

Philosophy of Teaching & Pedagogical Methods

As a faculty member at Colgate, I obtained a competitive year-long fellowship for mathematics educators with Project NeXT. This program addresses teaching, scholarship, service, and other professional academic activities at four major conferences for Mathematics. In one seminar, a facilitator instructed us to write down three attributes of the course in which we had learned best when we were students. It struck me that, in all my years of education, I had never thought about this. It sparked a more extended reflection about how those experiences affected my own decisions in front of a classroom.

In primary and secondary school, my pursuit of education was fueled by achievement and external recognition. During this time, I thought learning was successful imitation. I obtained a practiced skill in memory, but I could not develop my own solutions through critical thinking. Fortunately, my first year of courses at Quinnipiac University, a liberal arts university in Connecticut, deepened my perspective about education. I took challenging courses in both the sciences and humanities that stressed revision and improvement. Due to this focus on intellectual growth, I iteratively became a better reader, writer, problem-solver, and communicator.

These experiences inform my instruction and implementation of evidence-based practices in the classroom. Not all students have the same perspective, so I strive to blend my goals for students with their own. I start this work each semester by instructing students to write down three things about a classroom in which they learned well. For example, one student mentioned that having optional challenge questions on the homework helped incentivize learning without the fear of a bad grade. This is now something I do regularly. The students motivated to tackle the challenge get to see more of the material, and the conversations and mentorship that stem from discussing those questions are rewarding.

I aim to facilitate the learning I experienced as a student by guiding students to develop solid foundations and creative approaches for engaging with statistics. To do this, I incorporate “productive failure” (Burger and Starbird, 2012), recasting failure as a normal step in the learning process, instead of a frustrating end of their learning experience. Failure presents a snapshot of the current circumstances, illuminating areas for growth and a path toward understanding. Defined this way, failure can be embraced as a result

of stretching ourselves, encouraging us to venture further into complex topics, alter our approach, and reattempt. For example, an incorrect suggestion for approaching a question in class allows us to discuss the aspects of the idea that reflect understanding, while paying careful attention to why it doesn't yield the desired result. This helps students build a strategy for engaging with mathematics: mistakes become a moment for reflection and growth rather than a demoralizing signal of inadequacy. As a result, students learn to explore different approaches to various problems without fear of missteps. As a facilitator of this type of learning, I incorporate five overarching goals in my courses, which I will discuss in detail below:

1. pursue ambitious learning goals through rich and effective resources,
2. leverage technology to facilitate deep understanding and to level the playing field,
3. foster an inclusive, supportive, and respectful classroom environment,
4. inspire growth in students through supportive evaluation, and
5. motivate students to critically self-reflect by recasting failure as an integral part of learning.

—— Goal 1: Pursue Ambitious Learning Goals

Bjork (1994) coined the term *desirable difficulty* to describe tasks that are challenging but effective in a way that promotes long-term learning. I aim to provide desirable difficulties when planning my courses by exploring statistics through the lens of quantitative researchers and real data. Instead of contrived examples, I design materials that portray statistics as vital to real-world problem-solving. For example, Bracht et al. (2016) propose microfibrillar-associated protein 4 (MFAP4) measurements as a non-invasive method for assessing fibrosis severity in hepatitis C (Hep C) patients. This research is motivated by the fact that liver biopsies, the gold standard, can suffer high rates of complications and are prone to sampling error. We discuss this research and explore the data on serum samples to see if there is evidence that MFAP4 is predictive of disease severity.

Connecting statistical ideas to real-world problems takes considerable time. However, through this work, I intend to create textbook-quality lecture notes. My notes incorporate examples, practice exercises, and homework assignments that explore data from recent publications/news to promote learning through the entire problem-solving process. Many of these applied problems stem from the research projects I am working on in my multidisciplinary research program. Students report in their student evaluations of teaching (SETs) that they find these course resources organized and clear and that the research examples are engaging and motivating. Through this process, students see firsthand the practical import of complex statistical concepts, and, as a result, their learning improves.

Goal 2: Leverage Technology for Deep Understanding

I aim to weave technology into the learning process to complement how statistics has changed with technology. The choice to employ R, a statistical programming language, changes how we perform statistics after seeing the pen-and-paper approach and advances what students can do in the class. The modern practice of statistics includes state-of-the-art methods that *require* statistical applications and thus programming languages. In introductory courses, we use data visualizations to understand data, make decisions about simplified analyses, and communicate the results. In upper-level courses, graphical approaches allow us to visualize complex statistical procedures before deriving, designing, and completing publication-quality analyses, including simulation studies for evaluating the performance of a given statistical procedure.

As an example of how we might use data visualizations to enhance learning, consider the data from Bracht et al. (2016). At an introductory level, we could create a graphical summary of the data from (Figure 1) to assess which stages of the disease have similar MFAP4 levels and show that early stages of disease (stages 0-2) generally have lower levels of MFAP4 than later stages of disease (stages 3-4). In an upper-level course, we would use this same plot to plan a data analysis procedure for confirming that MFAP4 can be used to distinguish the three treatment stages – individualized treatment (stages 0-1), justified treatment (stage 2), and priority treatment (stages 3-4) – set forth by the European Association for the Study of the Liver.

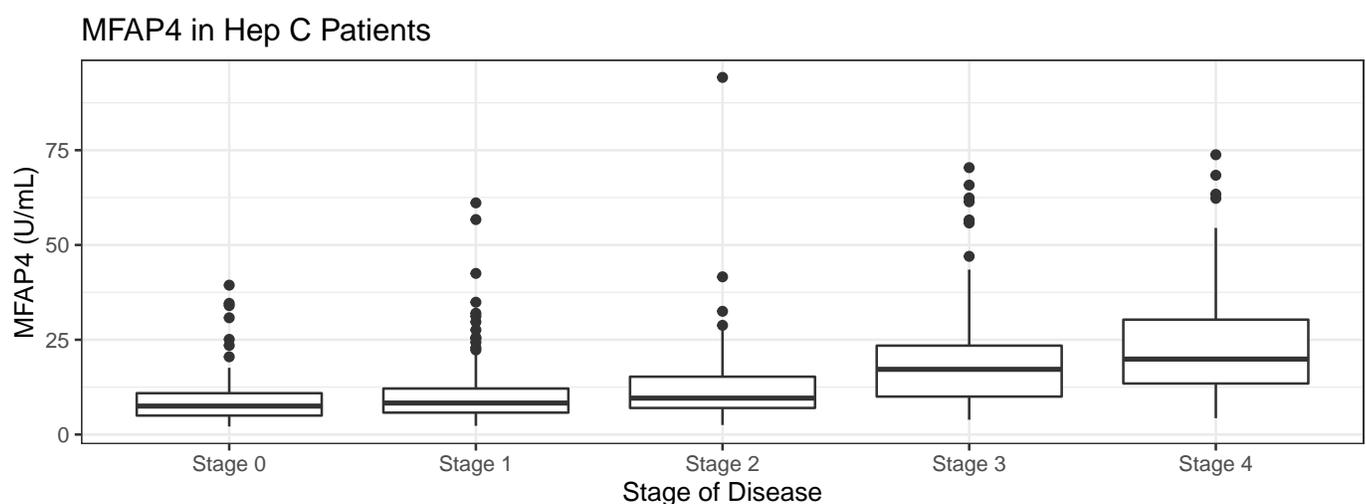


Figure 1: MFAP4 levels by stage of fibrosis in $n = 542$ hepatitis-C patients. Outliers are marked with solid points.

Introducing technology also helps lower barriers to understanding statistics. In my courses, learning how

to program is not meant to distract from statistical thinking or analyses. Instead, it is for conducting investigations more efficiently by focusing on understanding and interpretation rather than mechanics that depend on previous math experience.

While students recognize the challenge of using technology in their SET forms, many realize the benefits of this approach. At the introductory level, students see that they can analyze real-world data and focus on understanding what the analysis *actually* says. In upper-level courses, students learn the value of data visualization in the decision-making process. They often communicate that R is helpful for their senior theses and that exposure to R in my courses makes them confident in their ability to learn new topics independently in the future.

—— Goal 3: Foster a Positive Classroom Environment

I design my courses so that students are less focused on evaluating their current mathematical ability (i.e., what they can already do) and more concentrated on developing their understanding of new concepts. My intent with this framing is to encourage and energize students who are nervous about mathematics or who *think* they are not good at mathematics. To create this environment, there needs to be a delicate balance between pushing students beyond their comfort zone and helping them feel supported to do so. Early at Colgate, I struggled to attain this balance. Students appreciated my enthusiasm for the material but sometimes felt overwhelmed. I knew from these comments that I needed to provide more support and encouragement—especially for those who came into an introductory statistics course with expectations that they were not “a math person.”

To address this issue, in Fall 2017, I developed a weekly diagnostic assignment (Figure 2) where students assess and communicate their understanding of the material and submit any remaining questions. These assignments help me see common areas of confusion (e.g., a question that multiple students write down) that I can then address in our next class meeting. Likewise, it also helps me keep a pulse on how all students are doing – including those who may be less likely to speak in class – and provides the opportunity to contact students who require support individually. As a result of adjustments like these, students’ SETs now reflect that I am accessible, answer all of their questions, and care to ensure everyone understands. Further, they note that my enthusiasm is contagious and motivates them to want to do more.

1 * How well did you understand the material covered in this week's lectures? I suggest flipping back through the course notes at this time to refresh your memories. Select the grade that best represents your understanding of this week.

A

B

C

D

F

2 * What was the most important thing you learned in class this week?

3 * Is there an important question that remains unanswered about the subject matter covered in class this week?

4 Here's a place where you can make any comment you'd like -- ask a question, give some feedback, or anything else.

5 * If you haven't yet, go to the Chapter 5 -- Probability Model notes. Make a comment, ask a question, or answer a posted question.

I made a comment.

I asked a question.

I answered a question.

I didn't do this.

6 What questions do you have about HW5 that need to be answered before you can complete it?

Figure 2: An example weekly diagnostic assignment from MATH 105.

Goal 4: Inspire Growth Through Evaluation

A standards-based grading protocol (Marzano, 2000) involves measuring student proficiency on distinct objectives, termed *standards*, in addition to traditional grades for homework. This approach constructs an information channel for more nuanced conversations about where students are strong and where they can plan to improve. Many standards-based systems employ non-standard scales, e.g., Mastery/Progressing/Needs Improvement (M/P/NI) or categories (0-4). I found that these approaches confused students, particularly those who evaluate themselves on whether they made an A. Based on this feedback, I designed a novel standards-based grading system for communicating performance (Figure 3). To allow students to monitor their growth, I employ retesting for assessing students throughout the learning process. DeWitt (2020) likens this to regularly checking your weight or blood pressure as part of a program for improving your health – we do not terminate the program after one good checkup, and a poor checkup presents diagnostic information for adjusting the program. By providing students with several attempts at mastery, they are encouraged to excel through hard

Designation	Required Objectives	Points
A (Proficient)	<ul style="list-style-type: none"> Contains no non-trivial errors and clearly communicates understanding Achieves a correct solution Justifies decision(s) toward solution Effectively communicates solution and support Notation used is appropriate and clearly shows all steps 	0.95
B (Sufficient)	<ul style="list-style-type: none"> Meets expectations and contains an easily correctable mistake Makes correct decision(s) toward solution Justifies decision(s) toward solution Effectively communicates solution and support A slight error, confused reasoning, or notation mistake Refinement is needed 	0.85
C (Progressing)	<ul style="list-style-type: none"> Contains correct work and a serious error in understanding or communication Makes some correct decision(s) toward solution Some justification of decision(s) toward solution Attempts to communicate solution and support A wrong decision, confused reasoning, and/or notational mistakes Revision is needed 	0.75
D (Developing)	<ul style="list-style-type: none"> Does not contain the correct answer but shows some correct work Incorrect decision(s) toward solution Insufficient or incorrect justification for decision(s) toward solution Little or no communication of solution and support Several wrong decisions, confused reasoning, and/or notation mistake Revision is needed 	0.65
F (Needs Attention)	<ul style="list-style-type: none"> Does not contain the correct answer or work in the correct direction Missing or incorrect decision(s) toward solution Little or no justification for decision(s) toward solution Little or no communication of solution and support Several wrong decisions, confused reasoning, and/or notation mistake Revision is needed 	0.25
Z (Not assessable)	<ul style="list-style-type: none"> No Response, there is no reasonable attempt to provide the correct solution. Not assessable 	0.00

Figure 3: Each assessed attempt at a particular standard is graded using this rubric.

work and iterative learning. The focus of this grading system on understanding and communication rewards students for recognizing what is required when they cannot complete a solution while differentiating sufficiency from proficiency. Further, students can see feedback as a guidepost for progress through retesting.

In the process of retesting, students earn a letter grade for their first and second attempts on a particular standard (e.g., summarizing categorical data). Initially, I had placed all the weight on the most recent test of a specific standard. I reasoned that if learning is occurring successfully, the most recent attempt should be (and usually is) the highest grade. Colleagues reminded me that any exam is a random sample of what students know. Who is to say the second attempt is not merely reflecting a lousy day? Now, I employ a decaying average of first and second attempts that weighs the second attempt more than the first. This keeps the incentive for long-term learning in place while also rewarding a solid performance on a first attempt.

Although retesting received push-back initially – it requires additional work, and it feels less forgiving than a traditional approach – I used this as an opportunity to reflect on the factors causing the most substantial resistance and adapted my approach. These changes, and reliable communication, have

generated a remarkable shift in student reaction. Now, students recognize the added challenge of retesting in SETs, but they also express that this method helps them develop into self-sufficient learners, successful problem solvers, and effective communicators. In short, they have begun to see that learning happens through them, not to them.

— Goal 5: Motivate Reflection on Learning

The weekly diagnostics not only audit what students learn but *how* they learn. Each week, I summarize students' responses by posting a document containing students' summaries of the material and carefully crafted answers to their questions. The insights of the student summaries supply a complete picture of the topics discussed. The questions and answers allow students to evaluate their knowledge – sometimes identifying questions they did not know they had.

Further, I motivate reflection in my assessments by grading electronically via digital inking and annotation. This process enables me to provide extensive and individual feedback and allows students to learn from one another. In particular, by having electronic copies of student work, I can create and post an *inventory of successes and productive failures*. Students then have access to this inventory which contains anonymized correct student solutions; importantly, this inventory also includes faulty solutions accompanied by notes on recognizing, diagnosing, and ameliorating process errors. These resources expose students to a variety of approaches, promoting self-awareness and practice. Further, students feel more comfortable trying new tasks without fear of ridicule because we positively reflect on our collective mistakes to normalize mistakes as a path to growth.

I started this practice in MATH 354 (Fall 2018) and expanded it in Fall 2019 after my third-year review summary meeting with the dean and division director. Since then, students report in SETs that they are not afraid to make mistakes in the classroom. They find that reflecting on their mistakes creates opportunities for deeper understanding, where they can see that there are multiple ways to approach a problem. Further, students are motivated to review their previous work to fix their mistakes for approaching new concepts instead of simply checking their grades.

— Meeting These Goals

Just as summarizing data is helpful to students, I find it useful to visualize the themes in my student evaluations using a word cloud (Figure 4). In this way, I can understand whether my pedagogical goals

Dimensions of Teaching

Based on student responses on SETs

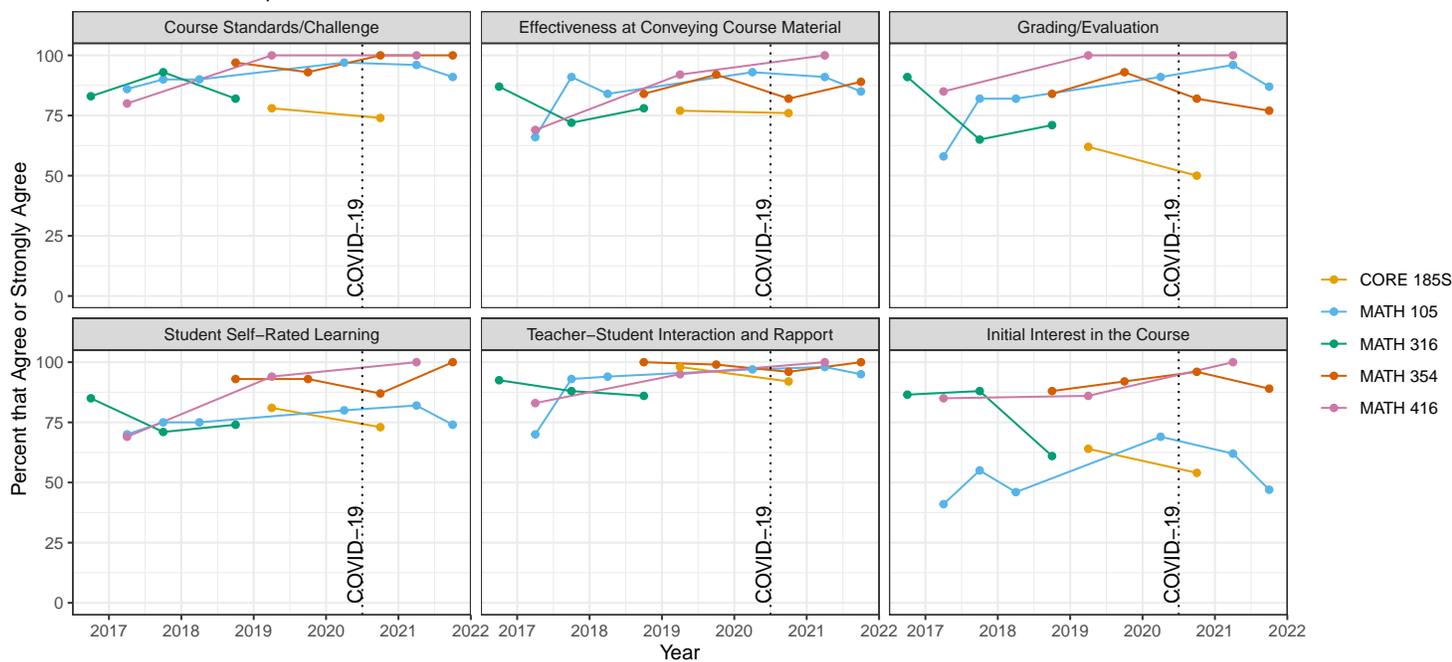


Figure 5: A time series plot of teaching dimensions for the Likert aspects of student evaluations. Each point represents evaluations for a course, and the lines help illuminate trends.

Finally, with this approach I earned the Waller Education Award in 2020. This is one of only two annual awards for teaching issued by the American Statistical Association, the other being a lifetime achievement award. The award was given “in recognition of [my] innovative approaches to teaching and statistical collaboration, bringing the importance of statistics in daily life to [my] students and others, and for [my] tireless work to reform statistics education at [Colgate] and beyond.”

Course Specific Reflections and Future Plans

My SETs were not always as strong as they are now, and I’m proud of the dossier I can present today. Through thoughtful reflections on developing my pedagogies and communication channels with students, I feel that my courses have transformed. By carefully contemplating student feedback, I made informed choices to maximize the learning of all students while ensuring students feel supported to accomplish their own goals. My SETs reflect these changes: students express that my courses are challenging, but they also express that they feel supported to pursue growth and understanding.

In the following subsections, I provide course-specific developments and reflections.

CORE 185S: Balderdash, Codswallop & Malarkey

This course explores the inherent uncertainty in statistical studies, the incentives to avoid communicating these uncertainties in journal articles and media portrayals of science, and how to spot unspoken uncertainty. To do this, we focus on the use and abuse of numerical data in the lifecycle of information creation – from researcher to publication outlet – by exploring the scientific method and the translations between numbers and words. Professor Meg Worley and I team-taught this course twice, and it has been selected as a course for the Benton Scholars' program for Spring 2022.

In our first offering of the course (Spring 2019), we challenged students to read journal and popular press articles that describe research in various scientific fields. For example, we assigned a news article describing firearm death statistics accompanied by a scientific paper that explores how our ability to discern quantitative information varies depending on whether or not it aligns with our outlook. This acts as a launching point into questioning problematic claims in a way that elucidates what the research *actually* says. For example, when a news article says “rates of death from firearms among ages 14 to 17 are now 22.5% higher than motor vehicle-related death rates”, and another says that “there are 22.8% fewer firearm-related deaths than motor vehicle-related deaths” what can we say about the world? How can these statistics be accurate simultaneously?

Professor Worley and I demonstrated that a good understanding of even the most basic statistics is enough to ask important questions of information we consume – e.g., “What exactly is being measured?”, “who or what is missing?”, and “who is creating the information and why?” Many students reported learning to question the information they consume and recognized that this would influence their future classes and daily lives. We also prepared students to be critical of information and accept proof when they get it, regardless of whether they believed it *a priori*. In response, several students resolved to engage with politics and the news more actively and approach ideas they disagree with initially with curiosity.

While many students experienced this type of growth in Spring 2019, it was not universally perceived. Due to the large class size (50), some students felt they could not contribute and were uncomfortable asking for help. This limited our ability to gauge who completed the reading carefully, which was compounded by some students feeling they could get away with responding to another student's point rather than generating their own. Partially to address this perception, we received a team-teaching proposal grant from the Office of the Provost and Dean of the Faculty to teach the same course to a smaller class (22)

in Fall 2020 and again later.

In Spring 2019, students spotting the differences between our mathematical vs. humanistic approaches worried about which of the two of us they needed to please to receive the grade they thought they deserved. In Fall 2020, we aimed to explicitly address our differing perspectives to discuss uncertainty by exploring the two-professor problem intentionally. This included a section in the syllabus encouraging students to view these conversations as complementary and reflective of the world's complexity. We also decided to hold all our office hours together and merged our grading expectations into one rubric for each assignment to ensure that students would always get both perspectives.

Together, these changes (smaller class size and addressing the two-professor problem) effectively mitigated perceptions of unfair grading, as evidenced by the narrative SETs. While a couple of students still found assignments unclear, it was not due to a difference in grading but by design. That is, for some tasks, a one-sentence summary of *exactly* what to do would often give away the central aspect of the assignment: deciding which questions are necessary to ask about the information at hand.

While many students felt I explained the statistical information well in Spring 2019, some felt the build-up was long and confusing. To address this, we planned a new unit for Fall 2020 that includes a broader overview of statistics to reduced comments about confusion. The expanded statistical material helped students understand more complex topics at a high level while spreading it over several weeks made it feel more digestible. However, an increased focus on statistics did yield few comments about the difficulty of the statistical concepts of the course. Additionally, some students mentioned long explanations, but for new reasons. Students with a better and broader understanding of the statistical aspects of research asked exciting new questions far beyond the scope of the course (e.g., Bayesian approaches). In the next iteration of the course, we can employ statistics-focused assignments that clarify the concepts they are responsible for while assessing their understanding.

It is rewarding to see that students report being motivated to learn about the intersection of statistics and rhetoric. We successfully led students to develop strategies for reading articles and questioning information presented to them. Many students remark that they have become better critical thinkers and feel more informed as they think about new topics from their own *and* others' perspectives. Further, students see the value in this learning as it applies to their other courses and daily lives. I am very excited to continue developing and teaching this course.

COVID-19 Impact: The pandemic (Fall 2020) presented significant challenges in teaching this discussion-based course. We split the students into four groups that met synchronously in a hybrid format so that students would have chances to interact with everyone in the course. In each class meeting, two groups would meet in person while the others joined virtually via Zoom. This sometimes led to overlapping discussions across class meetings, as those on Zoom in a previous class meeting felt moved to continue or rehash a conversation when they were in person. This may have contributed to a small number of comments indicating that they could have skimmed readings to get participation points. In response to these comments, we continue to brainstorm methods to encourage careful reading. For example, we can rework the diagnostics to ask questions about the readings we assign each week and incorporate tools like Hypothes.is, an online social annotation tool. This would allow us to more closely monitor and guide students as they learn to read and extract value from scientific articles.

— MATH 105: Introductory Statistics

The ASA and the Mathematical Association of America (MAA) released *Guidelines for Assessment and Instruction in Statistics Education (GAISE)* (Carver et al., 2016), which sets recommendations about what to teach in introductory statistics and how to teach it. This report discusses teaching statistical thinking as a problem-solving process that focuses on conceptual understanding by integrating technology and using real data to provide context and purpose.

With careful consideration of the GAISE report, I prepared a course where we explore topics in statistics at the highest level by leveraging technology. Students focus on understanding and communicating the results from experiments that I curate from quantitative research. This allows students to understand where the statistics they see in the news and journal articles they read in other courses come from and the foundation to create information when completing their own research responsibly.

The information drawn from the plots plays a pivotal role in the decision-making process, where students perform analyses in the R programming language and interpret the results. To contextualize the use of R, I first demonstrate the pen-and-paper approach. Then, I show that using R can sometimes reduce a page of algebra to a couple of lines of code, giving us time to focus on a different aspect of understanding. This method supports students of diverse mathematics backgrounds in this introductory course by removing algebra practice as a barrier to understanding statistics. Further, by the end of the semester, we complete tasks that are impossible to achieve by hand and require technology.

Students are almost universally challenged in this course. While few mention being pushed too far, many students see value in the challenge and the ability to triumph, thanks to the variety of resources available. Specifically, students find the course notes that I've written easy to follow and that the homework ensures they learn and retain the material. While students who admit they are not *math people* are surprised by how much they can understand, there is some push-back about technology from students with previous statistics experience who already knew a different way.

At the beginning of the semester, I describe similarities between R and spreadsheet software or calculators by comparing them. For example, to find the average of data, we use `=AVERAGE()` when using spreadsheets and `mean()` when using R or a calculator. The utility of R is more apparent when we get to the randomization tests at the end of the semester, which are performed in a few lines of R code and are considerably more difficult, or impossible, to conduct with spreadsheet software or calculators even with add-on packages. That is, the use of R not only affects how we complete the material of the course but it also controls how far we can reach.

The use of R received tempered feedback in Spring 2020. In response to this feedback, I moved from a *search, copy, and tweak* method for coding, where students need to find a similar example in the notes and alter the code to meet their requirements, to a script-based method. I often teach students to view statistical approaches as toolboxes, and the script-based approach matches this instruction. Now students can decide which tool is required, as before, and easily find the corresponding script on Moodle to complete the analysis. Responses to R improved in Spring 2021 with this new approach. In my experiences guiding students, the remaining issues are about specifying the data. In the next iteration of this course, I plan to use a hybrid approach where I focus on the basics of R for the first several weeks instead of just in the first homework. The script-based approach will be more successful with prolonged practice of the basics. These scripts have laid the groundwork for another option I am working on. As part of my work developing the Data Science Collaboratory (see that section below), I worked with students to create a series of web applications that will remove the coding hurdle. This will allow students to conduct analyses using R in a more user-friendly point and click format.

My pedagogical approach to MATH 105 has made the curriculum feel more approachable through increased communication and support. Students feel distinctly challenged in a manageable way because they have patient and kind support and plentiful and organized resources. For example, during the COVID-19 pandemic, I incorporated Hypothes.is so that students could annotate the course materials,

asking questions and sharing insights directly in the margins of the lecture notes. Students can notify me where they stumble, and I can answer their questions or provide additional details; further, this record remains in the comments section to benefit others.

While trying to be supportive and kind, I always aim to be thorough in my responses. Sometimes, however, when an inquiry is missing an essential step of the investigative process, I lead them to problem-solve with guiding questions rather than simply supplying the answer. While some students recognize that this helps more in the long run, some students felt this confused them more. I plan to address this in future semesters by being more explicit when I pose a question to encourage active learning – an important step to sustained learning.

Overall, students in this course find it interesting through the real-world examples, which motivate them to see the connection to their other courses. One student even mentioned feeling more comfortable getting the COVID-19 vaccine because they understood the scientific research process. Further, students reported learning to ask good questions and an increased interest in learning statistics, which they found important to daily life and being informed.

COVID-19 Impact: The Spring 2020 section of the course was interrupted by COVID-19, and the Spring 2021 section was fully affected. During this time, I recorded lectures for each chapter and posted them on YouTube. This requires a tremendous time investment, but it provides all students a similar experience. I also held two recitations (each student attends one) where students could develop a cohort they regularly see and participate in the teacher-student experience. It was clear that the student-driven recitations I had envisioned were not going to fill our in-person time. Further, due to distancing regulations, I did not feel comfortable employing the think-pair-share exercises, which are mentioned favorably in previous SETs and help add to the collaborative environment. Instead, I quickly adjusted to allow time for questions (~20 minutes), followed by summarizing the previous week's material and how it segues into the current material.

I was flexible during this time, but not at the expense of the material. I made the writing assignment, which is usually mandatory and time-consuming, optional – it would count if completed and was omitted if it was not. Further, I redesigned the exams so that all standards would be tested at least once by the second exam period to allow the last round of retesting to be optional. Note that all students still took a cumulative final exam that makes up a separate portion of their overall grade.

MATH 316: Probability

I have taught four sections of MATH 316. Over time, I have developed lecture notes that thoroughly discuss theoretical concepts and examples motivated by the real world. We explore the traditional theoretical results of a probability course and answer questions beyond our reach using simulation in R. This type of approach, combined with a strong focus on supporting and building effective communication channels, has led to a classroom environment where students can comfortably learn the topics of an undergraduate probability course, often at the graduate level.

In Fall 2017, almost all students reported learning, growth, and increased interest in the material but some students initially felt the material was too difficult, indicating I perhaps overshot in my efforts to make the course more challenging after feedback received in Fall 2016. Upon reflection and review of bifurcated SET forms, I believe this was a big factor due to the varying calculus experience of students. To ameliorate this issue in Fall 2018, I added a calculus review to *every* homework assignment. This aided in leveling the playing field for students who are less comfortable with calculus by providing several questions guiding their review and remastering of foundational calculus. This allowed me to keep the level of material the same with goals of improving communication through the addition of required weekly diagnostics, which allowed me to better balance the students' varied goals and experiences. Additional negative comments in my MATH 316 course revolved around my grading and communication, as discussed in my teaching statement and in the section about MATH 105, and have been largely addressed in the same way.

The increased direct focus on technology and graphing, during examples and homework, has lead students to discover results. On the first day, we discussed the probability that two students in the room had a matched birthday. At the outset, students couldn't calculate this probability and had guesses that ranged from a 0% to 10% chance. After our guesses, students ordered themselves by birthday and there was no match. I asked them to make a new guess, and this time their guesses ranged from a 0% to 5% chance. Showing there was a 57% chance that two people among 25 share a birthday, via simulation in R, motivated the learning of advanced counting techniques by showing that we, as humans, are actually quite bad at assessing probability on the fly. In another unit, I showed students graphical displays of both discrete and continuous probabilities, giving them time to derive probability formulas for compound events – this lead to a far better outcome in understanding the grammar of probability as evidenced by assessments and was noted in many of the weekly diagnostic assignments. Students practiced this type of discovery in a semester-long group project where students in self-selected pairs were combined

with another pair to derive the results about an assigned named distribution not covered in class. I feel that this also contributed to the classroom environment as students were able to meet other students in the class while experiencing the application and derivation of results from the course in a new context, helping each other along the way.

The adjustments I had made have largely ameliorated negative or tempered themes in previous semesters of this course in the Fall 2018 semester. In particular, a previous theme was that I had been perceived as condescending in previous semesters; I was very happy that this did not come up at all this semester. I was very happy to see that the majority of students mentioned learning a lot and commented in some way about how I facilitated that by being engaging, accessible and thoughtful. I was also happy to see that the increased focus on real-issues and visualization using R helped students learn a lot and “see” what they were learning.

—— MATH 416: Mathematical Statistics

I have designed MATH 416 to be a challenging course where students prove and derive fundamental results of statistical inference. This course ties a bow around the statistics curriculum at Colgate. Students who have taken data analysis and probability are able to combine what they have learned to derive results from statistical inference and see why they work.

Like MATH 316, in MATH 416, I implement R to visualize complex concepts, simulate data for evaluating approaches to statistical inference, and apply newly-derived techniques to real data. This approach makes the inaccessible topics *feel* approachable because the concepts can be visualized and understood before exploring the mathematically rigorous explanation. Further, we make it through additional chapters of material because students do not get bogged down trying to imagine what is going on. They can see it. This experience gives students the tools to think through solutions independently and through multiple perspectives simultaneously— theoretical and applied.

Focusing on fostering a positive classroom environment has enabled me to challenge students with graduate-level statistical inference in a way they find approachable. Students find the comprehensive homework assignments difficult but recognize that they are essential for deep understanding. Further, they find the evaluation design to be fair – it encourages learning iteratively, which is vital in such a cumulative course. In the next iteration of this course, I plan to incorporate Hypothes.is as I did in MATH 105, providing another place to engage with the course material. This pedagogical choice would

encourage students to refer back to their notes after our class meetings, reinforcing their learning – particularly the details of complex mathematical proofs.

Students generally find that they've learned an incredible amount in this course. Students report in SETs that this course ties the statistics courses together, which allows them to gain a rigorous understanding of the theory and application of statistics. By the end of this course, students report understanding through the exploration of multiple approaches that they can use to build on their learning and apply to new situations. Further, students reach an inflection point in their appreciation of technology where they see many benefits in using R and \LaTeX .

COVID-19 Impact: I taught this course in person in Spring 2021. The lecturing of this course went well, but I dropped collaborative exercises in class that were previously well-received due to distancing regulations. I aimed to remedy this by assigning optional group homework that roughly half the students completed. This assignment helped tie concepts together for those students but left some to feel left out, which may have affected the cohesion of the classroom environment. Further, students who had taken the pre-requisite (MATH 316) in the pandemic-affected Fall 2020 semester did not have time to complete the material originally planned for that course. For this reason, I made sure to take a few classes to ensure everyone was at the same level. While we were able to make up some time due to the recency of the material, some students who had previously taken probability found this to be unnecessary. I do not anticipate this issue in future offerings, given that the challenge centered on the consequences of the pandemic.

—— MATH 354: Data Analysis I

This course attracts students from across the university, despite being a 300-level mathematics course. The varied pre-requisites for the course have yielded students with extraordinarily different perspectives, which presented many opportunities for rich discussion and some instructional challenges. We rely on R to complete complex statistical analyses. In this setting, students with little experience find the start of the semester overwhelming, whereas students with more experience find it slow. To address this, I designed a 200-level course to act as a pre-requisite for the upper-level statistics courses. In discussion with the department, we have decided to incorporate the essential topics of this course in a redesigned MATH 260, the introductory course to the applied mathematics major. These efforts aim to make the positive experiences universal among students as the additional preparation removes barriers for those

with less statistics experience.

Given that this course focuses on data analysis, we focus on the researchers' degree of freedom in statistics – the decision-oriented aspects that introduce subjectivity to the research process. Through this process, students realize that they are practicing skills of judgment alongside mathematics. That is, students learn how to approach problems independently by breaking down complex issues into smaller questions. While some students in the initial offering reported that the lecture material (based on a textbook) was tedious, the new research-focused material – including simplifications of my collaborative research projects – has almost eliminated such comments and substantially increased comments about how engaging the course is.

Homework assignments and exams present students with research problems covering a variety of disciplines. The homework guides students through the data analysis procedures by prompting data visualization to help their decision-making process. Students use the *inventory of successes and productive failures* to understand the pros and cons of various approaches to homework questions. The exams require students to use this practice to independently complete a full data analysis based on reading a quick summary of a research project and translating the research questions into questions they can answer with the data provided. After the exam, students engage in peer review of their initial analyses. This exposes them to different approaches to the same problem, which helps broaden their perspective and another way to demonstrate their learning. Finally, after receiving detailed feedback from two other students and me, each student compiles a polished and complete report on their analyses.

The ambitious goals of this course are met by students who find the hard work leads to substantial learning. My enthusiasm for the course material and the interesting applications are largely shared by students who find themselves empowered to continue learning data analysis topics independently or inspired to pursue data analysis in their major theses, the workforce, or graduate school. With several of my students, I look forward to further developing this sequence as I offer MATH 454 – Data Analysis II for the first time in Spring 2022.

COVID-19 Impact: My instructional design for the Fall 2020 semester mirrored that of my MATH 105 courses. The video lectures allowed students to observe and re-observe complete data analyses line by line in R. This aided the course tremendously and is something I plan to continue. Similar to MATH 105, I adjusted the recitations to answer questions (approximately 30 minutes) followed by explanations of the challenging (usually theoretical) material. The hybrid design of the course put a high responsibility

on students to consume the material and initiate communication when they felt lost. That said, given the strength of my SETs for this course before COVID-19 alterations to this format, I do not foresee this issue continuing once in-person classes begin again.

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Student Outcomes

Last updated: March 19, 2022.

This section provides a complete summary of student outcomes from Fall 2016 to the date last updated above.

Course	Semester	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F	W	S
Ind. Study	Sp17-Present	0	9	2	0	0	0	0	0	0	0	0	1	0	1	0
MATH 354	Fall 2021	0	2	1	3	6	1	1	0	1	0	0	0	0	1	0
MATH 105	Fall 2021	1	9	7	9	15	10	6	7	6	1	0	1	0	0	0
MATH 416	Spring 2021	1	2	1	2	2	2	0	2	0	0	0	0	0	2	0
MATH 105	Spring 2021	2	3	12	19	15	10	5	7	1	0	0	0	0	1	0
MATH 354	Fall 2020	0	0	1	6	14	3	0	2	0	0	0	0	0	0	0
CORE 185	Fall 2020	0	4	6	3	4	3	0	0	0	1	1	0	0	0	0
MATH 105	Spring 2020	1	9	20	25	16	2	1	1	0	0	1	0	1	0	0
MATH 354	Fall 2019	0	3	4	6	4	5	1	1	0	0	0	0	0	0	0
MATH 416	Spring 2019	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0
CORE 185	Spring 2019	0	8	24	10	4	1	1	1	1	0	0	0	0	0	0
MATH 354A	Fall 2018	1	1	3	2	4	4	2	0	0	0	1	0	0	0	0
MATH 316A	Fall 2018	1	2	6	4	9	2	0	0	0	0	0	0	0	1	0
MATH 105A	Spring 2018	0	10	15	17	10	3	5	6	2	2	0	0	0	3	0
MATH 316	Fall 2017	0	3	3	6	9	8	1	1	0	0	0	0	1	2	0
MATH 105	Fall 2017	1	7	22	46	36	11	7	4	4	4	4	3	3	0	0
MATH 317	Spring 2017	0	8	6	1	4	2	0	0	0	0	0	0	2	1	0
MATH 105	Spring 2017	5	17	16	32	39	18	8	3	2	2	1	0	2	0	0
MATH 316	Fall 2016	0	0	5	1	5	3	0	1	0	0	0	0	0	1	0
MATH 316	Fall 2016	2	3	3	7	5	2	0	1	0	0	0	0	0	1	1
Percentages		1.6	11	17.5	22.2	22.4	10	4.2	4.1	1.9	1.1	0.9	0.5	1	1.5	0.1

Student Feedback

Last updated: August 08, 2021.

This section provides a complete summary of student evaluations from Fall 2016 to the date last updated above.

As an Assistant Professor at **Colgate University**, I have taught 5 different courses:

- CORE 185: Balderdash, Codswallop, and Malarkey
 - *Target audience:* Mostly freshmen and sophomore students from across the university looking to fulfill their natural sciences requirement in the core curriculum.
- MATH 105: Introductory Statistics
 - *Target audience:* Mostly freshmen and sophomore non-major students from across the university.
- MATH 316: Probability
 - *Target audience:* Upper level undergraduate students mostly Math, Math-Econ, Math-Computer Science majors
- MATH 416: Mathematical Statistics (previously MATH 317)
 - *Target audience:* Upper level undergraduate students mostly Math, Math-Econ, Math-Computer Science majors who have taken MATH 316
- MATH 354: Data Analysis I
 - *Target audience:* Upper level undergraduate students mostly Math, Math-Econ, Math-Computer Science majors

It is required that each student completes a course evaluation towards the end of the semester. Likert analysis provides five meaningful dimensions of teaching I find particularly important – “Course Standards/Challenge,” “Effectiveness at Conveying Course Material,” “Grading/Evaluation,” “Student Self-Rated Learning,” “Teacher-Student Interaction and Rapport,” and “Initial Interest in the Course,” as well as the “Initial Interest in the Course.” A standard 5-point scale is used as a measurement system (5 = best) and these ratings are provided in the table below as the percent that agree with the percent that strongly agree in parentheses.

Course	Semester	Surveys	“Challenge”	“Effective”	“Grading”	“Learning”	“Rapport”	“Interest”
MATH 105	Fall 21	55	91% (51)	64% (34)	65% (38)	56% (21)	71% (47)	36% (14)
MATH 354	Fall 21	9	100% (89)	53% (36)	42% (24)	80% (40)	60% (44)	53% (33)
MATH 105	Spring 21	53	96% (60)	65% (39)	69% (47)	59% (30)	70% (54)	44% (20)
MATH 416	Spring 21	8	100% (88)	67% (47)	67% (39)	65% (48)	67% (53)	67% (50)
MATH 105	Spring 20	55	97% (64)	66% (45)	66% (46)	57% (32)	69% (58)	49% (23)
CORE 185S A	Fall 20	22	74% (32)	76% (24)	50% (5)	73% (27)	92% (53)	54% (18)
MATH 354 A	Fall 20	23	100% (87)	75% (48)	72% (45)	74% (49)	83% (60)	85% (54)
MATH 416A	Spring 19	7	100% (79)	92% (63)	100% (90)	94% (59)	95% (95)	86% (43)

CORE 185S A	Spring 19	47	78% (21)	72% (28)	57% (15)	75% (25)	91% (50)	60% (20)
MATH 354A	Fall 19	23	93% (81)	92% (57)	93% (51)	93% (70)	99% (83)	92% (83)
MATH 105A	Spring 18	57	90% (39)	84% (50)	82% (49)	75% (29)	94% (69)	46% (21)
MATH 316A	Fall 18	23	82% (49)	78% (37)	71% (29)	74% (27)	86% (57)	61% (22)
MATH 354A	Fall 18	17	97% (75)	84% (60)	84% (47)	93% (60)	100% (92)	88% (59)
MATH 105A	Spring 17	128	86% (38)	66% (22)	58% (20)	70% (29)	70% (29)	41% (8)
MATH 416A	Spring 17	20	80% (45)	69% (12)	85% (40)	69% (20)	83% (35)	85% (30)
MATH 105A	Fall 17	96	90% (40)	91% (50)	82% (42)	75% (27)	93% (66)	55% (20)
MATH 316A	Fall 17	25	93% (57)	72% (36)	65% (33)	71% (25)	88% (48)	88% (32)
MATH 316A	Fall 16	24	85% (42)	90% (50)	82% (47)	88% (46)	96% (74)	84% (42)
MATH 316B	Fall 16	9	81% (48)	84% (42)	100% (67)	82% (51)	89% (67)	89% (67)

Below I provide written student comments taken from the evaluation forms at Colgate University for the questions

- **(Reason)** "Why did you take this course?"
- **(Effort)** "Describe the effort that you put into this course;" "How did this course contribute to your understanding and appreciation of the course subject?"
- **(Understanding & Appreciation)** "In what ways did the course contribute to your intellectual growth or education, beyond your understanding and appreciation of the course subject?"
- **(Intellectual Growth)** "In what ways did the course contribute to your intellectual growth or education, beyond your understanding and appreciation of the course subject?"
- **(Quality)** "Please describe in precise terms your opinion of the quality of teaching in this course, giving special attention to what you consider important strengths and/or weaknesses."

CORE 185: Balderdash, Codswallop, and Malarkey

Fall 2020: Section A

- Student: 1
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor
 - **Effort:** Most of the effort was put in the readings that were due by every class and periodic homework assignments that were completed about once a week.
 - **Understanding & Appreciation:** I had some background on parts of the information before the class and had much less background in others. Professor Worley and Professor Cipolli do a really good job playing to the strengths of their students, encouraging them to use background knowledge on their work. I felt like my knowledge of the material was enhanced as much by others as it was by the Professors (which I mean in a really good way).

- **Intellectual Growth:** Professor Cipolli and Professor Worley were more interested in teaching a way of thinking and challenging information as opposed to specific content areas. I think that method of questioning information should apply to every class I'm taking in the future, as well as any information I might happen upon later on in life.
- **Quality:** Professor Cipolli is obviously very bright and caring. He takes the content of his class seriously without ever being too demanding to his students. The only thing I would say is that occasionally he might get lost on a particular tangent with a student and get really into content that is not needed for the class, but honestly, that really was not that big a problem and part of the benefit of having two professors is that Professor Worley would make sure that isn't happening too frequently.
- o Student: 2
 - **Reason(s):** Elective outside major or minor; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I would say that this is the course that I probably put the most effort into this semester. The main reason why is because this kind of information is something I really struggle with so I try my best to understand it, which takes a lot of time. I also struggle to keep up and take notes in discussion-oriented classes so that made it a little harder but it was definitely doable. The lack of traditional lectures and active practice made it pretty hard to fully understand what exactly was being talked about or referred to but both Professor Worley and Professor Cipolli made up for this (somewhat) by taking the time to clear up any questions we may have had and/or clarify any concepts that we were shaky on. Their comments on the homework really helped as well.
 - **Understanding & Appreciation:** Hard to say. I've never been particularly interested in this kind of stuff so I would not say that my appreciation for the course subject has increased or decreased. That being said, the teaching in this course was second to none and I really enjoyed having Professor Worley and Cipolli this semester.
 - **Intellectual Growth:** I would say that the main way this course contributed to my intellectual growth is that it gave me the tools to sniff out bad information and recognize poor statistics. This is something that I will be forever grateful for because it is extremely important that we are critical of the information we receive, especially in this day and age.
 - **Quality:** Absolutely top notch. While I will say that my inherent apathy on the subject made it very hard to stay motivated, Professor Cipolli and Professor Worley really tried their best to keep everyone engaged, which is something that I appreciate quite a bit.
- o Student: 3
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; Interest in the course material

- **Effort:** I completed all graded and nongraded homework assignments, participated in class, posted on the blog, completed all readings, and visited office hours.
 - **Understanding & Appreciation:** This course made me more interested in statistical concepts and how those intersect with other aspects of our world.
 - **Intellectual Growth:** This course gave me a lot of skills that will be useful in the future when reading the news and will help me make more informed decisions based on what I read.
 - **Quality:** I think Prof. Cipolli did a good job explaining the statistical concepts in a way that was easy to apply this knowledge to the readings and a variety of topics.
- Student: 4
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put in a reasonable amount of effort completing the readings and homework assignments for this course.
 - **Understanding & Appreciation:** I learned about the various reasons why sources of information might contain flaws, which helped me to take a more nuanced approach to evaluating information compared to if I was only taught how to find misleading statements, as well as the skills necessary to analyze research papers.
 - **Intellectual Growth:** It helped me to challenge my own biases and laziness when it comes to understanding the quality of a piece of information, without being overly cynical either.
 - **Quality:** The professor did a good job teaching the material, facilitating discussions, and used different approaches to explain material whenever clarification was needed.
- Student: 5
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I'd say I put in mostly what is required of me, but if I ever needed to work harder on one class this one was the first to lose my attention
 - **Understanding & Appreciation:** I feel like it did help my critical thinking, reading, and data comprehension, but mostly the data comprehension. Now I am able to read studies with more ease and am able to make substantive comments about it
 - **Intellectual Growth:** It will be easier for me to detect false claims and critically read arguments that I agree with. Overall I have become a much more cautious reader and critical thinker
 - **Quality:** For Professor Cipolli, I felt as though he was ready to teach this class to his mathematics students but had a hard time dumbing it down for the numerically illiterate. I appreciate that he tried his best not to contradict the higher level understandings of these statistical concepts, but more often than not, that just ended up with answers to questions that were vague, abstract, and not very helpful for those whose mathematical vocabulary is not well built. However, this is not to

say I didn't enjoy his instruction. Professor Cipolli did a great job explaining a lot of the concepts with a few hick-ups and was crucial to the political aspect of the class that we began with. His almost outsider prospective was very useful when evaluating the rhetoric of any given article and the class could not have been done without him

○ Student: 6

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material;
- **Effort:** I put maximum effort into this class as I enjoyed the material and maximum effort was required to do well in this class.
- **Understanding & Appreciation:** This course was my most beneficial course in terms of real-life thinking. It all allowed me to approach information with a critical eye and showed me the ways to detect bad information. The information was all very interesting and I appreciated it very much.
- **Intellectual Growth:** This course taught me the importance of thinking outside of the box and not just brute force memorizing information. The skills are all applicable to real-life and that is the most important thing in my mind.
- **Quality:** The quality of teaching was very good. Professor Cipolli was very accessible and always allowed students to clarify concerns before moving onto the next topic. Overall, very good professor!

○ Student: 7

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** As a whole, I didn't put a lot of effort into the class. When I did put effort into the class, it was intense because I had to change the way I think and do things in order to grow in understanding.
- **Understanding & Appreciation:** In general, yes. I now have knowledge of certain mathematical terms and I also have learned to read things critically.
- **Intellectual Growth:** My stance on reading the news has changed and now I know how to navigate reading articles and papers.
- **Quality:** Strengths: very good at explaining technical terms, is open to answering questions and explaining things again Weakness: sometimes explains technical terms too much (far) to the point it doesn't really become relevant to the class

○ Student: 8

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I thought it seemed interesting and different from a typical class
- **Effort:** I started out the semester putting in full effort but lost steam towards the middle-end. I found the material uninteresting and felt like busy work at times.
- **Understanding & Appreciation:** This course confused me greatly on the course subject, namely statistics. I felt that we were introduced to topics at random, if they happened to come up in a class

discussion, often leaving the class confused and disengaged. On the other hand, the course increased my appreciation of rhetoric, which was discussed more in the first half of class. I appreciated and was motivated to engage in the first half of class, but as the course progressed I found myself getting frustrated with the teaching style, the lack of a syllabus, and the ways in which statistics topics were introduced, given the varying levels of mathematical expertise among my peers. If there were one thing to change for the next section of this class, consider creating some sort of syllabus for the entire semester so your students can adequately plan their lives. Not having one created lots of undue stress and uncertainty among us, and I really think it's just fair to know what's ahead- especially since we didn't even know we were having a final exam until the second to last week of class. I also felt like I had no idea what we were learning at times, or what I was supposed to be getting out of the class each week. I understand this is a discussion based class and it's not meant to have power-points or a rigid agenda for each lesson, but I think I was so confused all the time because I never felt there was one clear topic or point I was supposed to be grasping. At times, it felt like I didn't even know what I didn't know- I just felt like I was behind. My favorite part of the course was the blog. I think it is a great idea and an informal way to keep communication and thinking going while we're not in the classroom.

- **Intellectual Growth:** This course definitely put me out of my comfort zone. I enrolled in the course knowing that I would be learning something different and hopefully challenging in a good way, and I was definitely challenged to think differently. However, I don't think this course was as effective as possible simply because a lot of students felt frustrated with the style of the class so much so that they did not want to engage with the material anymore. It definitely has the potential to contribute more to intellectual growth if there were more structure and the students felt more supported by the professors and more motivated to engage.
- **Quality:** I think the quality of teaching was ineffective for a core class. It seemed like he was trying to get us to understand intro to stat concepts and dive deeper into those ideas when it seemed like that level of understanding wasn't necessary for the course. He answered all questions and facilitated class discussions well, and was very efficient with responding to emails. On the other hand, I think Professor Cipolli's lecturing for a core class should be more about discussing statistics than teaching statistics.

o Student: 9

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I put a great deal of effort into this course, the assignments required a lot of steps and deep thinking.
- **Understanding & Appreciation:** I definitely learned a lot about statistics, which I previously had

no understanding of. I do not like studying statistics and this made the course challenging but it is definitely a good skill to have moving forward.

- **Intellectual Growth:** I am a much better critical thinker because of this class. It challenged me intellectually and I learned a lot of skills that I can use not only in my other courses but also in day to day life.
- **Quality:** Professor Cipolli was always upbeat and eager to teach the class and engage in meaningful discussion.

o Student: 10

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** Sometimes it was a lot. Sometimes it was nothing.
- **Understanding & Appreciation:** I think I did learn a lot about journalism. I still do not understand a lot about mathematics.
- **Intellectual Growth:** I liked getting to know the economics behind journalism and how that contributes to capitalism in the U.S
- **Quality:** I feel like at some times I couldn't get a word in to the discussion because it was either just Meg asking Will questions all the time, or it was just Will explaining a question or answer that took 40 mins (exaggerating). At other times, I feel like I was forced to participate when I had no real direction for what to go off of. A lot of times during Will's explanations, they would go on for so long that I would lose focus and ultimately just not understand what the actual answer was.

o Student: 11

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement Additional Reason(s):
- **Effort:** I have attended all class meetings, contributed to group discussions inside and outside of the class, completed homework and other assigned tasks.
- **Understanding & Appreciation:** This course allowed great practice in identifying information in reading news and empirical articles.
- **Intellectual Growth:** This course encouraged critical thinking and fostered an environment safe for friendly disagreement.
- **Quality:** This course is taught in an extremely engaging way. Class discussions take the majority of class time, which I personally enjoyed. The instructors intentionally prepare assignments with no clear grading guidelines, which can be difficult as a student.

o Student: 12

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** Not a ton. The course was designed around participation, therefore a majority of the effort would be entirely optional. That is to say: I could briefly skim the article we would discuss in class

or heavily analyze and learn everything I could about it. I typically opted for the former, and was able to contribute to the conversation meaningfully. I do believe that the opportunity to put more effort into the course did present itself, but not necessarily in a clear way. Just enough effort to a lot of effort yielded the same outcome in my opinion, but we'll see about that come my final grade. There is just a great vagueness in the course that didn't prompt me to put in a ton of effort, though it was always possible for me to do so. If I was held more accountable, I guarantee I would have put more effort into the course.

- **Understanding & Appreciation:** This class has pointed out the most efficient ways of analyzing information and verifying sources. However, a lack of quizzing or hammering in terms and details let whatever understanding and appreciation I may have simply fade away the moment we moved onto the next subject.
- **Intellectual Growth:** This course has made me appreciate the variety of ways in which information can be manipulated, but more importantly, it made me realize the importance of learning the proper terms to discuss and criticize how information is presented. I think of it as illuminating.
- **Quality:** The class was entirely discussion and participation based. I think that is a formula for great success, but it requires students who are actively engaged and want to do the most they can with the material. Obviously there was always more I could have done, but I really think that if I was held accountable to put more effort into this class with a potential variety of graded items, I would have been more motivated. The discussion format would allow me not to read anything and just string together a sentence from my classmates and a quick skim of the article, earn my participation credit, then sit in silence and not need to try.

o Student: 13

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; My Mom's intern (Colgate Student) recommended Professor Cipolli.
- **Effort:** I have always tried hard in this course. In the beginning I struggled with time management though so my best work was not always what got handed in.
- **Understanding & Appreciation:** I believe that I am a much more responsible reader. I can look at any information given to me with a critical and skeptical eye and this allows me to take away only the best information.
- **Intellectual Growth:** My professors really wanted me to work through problems on my own often throughout this semester. I think I learned how to be more independent in this course and I feel like I am better prepared to tackle real life assignments.
- **Quality:** I think that the teachers were really good at explaining the important information about our topics. Sometimes, I feel like the actual assignments were less clear.

○ Student: 14

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a considerable amount of effort into this course since I found the topics interesting, especially for a Core class.
- **Understanding & Appreciation:** This course contributed a lot to my understanding and appreciation for rhetoric, and not so much my total understanding of a lot of statistical concepts, but it still contributed to my appreciation for statistics as a discipline as well. I think this is a stellar option for the scientific perspectives core class since it is all around so relevant.
- **Intellectual Growth:** I think that a lot of the concepts I learned in this course can be applied almost everywhere else in my academic studies. In terms of intellectual growth, I think that a lot of the lessons learned in this course should be things that everyone has to learn nowadays.
- **Quality:** Professor Cipolli is a joy to learn from. You can tell how much he truly cares for both the subject matter and students. I've always thought that a teacher showing their genuine passion for a subject seems like one of the best ways to get students to be engaged and interested in material, and Cipolli did this very well. I had no prior interest in statistics whatsoever and am not a "math person," yet I still found Cipolli quite engaging. He is very attentive, accessible, and genuinely cares.

○ Student: 15

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; The name of the course is what attracted my attention versus other scientific perspectives courses (the world needs more classes with fun names!).
- **Effort:** This course required a lot more active learning than my other classes, but thankfully the mental strain of that was balanced with not all of the homework being collected/graded, allowing a bit of freeway on timings and freedom to just have a bad assignment once in a while. That being said, the extensive reading for the class was often too much for me to complete within my schedule.
- **Understanding & Appreciation:** This course allowed me to build my skills centered around data collection and analysis that I already had from previous courses.
- **Intellectual Growth:** This course is very applicable to a real life setting, where the constant use of data by media deserves healthy criticism in order to root out the good from the bad statistics, so I would say my practical education has especially been bettered by taking this course.
- **Quality:** Professor Cipolli is obviously very knowledgeable in his field and does well teaching this class because of that. However, there was the occasional struggle where his understanding of statistics was higher than anyone else in the room's, so asking questions had the potential to lead to even more confusing answers. That being said, usually between Professor Worley and other students in the class, we were usually able to break down the concepts further to the point that confusion

was lessened (and it should be noted that without him there we would have no answer at all, so I cannot complain too much).

○ Student: 16

- **Reason(s):** Elective outside major or minor; Interest in the course material
- **Effort:** Many hours of reading and homework assignments along with small group meetings.
- **Understanding & Appreciation:** Gave me slight insight into how to analyze statistical studies and experiments better along with news articles.
- **Intellectual Growth:** Gave me better insight into how statistics can be manipulated to tell a particular story.
- **Quality:** All over the place, didn't convey information strongly, struggled to grasp the attention of class.

○ Student: 17

- **Reason(s):** Elective outside major or minor; Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I thought it sounded interesting and as an avid news reader, I was wondering what would happen.
- **Effort:** This course involved a lot of thinking since it lies in between differing degrees of scientific perspectives, rhetoric, and bullshit. While there wasn't as much writing as other courses, the style of writing and attention to detail was extremely important. This is a class where definitions of terms in an argument have a high value since they are necessary to evaluate arguments, both scientific and non. This meant reading scientific papers and news articles closely and slowly to fully understand their meaning and then to evaluate them on their rhetoric.
- **Understanding & Appreciation:** I learned a lot that I didn't know before. I developed tools, methods, and strategies to evaluate scientific arguments even if I am not a researcher in that specific field. Using general knowledge of scientific and mathematical principles, I am better set to understand arguments in depth. This is really great since it means I have the tools, language, and understanding to say what makes this claim dubious or misconstrued or something else.
- **Intellectual Growth:** Well I now have a better grasp of what things I should ask for when looking into a claim in my everyday life. Beyond just simply asking is this journal reputable or saying I disagree, I can articulate what is necessary for me to believe something or for me to say I don't believe this, and here are the exact reasons why. It makes me a more informed citizen and consumer of information.
- **Quality:** As a statistician, I felt Professor Cipolli was indispensable to this course. Not only because he has worked with all sorts of researchers, but because when it comes to the technical stuff in statistics, he's your guy. And while there were points where things had been yet to be

understood in the class, there was still a great deal that made more sense. I will say though I wish the assignments were written with a one-sentence summary of what we are supposed to do because when everything is wrapped around in thinking processes it's easy to lose sight of what the assignment is supposed to be.

○ Student: 18

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement;
- **Effort:** I found this class interesting so I believe I put as much effort as in all my other classes.
- **Understanding & Appreciation:** Before coming in to the class I had more of naive approach on things such as news articles, statistics, and the scientific research papers. But the discussion and the homework we were assigned made me examine my previous point of view. I believe this course taught me to ask right questions in a right moment that made the comprehension of the subject easier and more intuitive by the end of semester.
- **Intellectual Growth:** I feel like this course is the one I can generalize and I have generalized the most to my other classes. It was especially helpful for me when I was reading scientific papers in my Research and Methods class for Psychology.
- **Quality:**

○ Student: 19

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** A lot of the effort that I put in was towards trying to figure out what the professors wanted, and then once I knew that, then I put a lot of effort into the homeworks. Overall, the major homework assignments were the things that took the most effort in this class.
- **Understanding & Appreciation:** I think that the goal of the course to be able to detect fake news and have more critical reading skill is valuable, however, I think that the course itself was not as successful in fostering an environment where students' could really appreciate the course material. Just due to the fact that the readings and homeworks were sometimes vague and very repetitive, it became more tiresome than interesting. Although I do appreciate the topics of the course more than I did before taking the course, the course was not the most effective way to communicate these ideas.
- **Intellectual Growth:** The course contributed slightly to my critical thinking growth, but I think that it could have been taught in a much more interesting fashion.
- **Quality:** I wish that the lectures were more interesting and did not just cover the same topics every week. When trying to ask questions, the answers I received were very vague and did not clear things up for me.

○ Student: 20

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I did all the homework on time, and I actively participated in class.
 - **Understanding & Appreciation:** I learned some new topics about how to best demonstrate data, however, many of the particular statistical concepts I am still unclear about.
 - **Intellectual Growth:** I would say it pushed me to question the information I was receiving.
 - **Quality:** Sometimes I felt like Professor Cipolli addressed information way over our heads that everyone was lost, but didn't answer the more simple questions without confusing us more. Also, I felt like this class was supposed to be more of a discussion course going into it, but it was instead dominated by the voices of the professors. I wished we had more opportunities to interact with the articles and foster more of a peer on peer learning environment. I also feel like the same things were repeated over and over again, rather than making new points and applying the material in new ways. Also, the class format was rarely ever varied. I wish we had different kinds of activities to have us actively engage with the material rather than just a lecture for an hour and 15 minutes.
- Student: 21
 - **Reason(s):** Interest in the course material
 - **Effort:** I put a great bit of effort into the course but sometimes I struggled with the amount of participation on multiple platforms.
 - **Understanding & Appreciation:** I developed greater skills of dissecting news data and accounting for bias as well as learning deeper about the interconnectivity of statistics and news media.
 - **Intellectual Growth:** I am more aware of what the media presents and how they present it and feel confident about making informed judgements about new materials.
 - **Quality:** This course challenged my understanding of how I understand outside sources and that was facilitated very well by Professor Cipolli's use of statistics and openness to questions.
 - Student: 22
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I spent a normal amount of time studying, doing readings, and doing homework for this class several days a week.
 - **Understanding & Appreciation:** This course made me more interested in the subject matter
 - **Intellectual Growth:** This course has encouraged me to apply the information to my everyday life in reading articles and news pieces.
 - **Quality:** This Professor made class much more interesting and presented information in a clear and easy to understand manner.

Spring 2019: Section A

- Student: 1
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a solid amount of effort into the course. Read most of the readings and completed all the graded assignments at my highest level.
 - **Understanding & Appreciation:** It was one of those courses that was meant to help me expand intellectually and contribute to my growth as a tolerant and sophisticated human being.
 - **Intellectual Growth:** It contributed to my ability to be able to analyze information and determine whether or not it is true or bullshit. It also helped open my mind to opinions I generally disagree with regarding politics.
 - **Quality:** Quantitative based style of teaching.
- Student: 2
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This course took lots of effort in preparing for tests, doing the graded and ungraded homework assignments, as well as completing the daily readings, but it was definitely manageable.
 - **Understanding & Appreciation:** This course helped me learn how to dissect what is the truth and what is not in media sources and also help develop my own opinions.
 - **Intellectual Growth:** This course helped with my time management and gave me the confidence to speak up in large classes.
 - **Quality:** Professor Cipolli did a great job teaching this course and explaining statistic methods to a large group of students, many of whom had never seen such things before. He was very articulate, and I think one suggestion might be to get rid of the “line” that arises when multiple people raise their hands, because some comments just get outdated.
- Student: 3
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** the effort that I put into this course truly fluctuated. there were down periods, but then there were also nights where we had to do 3 readings plus a homework that was a bit overwhelming.
 - **Understanding & Appreciation:** I think this course made me more aware of the bullshit around me and how to pick it out of articles and what to do when I see it.
 - **Intellectual Growth:** I think that the material learned can be applied every day to any type of information that I am looking at whether it be for a research paper or just scrolling on twitter in bed. pretty useful stuff.
 - **Quality:**
- Student: 4

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put a lot of effort into class. I always do the readings and show up to class every day prepared. I also participate often on our class blog out of class.
 - **Understanding & Appreciation:** This class has taught me to never just assume things to be correct. Unless you have enough evidence, you should never just believe something to be true. Rhetoric can be misleading and statistics do not prove anything.
 - **Intellectual Growth:** This class has made me more aware of the world around me and the information I am being fed. It is important to pay close attention to rhetoric as it can be misleading.
 - **Quality:** Professor Cipolli is a very passionate professor who cares a lot about the material he is presenting. Because I am not really a mathematical person, the way he teaches is sometimes confusing. His grading techniques are also a bit confusing and unclear. Overall, his passion for teaching is clear.
- Student: 5
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I spent a lot of time reading and preparing for the discussion in class. Also, I have written a lot of posts and comments on topics we discussed in class.
 - **Understanding & Appreciation:** I learned how to use statistics in life to detect misleading/ wrong information. Also, I learned how to read scientific papers effectively.
 - **Intellectual Growth:** It encourages me to think critically and determine the veracity of information, a skill that's important academically.
 - **Quality:** Professor Cipolli gives clear explanation to difficult concepts in statistics and help us use them in life-related problems. He also encourages everyone to contribute in class and always handles questions very well.
- Student: 6
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; This class seemed like an interesting scientific perspectives course that did not require a large amount of math knowledge.
 - **Effort:** This course required multiple weekly readings and blog posts to keep up with how you are doing in the course. In addition, in class quizzes would keep students always engaged with the material as a quiz question could come at any time that they must answer.
 - **Understanding & Appreciation:** This course allowed me to look into statistics and rhetoric in a way I had not thought possible before. I was able to examine both data and the mode it was presented in a way I have not before and become more critical of the news I consume.
 - **Intellectual Growth:** This course allowed me to appreciate all forms of news in a way I had not before and better appreciate others viewpoints. By consuming more news from both my own and

other perspectives I was able to think and develop ideas that I may not instinctively agree with.

- **Quality:** Overall this class was very well taught by both professors and they played to the strengths of each other well, by relying on the math skills of one and rhetoric skills of the other. The only slight of the professors is that they were not clear of who would grade which assignment and both seemed to grade assignments in different ways, meaning if the students knew who was grading the assignment they could possibly tailor the assignment better toward the professor grading it. Professor Cipolli in specific did a great job explaining complex statistic problems to students who may not have a large background in math or statistics. He did an outstanding job of making this interesting in the process which is hard to do for non-math inclined students.

○ Student: 7

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a good amount of effort into this course. It was challenging during class discussions, though I didn't always do the readings.
- **Understanding & Appreciation:** I appreciate how to read and understand information much more. The skills I learned in this course will carry over into my other classes, and life, as well.
- **Intellectual Growth:** I learned to think critically and contribute to class discussions in a thoughtful way.
- **Quality:** Professor Cipolli is a good teacher and I enjoyed having him as my professor. While at some points he was explaining statistics to a room full of people who had no idea what he was talking about, he was patient with us and answered our many questions with ease.

○ Student: 8

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; It was the least science sounding scientific perspective and actually sounded like a really interesting subject.
- **Effort:** I put a fairly high amount of effort in.
- **Understanding & Appreciation:** I now know how to identify fake news, statistics, and general pieces of information in the media. I consider myself an educated and numerate information consumer.
- **Intellectual Growth:** It definitely helped me to grow analytically and improved my ability to interpret studies.
- **Quality:** Prof Cipolli did a good job engaging the class, handed back assignments promptly, and was an entertaining speaker. There could be some improvement on clarifying grading criteria prior to handing in the homework.

○ Student: 9

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I put in an OK amount of effort into this class. I only missed one of the classes throughout the semester, I did all of the homeworks, and I studied a bit for each exam. There wasn't much work or need for much more effort to do well in the class.
 - **Understanding & Appreciation:** I feel as though I have learned nothing in this course. I only have one page of notes from the entire semester, and I genuinely could not tell you any new information that I received. Sure, I did learn to think more critically about the information I receive, but I would probably have been effected the same way if someone had just told me to do this in a quick 5 minute conversation. I was reminded of what were p-values in statistics were.
 - **Intellectual Growth:** The course helped me to think more critically about the information I receive in articles and in research papers. Mostly, it helped me push myself to participate in a large class and think about personal responses to the other things students were saying.
 - **Quality:** Professor Cipolli cared a lot about the students and made an effort to answer everyone's questions and make everyone's voice heard. However, he did not do a very effective job teaching the material. It was clear that he knew what he was talking about and that he was very passionate about the material, but I think that he had trouble adjusting his stats lessons for a class that wasn't based around statistics. It often felt like he was going around in circles and confusing the class more everytime he repeated himself, and I found myself lost in even the statistics that I thought I knew. However, I think this is more a product of the course being new and very different from regular classes than a reflection of him being a bad professor.
- o Student: 10
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Not a ton of effort as it is a CORE class as opposed to a class required for my major with subject material I will need to continue with my major.
 - **Understanding & Appreciation:** I understood how to better view scientific papers and popular press articles to look for validity and also falsehoods.
 - **Intellectual Growth:** It taught me good ways to view news I encounter in everyday life. Other than that, I do not think my intellectual growth changed much because of this course.
 - **Quality:** Professor Cipolli was very knowledgeable but occasionally went too in-depth into hard math definitions and topics for a core scientific perspectives class so he usually lost most of the class. He was always very engaged on our class blog answering questions and helping students which were great. I just wish the two professors discussed with each other their views before class instead of arguing with each other and leaving the class to wonder what the correct answer is, what we should be doing on assignments, etc. because both professors had different opinions on all matters.
 - o Student: 11

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Very little.
 - **Understanding & Appreciation:** It didn't.
 - **Intellectual Growth:** It didn't.
 - **Quality:** Few and far between will you find professors that can match the daily energy and genuine excitement of Will Cipolli.
- Student: 12
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I definitely put a lot more effort into this course than I have in other courses, which was disappointing because I have not done as well in this course as others.
 - **Understanding & Appreciation:** I definitely gained an appreciation for the course subject and it made me more interested in having more of these discussions in other classrooms.
 - **Intellectual Growth:** I definitely think I will be able to think more critically about information and this will have a significant impact in my daily life.
 - **Quality:** I think Prof Cipolli is a great professor and made the class very enjoyable . My only frustration was that sometimes he would get really excited about a certain topic and go on for the entire class explaining it without realizing the majority of the class had no idea what he was talking about. I think it would've been beneficial if he had just checked in with us every so often. Like in my review for Prof Worley, I felt that the grading was not very fair. I found we were penalized greatly for small things we omitted, and were given no credit for the actual work we did put in which made the assignments very frustrating. Prof Cipolli is clearly a very smart man and really cared about this class which made me want to work even harder. I was super appreciative of the work and effort he put into the class and think he is a phenomenal professor.
 - Student: 13
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a moderate degree of effort into this course. I spent a lot of time doing the graded and ungraded homework, but not as much time on the readings that were assigned to us. I also put a great deal of effort into studying for the exams in this class, as well as keeping up with my posts on the class blog. The reason that I did not spend as much time outside of class on the readings that were assigned, was because I found that much of class time was often taken up by tangents, and on some occasions we would only discuss what we had read the night before for ten minutes. Thus, I felt that I could merely skim the readings to get the job done.
 - **Understanding & Appreciation:** I learned how to analyze pieces of information and discern what could be misleading in the news we are fed on a daily basis. I acquired a lot of skills on how to spot

fake information, how to tell a good source from a bad one, and how statistics and rhetoric overlap with one another.

- **Intellectual Growth:** I believe that I became a much more critical thinker and reader as a result of this class. BCM had me closely analyze a wide array of particles, papers, etc. over the course of this semester, and I will now use the skills I have learned in this class in my other subjects as I progress throughout not only college, but life as well. This class taught me that I should not be complacent with the information I am fed and believe everything without second thought. Instead, it taught me to be analytical and rightfully dubious, and sparked in me a desire to find proof.
- **Quality:** I really enjoyed Professor Cipolli's style of teaching. I thought that he was extremely understanding and felt that he cared a lot about the students in the class. He was always enthusiastic during class time, which made coming to class enjoyable for me. Although I was on occasion confused by some of the portions of the lecture having to do with statistics, I thought he did a good job at simplifying mathematical topics in a way that made them easy to understand for almost everyone.

o Student: 14

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put maximum effort into this course and never skipped a reading or a homework assignment. I tried really hard to not only achieve high marks, but to get something out of this course.
- **Understanding & Appreciation:** I think previously I did not really question things I found in research or the media as much and this class has definitely made me understand better the way publishers try to be facetious and misleading in their reporting and to be on the lookout for that.
- **Intellectual Growth:** I think this topic can apply to research across disciplines and in everyday life too. I do not know that it made me appreciate statistics any more or less than previously, but I definitely became a more healthy skeptic after this course.
- **Quality:** I think that this class was a challenge to teach and I almost think that Professor Cipolli was a little too smart/nerdy to be teaching this class. Time and time again,, he would give these very nice, quality, lengthy, math explanations of things, and a handful of people would get them. And we would have to start over. I liked the way he and Professor Worley worked off of each other. They did not always agree when it came to grading.

o Student: 15

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I read the class readings, I posted on the blog twice a week, and I extensively prepared for the exams.
- **Understanding & Appreciation:** I am a much more critical thinker with news headlines and statistics–this class has instilled a set of guidelines for me to go through as I evaluate information.

I also know how to find the key pieces of information in a scientific article and how to evaluate graphs.

- **Intellectual Growth:** I am now much more interested in the news/politics because of our class debates regarding different news sources and different political parties.
- **Quality:** Strengths: he is very passionate about his work, he puts a lot of work into this class, he is very helpful in office hours Weaknesses: he would get distracted during class discussions, his explanations of math concepts were confusing, and grading structure is unclear

o Student: 16

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; This course was recommended to me by my previous Intro to Economics professor, Professor Blume-Kohout.
- **Effort:** I put a lot of effort into this course. I tried to stay as active as I could on the blog in terms of checking posts and adding to the blog in terms of either my own postings or comments on other people's posts. I think that this class doesn't have a ton of outside mandatory work, but I think that the blog and contributing in class can both be a lot of work depending on your own standard of effort.
- **Understanding & Appreciation:** I really like the way that this course merged both a humanities subject and a STEM subject, although I have learned now through this course that the two are inherently connected. I loved learning about how to apply statistics to my own ways of obtaining and thinking critically about information. I think that the structure of this class could be improved a bit, as it was very hard to speak in a class of 50 when the class is purely discussion-based. However, both professors worked hard to incorporate everyone into the conversation and I loved engaging with the course material.
- **Intellectual Growth:** I think that this course really made me think critically about my own habits in terms of the way that I read and understand and believe (or don't believe) what I am told. I think I have learned a lot of real-life skills that I can take with me to my everyday interactions with media and information.
- **Quality:** I really loved having Professor Cipolli as a part of this teaching duo. He has a talent for explaining somewhat confusing math concepts in really clear and relatable ways. I will forever remember the significance of a p-value because of his anecdote about trying to find his car on the street. He had really clear grading criteria and was very fair to his students. He is very comical in his teaching and really tries to make math relatable and enjoyable for all of the students in this class. I would want to take another class with Professor Cipolli.

o Student: 17

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I would do the readings and homework required for class. I would also review class material before the midterms.
 - **Understanding & Appreciation:** It would appreciate how statistics is a flawed field when utilized by individuals who may or may not have a complete understanding of its implications for data. Misinterpretation from innumeracy and other factors help create this flawed understanding in online articles. It is up to us as readers to determine what is true and untrue about the findings stated in an article.
 - **Intellectual Growth:** This course allowed me to improve the use of statistics when evaluating empirical data from an online source. It helped me understand and develop my critical thinking when it comes to looking through these articles. Additionally, it helped me develop a framework in which to assess data and how relevant it is the material I am looking for.
 - **Quality:** Strength lay primarily in his ability to convey the course material and effectively help us understand what the statistical portion.
- o Student: 18
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material; This course is very interesting. I really appreciate that I can take this course.
 - **Effort:** Graded and Ungraded homework. Course Discussion. Blogs and posts. Readings.
 - **Understanding & Appreciation:**
 - **Intellectual Growth:** It really helps me to have the ability of critical thinking and we can also examine the information provided by articles.
 - **Quality:**
 - o Student: 19
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** One could easily "slack off" in this course/not try and still "get by," but I approached it with the same energy and attention I do for my other classes. Readings for every class, and a mixture of graded and non-graded homeworks. Minimal studying for the exams.
 - **Understanding & Appreciation:** I have a much better understanding of statistics. This class in combination with Research Methods in Psychological Science was really helped and interesting. I gained skills about how to analyze information in many facets of knowledge. I learned more about political parties. I learned more about the publishing process.
 - **Intellectual Growth:** I learned how to effectively communicate in a large class size that still required active participation (speaking and listening). Being disciplined to come prepared with class readings. Managing my input for the class through a balance of blog posts and in-class participation. I learned how to communicate my own beliefs better.

- **Quality:** Strengths: Professor Cipolli knows SO much about statistics/math – it was contagious and helped significantly with the course material. He always came to class very eager to teach. He is fun guy to learn from. He gave positive feedback/positive constructive criticism/positive discourse whenever anyone participated. Explained things very thoroughly – drew graphs and gave anecdotal stories to help sometimes Weaknesses: His weakness was mainly the class structure’s weakness as a whole (same with Professor Worley) – sometimes it was easy for them to talk too much about their grading procedures because some people thought it was confusing; I, on the other hand, thought it was fair, and I understand why they felt the need to address it a lot.
- Student: 20
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; It seemed like the least science-y of the Scientific Perspectives
 - **Effort:** I did most of the readings before class and studied before each exam. I also posted on the blog once or twice a week.
 - **Understanding & Appreciation:** It made me more critical of information, whether I agree with it initially or not.
 - **Intellectual Growth:** Forced me to recognize that all information has an author, and that all authors have potential bias
 - **Quality:** Professor Cipolli did a great job at breaking down mathematical principles for the non-mathematically inclined students in the room, but I also think that his expectations for assignments could be more specific.
- Student: 21
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This course was challenging mainly because it was the first time being taught so, both the students and the professors were learning along the way.
 - **Understanding & Appreciation:** I now understand and appreciate how to detect false information which is very helpful.
 - **Intellectual Growth:** This course allowed me to grow by now being able to understand information better.
 - **Quality:** The same thing can be said for Professor Cipoli. I think that if we had a little more direction on what specifically they wanted from us, it would have been a lot better. The homework and the methods of grading were confusing and often were difficult to complete. I did think the way they taught the course was helpful. This course was mainly discussion based which I thought was interesting and conducive to my learning.
- Student: 22

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material; Reputation of the instructor
 - **Effort:** I actually put a lot of effort into this course. I did all the readings, frequently posted things on the blog, and constantly engaged with the materials outside of the classroom.
 - **Understanding & Appreciation:** I have become better at detecting questionable information, and in the mean time I have kept my appreciation for statistics. "Don't let perfect get into the way of good."
 - **Intellectual Growth:** This class has really helped me become a critical thinker outside of the classroom. Being able to apply this critical attitude while still keeping curiosity of things has helped me learn so much from other disciplines.
 - **Quality:** Strength: Open to contributions from all/ respect all the students/ encourages thinking and engaging with the materials
- Student: 23
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put in a considerable amount of effort into this class in completing out of class homework assignments on a weekly basis, blog posts, and studying for midterms. I did like that the homeworks were distributed evenly rather than huge projects all at once.
 - **Understanding & Appreciation:** I feel like I have a better understanding of how to detect false information, however, I do feel like a lot of the lessons were repetitive and I learned few tangible skills.
 - **Intellectual Growth:** Learning about detecting author bias and the spread of BS information is very applicable to today's media climate and other classes.
 - **Quality:** Professor Cipolli was energetic and enthusiastic about the material and enjoyed when students asked questions. However, he would often be confusing when answering the questions. Additionally, I did not understand his grading. I felt that on the exam questions and homework he graded I would get a grade that in no way correlated to the time and effort I put into the question which I think is unfair. I was unsure what he was looking for in some answers and if you put in unnecessary material you could get points off, even in very abstract questions.
- Student: 24
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I did not put in that much effort into the course. I did most of the readings, contributed to the blog, completed all of the homeworks, and studied for the tests.
 - **Understanding & Appreciation:** This course has made me think more about false information and how to detect it.

- **Intellectual Growth:** As I said before, the course has made me question the veracity of information, and the way in which statistics are portrayed.
- **Quality:** Professor Cipolli is a good professor. However, he is not fit to give this class if Professor Worley were not to be here. His mathematical explanations were not as clear as I would have wanted them to be, and he sometimes got entangled in them. That is when Professor Worley had to step in, and ask him to clarify it for the class. I do not think that he has high grading standards, but he is an unreasonably harsh grader. He deducted points off of exam questions if they didn't say verbatim what he wanted us to say. I think he is a nice person and knows about Statistics, but I would probably not take a class with him again. He is not a bad professor; he is just very technical not in the best way.
- o Student: 25
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I completed homework assignments ahead of time and to the best of my ability. I engaged in class during lecture and actively asked questions to clarify any confusion.
 - **Understanding & Appreciation:** This course introduced me to data analysis and basic statistics.
 - **Intellectual Growth:** I think my exposure to media and news sources improved.
 - **Quality:** I think this class was somewhat disorganized. It was never exactly clear what the expectations were as far as grading criteria and the two professors seemed to disagree on what was most important to focus on. I don't really feel like I know exactly what the main goals of the class were. It was difficult to participate in a discussion based class that was such a large class size and that issue was never really resolved throughout the semester. I do think Professor Cipolli cared a lot about the subject material and getting students to engage with the material. I think he would do an excellent job of teaching this class on his own.
- o Student: 26
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put in a great deal of effort. I came to class every day ready to be actively engaged in class discussions.
 - **Understanding & Appreciation:** This course made me appreciate the course subject as it taught me a lot about finding fake news
 - **Intellectual Growth:** It taught me real-world applications. There is a lot of fake news in the world and this class has helped me know what source is good before I restate something I heard on the news.
 - **Quality:** Great teaching, did not see many weaknesses except for one and that is Professor Cipolli's ability to make some of the course concepts such as P-values easy to understand. It took a great

amount of time to understand what that meant. I do not know if that is because it is actually hard to explain, or his word choice was not very clear. Other than that, really enjoyed his teaching.

○ Student: 27

- **Reason(s):** Reputation of the instructor; Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this course because there were a lot of different aspects of this course. While each individual aspect did not usually take a lot of effort like blog posts, green books, and attendance, all of them combined added up. I put a lot of effort into both the graded and ungraded homework.
- **Understanding & Appreciation:** I took stats as well as this class this semester so there was a nice crossover so I understood the material pretty well, especially at the end of the semester.
- **Intellectual Growth:** It definitely helped me in my everyday life, when I read or watch the news and am skeptical about certain information given. I think when I read material for my classes, however, I will not go into depth fact checking because I would assume my professors have done the fact checking on information prior to assigning a reading.
- **Quality:** Sometimes in order to explain a subject, we would be introduced to a whole new subject that would take a lot of time to learn and understand which was frustrating but I understand that statistics builds off of each other and when you jump straight to p values like we did, it requires a quick summary of everything that came before it.

○ Student: 28

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** Most of the effort I put into this course had to do with studying for the midterms, completing graded HW, and making sure I kept up to date with my blog posts. I would say though that out of these three things graded HW was what I put the most effort into because I really wanted to do well on these assignments because I knew they were important to my grade so I tried my best to be thoughtful and careful with them.
- **Understanding & Appreciation:** The biggest thing which I took away from this course was how flawed studies can be and how they should not be the sort of be all end all statements that politicians and the media frequently use them as. I thought that learning this was pretty helpful because it has made a lot more mindful of the data and information that I consume on a daily basis.
- **Intellectual Growth:** As I said before the biggest thing would be teaching me to question information and its validity. Apart from this though, I don't really see any other areas where I have seen intellectual growth. I don't really believe that this course gave me a lot of valuable skills which I could apply to other academic or non academic areas, aside from the point that I already mentioned about being able to better judge information.

- **Quality:** I think that Professor Cipolli is a very interesting professor and a good person to talk to especially in office hours. I found that on the few occasions when I went to visit him he was extremely helpful in answering my questions and making sure I understood the material. Having said that though, I felt at times that in class he could get a bit too technical with Stats. and I often found it hard to follow along with him. I think that going forward in the future it would be super helpful to mitigate these things which may be hard but given that it is a CORE SP I think it would make more sense. I also think that as I stated with Professor Worley, a lot of the grading procedures in this class felt very unclear at times and I wasn't always sure what sorts of things carried the most weight. I found this to be pretty frustrating because to me what seemed like little errors were actually huge mistakes and I wish I had some more clarity on how things were graded.
- o Student: 29
 - **Reason(s):** Reputation of the instructor; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I read the assigned readings and did all graded and ungraded assignments. I participated in class and on the blog in order to actively improve the conversations held in class.
 - **Understanding & Appreciation:** I feel that I entered this class with a good understanding of how to execute the main tenants of this class. I had already taken AP Stats and several classes that heavily prioritized critical thinking/analysis. So I don't think this class particularly gave me any significant improvements in skill. The thing I most enjoyed was the real-world applications of the course material, which I felt was not done much until the last third of the semester.
 - **Intellectual Growth:** I think that I affirmed my ability to use critical thinking/analysis in my studies. I was able to fairly easily understand all of the topics covered. I think that this class gives a good basis for people who do not necessarily have these types of skills going in, but I do not feel I gained as much as I did from other classes.
 - **Quality:** Professor Cipolli very effectively taught elementary statistics operations to a class where many students had not taken any statistics. He provided examples and explanations that were clear and interesting, so the course material was easier to understand. I think the Professor Cipolli was accessible and accommodating when need be.
- o Student: 30
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of effort into this course. I did all the readings and spent a lot of time working on homework and studying for exams. Although I did not participate much in class, I made up for it by contributing to the blog often.
 - **Understanding & Appreciation:** I really appreciated having two professors for this class. I think

it was very helpful to have an "English mind" and "math/science mind" in the room at all times because the class itself is made up of students from various majors/interests, so it allowed for everyone's opinions and thoughts to be fully discussed.

- **Intellectual Growth:** This course taught me how to read information in a completely different way, which I will take with me to future classes and life. It taught me how to think critically about what I am reading and who is putting information out into the world.
- **Quality:** Professor Cipolli did a really nice job explaining the material in a clear and concise manner. Since this class has students from all different majors, there are many people who did not understand the math/science portions of this class. Professor Cipolli acknowledged this and was very patient in explaining the material and was willing to explain it multiple times so that everyone was on the same page.
- o Student: 31
 - **Reason(s):** Reputation of the instructor; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I most likely should have put more effort into the course, but I struggled with some personal issues early on in the semester and then felt too overwhelmed to catch up.
 - **Understanding & Appreciation:** I definitely have a much better grasp on how to look critically at articles and studies. I have a much better toolset than I started with.
 - **Intellectual Growth:** My analysis skills have improved over this semester. I have also become more openminded when looking at the news from the other side of the aisle.
 - **Quality:** Most of the material was well taught, although sometimes the tangential lectures that sort of went down the rabbit hole of statistics became slightly hard to follow. Overall, a good demonstration of statistics without the use of heavy mathematics
- o Student: 32
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I completed most of the reading on time and spent a substantial amount of time on routine assignments
 - **Understanding & Appreciation:** I think that this course was a valuable addition to the core curriculum.
 - **Intellectual Growth:** I was able to think critically about the current media circulation and learned how to more accurately check for the validity of information
 - **Quality:** Discussion was very helpful part of the course. I think that aspect helped to clarify certain topics for me.
- o Student: 33
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I put a less than average amount of effort into this class. The homework was the only time consuming aspect of the class, and it still did not take too long. The readings were short and easy and studying for exams was also easy.
- **Understanding & Appreciation:** Most of the information taught in the course was not new knowledge. The only thing I learned that I did not know prior were p values. The discussions guiding the classes were also not productive to learning information, as the students mostly repeated each other because the questions were very broad and not too subjective.
- **Intellectual Growth:** It reminded me to check my news sources for bias and false information used for that news source's gain.
- **Quality:** Professor Cipolli was decent at explaining complicated concepts, but always began doing so in a way that was confusing and needed interventions from the other professor or from students to slow down and explain everything. It seemed that he cared a lot and is very knowledgeable about statistics, but the lessons were hard to grasp for students like me that do not have a math background. I think that these complicated lessons shouldn't be included, but if they are, Professor Cipolli should break them down more or not get so in depth with them. Standards for grading were also unclear, as both professors gave grades that did not seem to reflect the level of error in the homeworks. I think Professor Cipolli is a good professor that genuinely wants to help and teach, but this class is not suited for higher level statistics lessons.
- Student: 34
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I kept up with the readings, turned in homework on time, and posted to the blog regularly. I paid attention to and occasionally added to class discussions. I studied hard for the exams and worked hard on graded homeworks.
 - **Understanding & Appreciation:** I learned more about fake news and how information can become distorted than I ever thought possible. It definitely raised my awareness and trained me to look out for balderdash whenever possible.
 - **Intellectual Growth:** I hope to use these skills with me in everyday life.
 - **Quality:** Prof. Cipolli was always very enthusiastic when a student asked an intriguing question or made a unique point. This made it feel as though he genuinely cared about the students and what they had to say.
- Student: 35
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a decent amount of effort, as we had nightly readings to complete which took anywhere between 20 minutes to an hour. Homeworks took up a fair amount of time as well, about 30 minutes

to an hour and a half for each one.

- **Understanding & Appreciation:** This course is very much unlike any that I've ever taken before. It has motivated me to follow the news more closely than previously and become a more informed citizen, aware that much of the news is misleading and I would be naive to accept all news without probing and researching further.
 - **Intellectual Growth:** This course taught me to be more skeptical as a consumer of news. It has taught me what I should be looking out for in a news source and what I should be critical about when evaluating the veracity of that piece of information.
 - **Quality:** Professor Cipolli was one of my favorite professors this semester! He was able to present very difficult concepts to the class in a way understandable to many, and put more time and effort into our class than any professor I have had in the past. I loved taking a class with Professor Cipolli and I look forward to taking another one with him in the future.
- Student: 36
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I took this course because I talked to Professor Worley in my first semester and she was talking about teaching Balderdash. I was intrigued by her introduction of the course and decided to take it.
 - **Effort:** I did all the homework, showed up for every class, and studied for exams.
 - **Understanding & Appreciation:** This course definitely contributed to my appreciation of the course subject. I found the material both intriguing and useful. I think this course will serve me well going into future classes and in life. Also Professors Worley and Cipolli were more than willing to accept and answer questions, which created a better comprehension of the material.
 - **Intellectual Growth:** I think this course aided in my analysis of information skills. My skepticism for articles and news has skyrocketed since the beginning of this course and I believe that that will serve me well when interpreting information.
 - **Quality:** Professor was a very strong professor. He cares about his students greatly and holds them to very high standards. He does everything in his power to help his students succeed from taking lengthy amounts of time to clarify material and advocating passionately for office hours. He was probably one of the most organized professors I have had at Colgate. His enthusiasm for teaching goes unmatched and enhances the learning experience for his students. I am not interesting in enrolling in any math classes, but having Professor Cipolli as a professor again makes it tempting.
- Student: 37
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I think I put a lot of effort into this course. With this being said, I am not sure if the grades always accurately reflected my effort.

- **Understanding & Appreciation:** I am able to better understand how to read scientific articles.
 - **Intellectual Growth:** I am able to take what I learned in this class and take it into other classes.
 - **Quality:** This professor did a good job of trying to teach certain topics to students who did not have a base understanding for them. I think both of our professors are very passionate about learning and care about the success of their students. With this being said, i'm not sure if the class sets you up for success. I feel as though it was particularly hard to figure out how to do well in the class, figure out what the teachers liked. I don't think this class was really about being smart, rather it was about if you could figure out how to do well. I also think it is tough to grade participation so high when there is such a big class. I am shy and don't really like speaking in front of people, then when I do raise my hand I am called on after ten other people and forget what I was going to say or it was said already. Overall I did enjoy this class but I think there are some things that could change to make it much better.
- o Student: 38
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This course had a lot of unnecessary work. It required a lot of reading that we would barely talk about in class. The few times I didn't do a reading, it did not impede my ability to participate in class at all. The blog also serves more as a burden than a resource. I found myself jumping in, throwing in a few comments, and leaving without reading anything else because the requirement to post made it seem like work instead of a way to discuss class material.
 - **Understanding & Appreciation:** There was some useful information but not much. It got pretty repetitive after a while.
 - **Intellectual Growth:** The class helped here more than anywhere else. It taught me to be more careful of what I read but teaching that one lesson over a whole semester does not seem efficient.
 - **Quality:** Professor Cipolli worked much better in this environment. He presented his content in a fun way, making it easy to understand (by everyone but Worley) and threw in some fun anecdotes. He was incredibly patient when students (or another professor) were disruptive, and he really knew how to address student questions. He also felt incredibly personable, making it easy to approach him after class to ask more math related questions after that piece of the lecture was cut short. Overall, I really enjoyed his teaching; it was one of the very few positives about this course.
 - o Student: 39
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I initially took this course because I thought it would be useful in the digital/modern age of news, media, and data.
 - **Effort:** I did the readings, posts on the blog, and completed the homework assignments for each

class. I studied and went to office hours for each exam and participated actively in class discussions every day.

- **Understanding & Appreciation:** I know more about statistics than I ever have, and I look at rhetoric a little differently when examining data.
 - **Intellectual Growth:** It helped me learn how to analyze information on a more numerical level.
 - **Quality:** Professor Cipolli made himself available for office hours and put effort into helping his students understand difficult concepts. The grading procedures for attendance and homework, however, were not made super clear in the syllabus, and often times rubrics or grading guidelines were made available after we turned in the homework, and I did not always know what I should be including until I found out my grade later. Attendance was graded on small collected assignments that were not available for make-ups, which means when I had an excusable sick absence, I missed a part of my attendance and my grade was affected by something that I was otherwise excused for.
- Student: 40
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a medium amount of effort into this course. I didn't always do the reading, but I often did. I rarely skipped class, and I always came ready to discuss, etc. I put sufficient effort into my homework's.
 - **Understanding & Appreciation:** I do think I am far better equipped to evaluate statistics as well as language/rhetoric.
 - **Intellectual Growth:** This class helped me get over a fear of science.
 - **Quality:** He's great! He taught me a lot, and I think he's very clear.
- Student: 41
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I only did some of the readings required because I realized that during class discussions, we barely talked about the readings and only discusses super general topics concerned with the reading material. I was able to participate fully in these conversations because you didn't have to do the reading to have the knowledge to make points in class. I pretty much made the minimum amount of blog posts/comments to get a solid participation grade because the blog was not very engaging and seemed very superficial.
 - **Understanding & Appreciation:** I learned a lot about analyzing news sources and being able to decide what was credible or not.
 - **Intellectual Growth:** I am now able to better see what's fake news and what isn't.
 - **Quality:** I think Cipolli did a much better job in this class than Worley did because he was able to adapt and learn new rhetoric concepts, unlike Worley who completely avoided mathematical

concepts like the plague and was very vocal about it. Cipolli taught in a very fun and engaging way, where I was able to learn difficult math concept in a matter of minutes. Overall, I really liked Cipolli and would take more math courses with him if I were so inclined.

Student: 42

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I worked hard in this class. Participated frequently and came to almost every class.
- **Understanding & Appreciation:** This course tackled interesting material for a classroom setting and I think it allowed me to explore how statistics manifest themselves in the confusing world of information available on the internet.
- **Intellectual Growth:** This course made me a more aware curator of news and gave me skills that can easily translate outside of the classroom
- **Quality:** I enjoyed having both professors as it made the statistical knowledge of Professor Cipolli seem more manageable. At the same time, Professor Cipolli came to class with a great attitude every day and his passion for both teaching and the subject matter was reflected in his teaching.

Student: 43

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put in considerable effort into some of the graded homework assignments. Some cases I would spend 4 hours on a homework. As long as you consistently did the reading, the work was manageable and constant throughout the semester.
- **Understanding & Appreciation:** I have a greater appreciation for analyzing information and reading information.
- **Intellectual Growth:** I am now more sufficient at interpreting statistics and can understand how information was created.
- **Quality:** Professor Cipolli was highly accessible during the semester and was excited to meet with students in his office hours. He was engaging and always enthusiastic regarding the course material which was transferred to the students. Professor Cipolli often went on tangents which caused some topics to become confusing. It was clear he was excited about teaching the content, but this led to him getting into specifics that weren't easily understood by the majority of the class.

Student: 44

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** My effort was a step above minimal, although it seemed like a fair level of effort. I did all of the homework assignments and participated in class. I contributed to the blog. The readings, however, I didn't always complete- and often skimmed.
- **Understanding & Appreciation:** I learned to think critically in relationship to media and other

forms of information. I learned a lot about the flow of information. But most importantly, I learned to practice a handful of skills that I hadn't done outside of class- like analyzing a website for validity or how to set up a hypothesis test, how to fix visual media, etc. Lots of soft but relevant skills in today's society.

- **Intellectual Growth:** I've decided to become more political and engaged with the world. I've learned that people of "the other side" are not as ignorant and naive as I have made them out to be and that a conversation can really go far.

- **Quality:**

Student: 45

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; It seemed like it was the least sciencey scientific perspective offered which was appealing to me because I am not a science person.
- **Effort:** I put a lot of effort into this course. I did all the readings every night which ranged from 30 min-1 hour or so a night. Keeping up with the blog was something that took some time but was not too brutal. The homework were deceptively time-consuming and many times would end up taking at least an hour and a half sometimes two.
- **Understanding & Appreciation:** This course helped me think about the information that I am consuming on an every day basis and it pushed me to question venues I would have previously just assumed to be reliable news sources. It also helped me to become a better reader of not only scientific articles but all articles in general by teaching me how to really evaluate the veracity of a piece of information.
- **Intellectual Growth:** Taking this course was a nice change from the history classes that I have been taking. Having a math/science class was a nice break for my mind and really helped me to continue to vary the way that I think about and assess different questions and ideas.
- **Quality:** Professor Cipolli did a really good job of explaining material in a way that was able to be understood by most people in the class. With follow up questions I was able to have a firm understanding of all of his concepts without taking a statistics class.

Student: 46

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor
- **Effort:** There were a lot of homework assignments and readings along with blog posts and other things, so even though there was never one big assignment, this course required a fair amount of effort. It required daily effort and time to keep up with the class.
- **Understanding & Appreciation:** I had never really taken a class like this before so I learnt a lot of new things. Having two professors from different departments was also very helpful because that way we'd learn about multiple perspectives on everything. We covered a lot of ground both about

numbers and language which was interesting.

- **Intellectual Growth:** I think this course has a direct impact on our day-to-day lives because of the material that it covers. I've learnt to consume information in a better and more aware manner which is really useful and important in the world we live in.
- **Quality:** Professor Cipolli clearly knows a lot about math and statistics and he's very good at getting other people interested in them. It really helps when a professor is so passionate about what they're teaching because students also automatically become interested. For a class where most of us weren't into math or numbers, Prof Cipolli did an amazing job teaching us more about statistics and what the numbers represent. He was also very open to questions and other views and opinions, which was really helpful in gaining a better understanding of what he was talking about.

Student: 47

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I didn't put a lot of effort into this course.
- **Understanding & Appreciation:** I understood how to better analyze information, but other than that I didn't think this course was necessary or useful for me. Overall I didn't learn a lot.
- **Intellectual Growth:** I don't think this course contributed greatly to my intellectual growth or education.
- **Quality:** I was mostly frustrated in the class because grading wasn't clear at all. No one knew what to expect for the midterms or the final because we weren't given any concrete information about it. Also we were given random readings each night and then in class we wouldn't get to many of them. The discussions in class were also very scattered and unclear about the point of them. Professor Cipolli would sometimes go on tangents about stats problems when they weren't relevant to anything we were talking about in class. When he did this I was very confused and didn't know how it related back to class.

MATH 105: Introductory Statistics

Fall 2021: Section A

o Student: 1

- **Reason(s):** Major or minor requirement; Reputation of the instructor
- **Effort:** Reading materials and lecture powerpoints, using R to finish homework...
- **Understanding & Appreciation:** This course introduces me to many statistical terms and how statisticians work in an organized way (random sampling, random experiment, analyzing data...)
- **Intellectual Growth:** This lets me think deeper about the use of statistics in real-life examples. It's very good to analyze real examples in class to have a sense of how statisticians work.

- **Quality:** Prof. Cipolli is amazing! He is the best professor you can have for a large class. His lecture is organized and interesting; the grading criterion is also creative and helpful. I'm most amazed that for every exam, he will give each student an individualized report on grade, which is a big amount of work for a class of about 70 people. I have no idea how he can manage to be perfect in all ways. Thank you Prof. Cipolli for the amazing semester!
- o Student: 2
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put great effort into this course and studied rigorously for the tests.
 - **Understanding & Appreciation:** I have a much larger understanding and appreciation for the course subject. I feel I have a much larger tangible knowledge of the subject, and I feel I can understand polls and statistics in mainstream media better now.
 - **Intellectual Growth:** The course taught me how to meet deadlines on time, how to study efficiently, and how to focus on areas I did not know. Our professor's method of grading where he gives the breakdown for each "Standard" really helped guide me toward these developments.
 - **Quality:** Professor Cipolli was a great teacher. His classes were focused and he always responded well to student questions. He was always available—there was never a time that I needed help and our professor was not there for me. Also, I love his grading breakdowns and updates, which really allow students to grasp a full picture of how they're doing and how they can improve. I came into this class scared to learn about statistics, but I left feel satisfied and wonderfully surprised. Thanks for a great year!
- o Student: 3
 - **Reason(s):** Major or minor requirement
 - **Effort:** I think i put a great deal of effort into this course. Attending class was crucial since each lecture was needed to understand the upcoming homework. The homework assignments themselves were also quite extensive and I often spent 3-4 hours on each of them.
 - **Understanding & Appreciation:** This course showed to me how to apply statistics to real world problems as well as basic probability and hypothesis testing.
 - **Intellectual Growth:** I learned how to take thorough notes and also how to critically think and problem solve when dealing with difficult R problems.
 - **Quality:** I think Prof Cipolli is a very dedicated and eager professor with a lot to offer. He was engaging in class, encouraged participation, and always accessible. The only recommendation I would make would be to have the tests mirror the homework a bit more. I was very taken aback on the second test when we were provided with printed R code. I think more practice with this would have benefitted me and my peers.

- Student: 4
 - **Reason(s):** Major or minor requirement; Economics major.
 - **Effort:** For each class meeting, I took notes on the lectures. In terms of homework, I began each assignment a few days before they were due so I had ample time to work on them. I also put a lot of time into studying for exams, seeing as they were very cumulative.
 - **Understanding & Appreciation:** I have never explored this field of math before. This course provided a nice introduction to it and helped me appreciate just how applicable statistics is to many fields.
 - **Intellectual Growth:** I consider myself more of a humanities student rather than a STEM student. Therefore taking a STEM-based class challenged me to think and learn differently.
 - **Quality:** Professor Cipolli has many strengths. His grading is very quick and fair. He also makes sure to review the material at the beginning of each class so we understand it better. The only issue seemed to be the last few topics of the class. I believe they could have been explained a bit better as I started struggling with the homework and with understanding in general.
- Student: 5
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** The homeworks often took a long time and the exams were challenging.
 - **Understanding & Appreciation:** It contributed a lot to the conceptual understanding of statistics
 - **Intellectual Growth:** I felt it really stretched me to think about graphs/charts differently.
 - **Quality:** Professor Cipolli is very kind and willing to help. His course is very challenging for an intro level course and felt that the material was extremely difficult.
- Student: 6
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** My effort ebbed and flowed throughout the course; sometimes I was very engaged in class and homework, but other times my effort definitely waned.
 - **Understanding & Appreciation:** I grew in my understanding of and ability to apply statistical analysis, however this course kind of solidified the fact that I don't particularly love stats. However, it did reaffirm the value in a basic understanding of stats, especially through our case studies and real world examples.
 - **Intellectual Growth:** It gave me a better mathematical foundation and helped me grow in my ability to visualize and manipulate data to extract results.
 - **Quality:** Overall, Professor Cipolli is a good teacher with great intentions. His classes are a bit dull, but he is very accessible and receptive of feedback, questions, and issues. He seems to love teaching.

- Student: 7
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put in a lot of effort for the things I did not understand
 - **Understanding & Appreciation:** Helped me have a broader understanding of stats
 - **Intellectual Growth:** It allowed me to take tests and then learn how to restudy and do better the next time
 - **Quality:** Nice, smart guy. The homework sometimes was a bit confusing and didn't follow exactly what we did in class, but overall had a strong correlation.
- Student: 8
 - **Reason(s):** Major or minor requirement
 - **Effort:** This course took a great deal of paying attention to detail in making calculations and judging whether to use certain methods and formulas to arrive at our end results. I am typically a person who makes those mistakes in detail so it took me having to slow down and train myself to watch for detail.
 - **Understanding & Appreciation:** I didn't think statistics was so in-depth so this course has definitely changed my view of statistics and I can somewhat appreciate its importance more being that I realize its depth.
 - **Intellectual Growth:**
 - **Quality:** Professor Cipolli is a great professor and he is very energetic and does his best to make sure students are engaged. He understands that we have our ups and downs throughout the semester and he does little things to lighten our moods. There really aren't any negatives that I could give him but I would suggest that he tweak his testing technique by making sure his tests do not overlap too much. I found that the second exam took a bit much after the first but I may just be missing the connection between the content on the two exams.
- Student: 9
 - **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
 - **Effort:** I attended all lectures and completed all the assignments on time.
 - **Understanding & Appreciation:** This course taught me to see statistics all around me and recognize how varied the applications of statistics are. Furthermore, I feel like this course has given me a good understanding of the foundation of statistics.
 - **Intellectual Growth:** I learned how to use technology more effectively and also gained an appreciation for teamwork while working with other students for this class.
 - **Quality:** The professor was very accessible outside class to help resolve doubts. He also used a lot of examples to show the relevance of the course content in the real world. However, sometimes the

examples seemed unnecessary and more time on the theory would have been more useful.

- Student: 10
 - **Reason(s):** Elective outside major or minor
 - **Effort:** I came to all classes and extensively studied
 - **Understanding & Appreciation:** I re-learned stats. Honestly, I took this because I thought I was applying to grad school and ended up changing my mind so...oh well.
 - **Intellectual Growth:** I think stats is useful for a variety of disciplines so in that respect, I appreciate the course, though realistically the amount I use it is not super high.
 - **Quality:** Prof. Cipolli is a solid professor. Accessible, kind, patient.
- Student:11
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this class. Math is not my strong suit so this was really hard.
 - **Understanding & Appreciation:** This course contributing to my understanding of statistics a lot because I had never taken a stat class before.
 - **Intellectual Growth:** This course contributed to my intellectual growth because now I have a whole new way to looking at and analyzing data.
 - **Quality:** High quality of teaching, hard course material. I understand why we had to go online at the end of the semester, but that was not good for me.
- Student: 12
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** weekly homework, textbook reading, studying for exams
 - **Understanding & Appreciation:** I enjoyed all the real world applications of stats
 - **Intellectual Growth:**
 - **Quality:** If you just met Cipolli, witnessed the time he dedicates to office hours, and saw the detail he puts into critiquing the exams, you would not have guessed he taught a big lecture. His dedication to each individual to ensure they succeed in this class is heartwarming and helpful.
- Student: 13
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put in a fair amount of effort into this class, it wasn't my hardest or easiest class however I still had to work to get a good grade
 - **Understanding & Appreciation:** This course gave me a good foundation to statistics beyond just the common knowledge that everyone knows.
 - **Intellectual Growth:** This course helped me think about studies and surveys in a more critical light, and allows me to understand statistics in a more in depth manner

- **Quality:** The quality of teaching in this course was good. Prof Cipolli was very enthusiastic and energetic about the course material, however sometimes the classes could be boring he was a good overall professor.
- Student: 14
 - **Reason(s):** Major or minor requirement; Planning on declaring economics as a major, this is a requirement.
 - **Effort:** This class required a lot of effort to succeed. We were required to do weekly homework and diagnostics. These would take me multiple days to complete. Studying for exams took a large chunk of time because we were quizzed on material from the exam before.
 - **Understanding & Appreciation:** I have never taken a statistics class before so all of my understanding comes from this one!
 - **Intellectual Growth:** This is the largest class that I have been in at Colgate so this was definitely an adjustment!
 - **Quality:** Sometimes I felt as though even though even most of the class was confused, Professor Cipolli moved on if one person raised their hand to answer. In my opinion, a majority of the class should be able to grasp the information before moving on. Overall, Prof Cipolli did a great job answering people's questions and was very accommodating if you could not take exams at the scheduled time.
- Student: 15
 - **Reason(s):** Major or minor requirement
 - **Effort:** The effort that I put into this course was very substantial
 - **Understanding & Appreciation:** It contributed by teaching me how to better calculate probabilities that I didn't know about
 - **Intellectual Growth:** It contributed by helping me to better understand concepts that will be important in potential industries that I'm interested in going into like finance.
 - **Quality:** My opinion of the quality of this course is very positive, with the weekly diagnostics being an important strength of this class.
- Student: 16
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put lots of effort into the homework assignments, preparing for class by reading the notes and into preparing for exams.
 - **Understanding & Appreciation:** It was a steep learning curve since I did not have much background knowledge in stats. I was unaware of how complex it is to analyze statistics and this made me appreciate the subject more.

- **Intellectual Growth:** This course inspired me to think more critically about the stats that I encounter everyday.
- **Quality:** I thought Professor Cipolli did an excellent job teaching this course. He went over material thoroughly and in an engaging way. His homework assignments were very fair and he was always willing to accommodate us. His grading technique/structure was a little confusing at first but it was very beneficial to us in the end (as we had more than one go at each standard. Exams were very fair too.
- o Student: 17
 - **Reason(s):** Major or minor requirement
 - **Effort:** I would create notecards and study them per standard. In addition, I would do all of the free response questions given at the end of the text book.
 - **Understanding & Appreciation:** I had taken AP stats before, and I think I prefer actually doing the math rather than just learning about it. I learn by doing not as much by listening. I really enjoyed AP stats, but this class was a little tougher for me since we didn't do much math in class.
 - **Intellectual Growth:** I became more patient with myself. The coding really intimidated me, but I just took it piece by piece.
 - **Quality:** I felt that it could have used more comparisons considering how many of the words are reused in different pairings with completely different meanings behind them. However, Professor Cipolli gave us many resources to improv on our own which was very appreciated. He definitely gives you all the tools you need to succeed. In addition, I like his grading style. Although, I don't understand how two wrong equals a C.
- o Student: 18
 - **Reason(s):** Other requirement; Future classes I plan on taking had this class as a prerequisite.
 - **Effort:** I put a lot of effort into this course, especially on homework assignments.
 - **Understanding & Appreciation:** We learned material in a different order than in my high school stats class, which made me think about it all differently.
 - **Intellectual Growth:** I now better understand/question the results of data in the outside world.
 - **Quality:** I thought Professor Cipolli had a very high quality of teaching, and was able to manage the large number of students in the class well.
- o Student: 19
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; This class fulfilled my Natural Sciences requirement and I was dreading taking this class
 - **Effort:** I put hours and hours into this class every week, yet failed to find success with understand the course material, especially in the later units.

- **Understanding & Appreciation:** This course did not increase my appreciation for the course subject. I had a very difficult time understanding the concepts because we were using RStudio to show the executions of the content.
 - **Intellectual Growth:** Because we focused a lot on Theoretical statistics, it was hard to apply the stuff we learned to other disciplines and read world subjects. This course caused me a lot of stress because it felt like busywork and it took away from the courses that count toward my major which I am actually interested in.
 - **Quality:** The quality of teaching in this course was as good as it could be in an Intro Lecture course. I do not think that Professor Cipolli had the best tools to deal with such a large class, where lots of students do not have any prior experience or interest in Math or Statistics. The use of RStudio was a huge mistake, and I believe this caused a lot of students to lose their place in the course as they struggled with the software, which was actually unnecessary to understanding the concepts.
- o Student: 20
- **Reason(s):** Major or minor requirement
 - **Effort:** I had already taken a statistics course so I was pretty familiar with the subject material. Most of the material came easily to me and I did not have to put as much effort into this class as in other classes. I took several days to complete each homework and frequently went to office hours with the teaching assistant, and I completed every practice FRQ to review for the tests which were about the same difficulty as the practice. The effort I put into this class was relatively moderate compared with other classes since I found the material more straightforward and easy to understand.
 - **Understanding & Appreciation:** It showed me the importance of interpreting statistics and I gained new insight into the statistical process. Statistics guide our lives in all different types of ways, and through this class I was able to appreciate that both through the professor and the material. I continue to use this course in my everyday life to evaluate statistics in the news and around my life.
 - **Intellectual Growth:** As previously stated, this course has opened my eyes to interpreting statistics in everyday life, since statistics tell a story of aspects of the world. Since I didn't find this course especially challenging it didn't contribute too greatly to my intellectual growth, but it did provide a good foundation for future statistics and economics courses.
 - **Quality:** The professor is very organized and attuned to the needs of his students. He is quick to answer questions and has methods that I think are very helpful to gauge how we are learning as well as how he is teaching. His grading procedure I think is very effective, and by grading each individual question and allowing the students to improve throughout the exams, it not only forces

the student to review that material, but the more we practice, the better we get. His teaching style is interactive and organized, and he barely strays too far from his material. One complaint would be his use of R, which isn't too confusing but if we took a few days to play around with R I think we would all be more comfortable with it.

○ Student: 21

- **Reason(s):** Interest in the course material
- **Effort:** Studied the most
- **Understanding & Appreciation:** Helped me a lot to understand more deeply about stat.
- **Intellectual Growth:** N/A
- **Quality:** N/A

○ Student: 22

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I was not expecting to put that much effort into the course, as I had taken a statistics class previously in high school and had gotten around the general concepts- all the way to confidence intervals. I did find myself still challenged, however, and spent a lot of time outside of class and homework reviewing the lecture slides and textbook. This definitely helped my homework performance and understanding of the material in class. The homework itself took only a few hours to complete, and most of that was reviewing and checking all the answers. The diagnostics took longer because it was difficult to find something in the textbook that had not already been questioned or commented on, so I found that the sooner I did the diagnostic, the quicker it was finished.
- **Understanding & Appreciation:** This course definitely helped me understand the concepts I learned in high school. It went into a lot more detail while still covering the same topics and more, which certainly made me appreciate the practices I just accepted and didn't question in high school. I do appreciate the course material a lot more than I once did and I like how it all falls together once you understand all the moving parts.
- **Intellectual Growth:** The course did help me put together a better understanding of how to process lectures and the resources that accompany lectures. Large lecture settings are still relatively new to me, so this certainly helped acclimate me to the setting. It also generally helped my critical thinking and logic skills more than I thought it would, because I haven't taken a math class in over a year. This assembling of puzzle pieces in a math course was helping my critical thinking more than I expected it to.
- **Quality:** I definitely liked the lecture format in spite of the decrease in personal connection through it. The content was put forth in a way that was easily understood, plus the lecture slides were

all available on Moodle afterward with notes taken on them during classthat was the most helpful part of the slides. Going through and taking notes was much more effective than explaining what a concept means on a screen. The integration of R was also very helpful and practical. It was easy to understand and the ability to take real-world data and make inferences with it helped make the class feel more real in a sense. I was able to understand that statistics as an entire concept is everywhere in the real world, and being able to understand the world through that lens is very helpful.

○ Student: 23

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course. Although I have already taken a stats course before in high school, this was much more challenging and required a lot of effort.
- **Understanding & Appreciation:** This course made me realize how stats is in everything. Statistics will always be useful and this course made me appreciate that much more.
- **Intellectual Growth:** This course helped me to realize that stats is everywhere in our world and can be used in more than just this class which is very cool.
- **Quality:** I think Professor Cipolli did a great job teaching this course. He always asked if anyone had questions or any other comments to make and he made sure to explain himself very thoroughly when going through a new topic. Overall, I really enjoyed this course and would recommend others take this with him as well.

○ Student: 24

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course. I was constantly challenged by the material and constantly needing to get help and overcome the challenges of this course.
- **Understanding & Appreciation:** I understand and appreciate stats a lot more. I always found it confusing, but this class has allowed me to understand it more.
- **Intellectual Growth:** I learned to be proactive in getting help and asking for help. Professor Cipolli was always there to help and he allowed me to be able to be proactive which I really appreciated.
- **Quality:** I loved his grading technique, I found it very helpful. At times I felt like some instructions on R, tests, and the homework were just not clear. For example, I did not know that R code was on the test and should be used in answers until Exam 3. In there future, I would ask Professor Cipolli to be crystal clear about instructions.

○ Student: 25

- **Reason(s):** Other requirement
- **Effort:** I showed up to every class, completed and checked over every homework assignment, and extensively studied for every exam.

- **Understanding & Appreciation:** I have learned which statistics to calculate in a given scenario and how to do so. I have learned how statistics are useful in the real world, and how to measure whether one is significant to research or not.
 - **Intellectual Growth:** I have learned to read critically through the textbook readings and better time management through longer homework problem sets.
 - **Quality:** While we did numerous examples in class and gained a greater sense of the overall ideas and concepts learned, while I was reviewing for exams through free response questions, I found many problems that contained elements that were not clearly explained in the class. In addition to this, the extensive use of R put a large focus on coding as a means of solving for statistics instead of math. While this made work easier at times, it blurred my focus and caused extra confusion. When multiple students asked how a certain statistic was calculated or where a number portrayed in a problem came from, the answer was always simply, "it's from R" which did not necessarily help me understand the material in the deeper sense that I had hoped. As of now, I have still done well in the class and put in a lot of effort into my learning, but it has been more confusing that I had hoped the teaching would be.
- o Student: 26
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a great deal of effort into this class and really cared for the work I put in. In addition to completing all homework assignments and diagnostics, I also went to office hours, reread the textbook if necessary, and did extra practice problems.
 - **Understanding & Appreciation:** I really enjoyed my time taking statistics. I thought that it really interested me and gave me some practical usage as well.
 - **Intellectual Growth:** This course showed that often spacing out work allows me to complete it to the best of my ability. Instead of reading everything from the textbook in one day and doing the HW problems on that day as well, I divided up the reading and problems in order to best benefit my learning. I can use this in other courses as well as learn to manage time and space assignments out in other classes.
 - **Quality:** I thought this course was extremely well taught. The professor was extremely available and really showed care for the students. If I had any sort of difficulty or wanted some clarification, I knew I could reach out to the Professor or a TA and get my questions answered almost immediately. This also made it that much more enjoyable to come to class and put in the effort outside.
 - o Student: 27
 - **Reason(s):** Major or minor requirement
 - **Effort:** I spent extensive time working on the weekly homework, reading the notes as well as

performing diagnostics. I reviewed my notes and did every multiple-choice and free-response question relating to the exam material in order to prepare for the tests.

- **Understanding & Appreciation:** Before taking this class, I did not have a good understanding of statistics. I have now gained the knowledge of not only what statistics is, but how to use and apply it to everyday problems.
 - **Intellectual Growth:** This course taught me a lot about critical problem solving and how to deduct information from a given problem to solve it. It also taught me a lot about time management and new studying techniques.
 - **Quality:** Professor Cipolli was a great professor that presented the material in an interesting way and provided many examples to help us gain a better understanding of the material being presented. He was very open and responsive to questions and was always there to help.
- Student: 28
- **Reason(s):** Other requirement
 - **Effort:** I put a great amount of effort into this course by trying to actively engage with the material, completing the homework to the best of my ability, and studying very hard for tests.
 - **Understanding & Appreciation:** This course helped me to develop an understanding of statistics and further pique my interest in math.
 - **Intellectual Growth:** This course helped me to develop study habits that are not solely memorization of content.
 - **Quality:** Professor Cipolli is very helpful in providing any possible additional aid to further your knowledge. He always makes himself available to answer any extra questions. I did sometimes feel using the R code made it more difficult to learn the statistics topics because I was focused on learning how to use R, but overall I loved this course and the professor.
- Student: 29
- **Reason(s):** I took this course because it is required for my economics major, but also because I did not get the chance to take AP Statistics in high school.
 - **Effort:** I put a lot of effort into this course, especially in terms of the homework assignments and the standards. I also attended every class and used the diagnostics to get feedback I needed.
 - **Understanding & Appreciation:** This course gave me a great foundational understanding for a lot of the topics that fall under the umbrella of statistics. It is definitely a great first step in terms of the field of statistics, or math in general.
 - **Intellectual Growth:** The way that the course was organized with weekly homework assignments, diagnostics every week, as well as exams that truly built off of one another and made the course a cumulative experience contributed to my intellectual growth. I really enjoyed how the exams were

set up, and I can tell how everything was interconnected in this course.

- **Quality:** The quality of teaching in this course was very high. The biggest strengths of the professor were their accessibility, as they were always available to answer emails and help with homework or studying questions. Also, it was very clear that the professor has a passion for this subject, and has had a lot of experience around the material. While I do not enjoy big class sizes like this one, the professor made it feel very small and manageable. I would definitely suggest this course to another student.

○ Student: 30

- **Reason(s):** Major or minor requirement
- **Effort:** I put high amount of effort into the course
- **Understanding & Appreciation:** This course allowed me to learn stats but also learn some code at the same time
- **Intellectual Growth:** This taught me how to view numbers in a different way
- **Quality:** I think the teaching was really good. Effective learning in class, good engagement, practical examples. Also the prep and grading made the exam easy.

○ Student: 31

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** This class was very challenging for me and I had to put a ton of effort into it.
- **Understanding & Appreciation:** I have very little appreciation for math beyond the basics of calculus, so I don't feel like this class helped me very much, but I am glad to know that I can do hard things academically.
- **Intellectual Growth:** It showed me that I had to lower my standards sometimes that it's also ok to do so.
- **Quality:** Cipolli was incredibly personable and helpful. He seemed to recognize that the majority of the class were merely taking it to get the requirement out of the way, so he did his best to help us understand the tricky material.

○ Student: 32

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** each week we had homework and surveys asking how the course is going. We also had three exams throughout the semester.
- **Understanding & Appreciation:** I think that the first part of the course was incredibly interesting and relevant to existing as a human in the 21st century. Statistics are everywhere and it's certainly useful to know how they are produced. I think that after that portion of the course, my interest fell off, as did my understanding. That's not really Professor Cipolli's fault, though.

- **Intellectual Growth:** In the ways I have just described. I guess it was different to exercise my math brain that I hadn't since senior year of high school, but other than showing me different types of experiments, where statistics I see every day come from, and why they aren't necessarily true, this course felt extremely irrelevant to my study of art history.
- **Quality:** Professor Cipolli was trying really hard to get us excited to learn about the math, and I think it would have been more successful if the class was smaller. Generally, I would have felt a bit more comfortable asking questions, but in general, Professor Cipolli was extremely available and dedicated to our learning and understanding. What seemed tough for this course was just that no one is a math major, and there were a few students like me (a senior, Art history major, french minor) where this was solely a distribution requirement that I was not excited and frankly nervous to take.
- o Student: 33
 - **Reason(s):**Major or minor requirement; Other requirement
 - **Effort:** Homework's took lots of effort because it sometimes took a good amount of time to fiddle with R and figure out the answers I had to study a reasonable amount for exams
 - **Understanding & Appreciation:** I definitely have takeaway knowledge about stats that I will apply to other courses/my career
 - **Intellectual Growth:** Got some experience with R, although I wish we learned a little bit more explicitly how to use R/write code
 - **Quality:** I think prof cipolli is really awesome- he does the MOST to help us (comments on exams plus diagnostics plus stack overflow plus the ppt with images of common mistakes from exams) which I can tell is a lot of work on his end to make things easier for us and I really did appreciate that. My one slight issue is that sometimes I felt like there was a disconnect between then information I thought I knew and then what the question for the standard would be asking for. . . it would make sense to me after I saw the answer key and I think I would have been able to answer it correctly if I had better known what the question was asking- for this reason I think hw that is more similar to the exams or a practice exam might be a little more helpful Overall though I really respect prof cipolli as a teacher and enjoyed the class
- o Student: 34
 - **Reason(s):** Major or minor requirement
 - **Effort:** This course required a ton of effort. There was at least 4 hours of work a week and the prep for exams was strenuous. For those unfamiliar with coding this course was very difficult at first because I don't believe there was any introduction to coding at all, I felt Cipolli expected us to naturally understand what coding is and how it works when some of us (like me) have literally

never even talked about coding nor seen a coding interface in my lifetime.

- **Understanding & Appreciation:** I definitely don't appreciate the course subject but my understanding was greatly increased
 - **Intellectual Growth:** in no ways
 - **Quality:** I think Cipolli is a fantastic professor. He is really open to questions and giving extra help and I believe he genuinely wants the best for his students and wants people to succeed. But I think this course is unreasonably difficult. it is a 100 level class and I felt like I was struggling so so much even as a junior and felt that the exams were more difficult than they should be. this course requires a lot of effort and the material is incredibly dense. I think one thing Cipolli could do it to cut his lectures in half and only focus on exactly what we have to know - I feel like there is a lot spoken about in class that we dont need to know.
- o Student: 35
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Although participation and attendance were not necessarily required for this course, they were crucial in understanding the material. Homework assignments were posted consistently to ensure we stayed on top of the material, and the exams were fairly spread out enough to allow ample amount of time to study.
 - **Understanding & Appreciation:** Contextualizing data and statistics is really important. I'm not a STEM major, but I definitely developed a newfound sense of appreciation for this course and field of study.
 - **Intellectual Growth:** Again, I think contextualizing statistics and data is important because it allows you to better understand what those values truly represent. Statistics are often used in misleading ways and understanding some of the nuances of how they are calculated, and what they represent in different kinds of data sets is important. I also really appreciated that the professor drew from real research studies for the examples and the problem exercises. The different kind of research he pulled from really demonstrated to me the importance of statistics and the interdisciplinary nature of it in other research fields.
 - **Quality:** I really liked the professor's style of teaching. I'm glad he went with a lecture based structure as opposed to a flipped classroom model, because I think the material on its own is a bit dense for an introductory class. The professor also taught in a really straightforward manner so it was easy to understand the material. The professor also provided a ton of opportunities to ask questions through diagnostics, in class, and hypothesis.
 - o Student: 36
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:**
- **Understanding & Appreciation:**
- **Intellectual Growth:**
- **Quality:**
- Student: 37
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This is the hardest course ive taken at Colgate, so I had to put in a lot of effort.
 - **Understanding & Appreciation:** I will never take another stats class.
 - **Intellectual Growth:** I usually do not like math, so this pushed me in areas I don't usually do.
 - **Quality:** He was a very good teacher and very available. His grading was unique, but I enjoyed it.
- Student: 38
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of effort into this course and honestly found that his grading was quite unfair. I thought that he took way too many points off for minor errors even when I showed a strong understanding for what I was doing.
 - **Understanding & Appreciation:** I learned a lot about probability that I had never learned before.
 - **Intellectual Growth:** I began to understand how to code.
 - **Quality:** I think that he needs to go slower over the class material. I never had time to write everything down and it left me feeling so confused and overwhelmed after each class. I also feel that the homework didn't prepare us for the tests. I wish that he could have given us more practice problems like that on the test because even though I did all of the FR questions like he suggested, going over problems like this as a class would have been really helpful, as I honestly feel like I taught myself most things as I went through the R. I think his grading methods are quite unfair and I really don't like the way he puts a letter grade on each section of the test. It confuses me and and upsets me when I work really hard and get one tiny thing wrong and he labels it a C.
- Student: 39
 - **Reason(s):** Major or minor requirement
 - **Effort:** Homework - 2-3 cumulative hours a week. I would start several days in advance. Tests - I would prepare a week in advance. I went to office hours when I had a question but should have utilized them more.
 - **Understanding & Appreciation:** This course gave me a strong base in statistics. It helped me understand how to apply statistics in the real world, especially with probability and experiments.
 - **Intellectual Growth:** I think the ability to assess if something is statistically significant and it did not arise by random chance or bias. I can apply this in real-world scenarios/conversations to assess

if a source/study is trustworthy.

- **Quality:** Professor Cipolli is a fantastic, passionate, organized professor. He was very accessible and provided an abundant amount of outside resources to help us succeed outside the classroom. The only complaint I have was that we did not get the chance to re-test exam three material. I felt that this was very arbitrary as we were able to improve 2/3 of our standards grades. Our standards are 50% of our grade and not being able to improve our third exam standards negatively impacted many students. Overall, Professor Cipolli was great! His classes were engaging and exciting and his organization by providing many resources helped me learn easily.

○ Student: 40

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort in- I attended every class, completed every homework, and studied for an average of 10-15 hours per exam.
- **Understanding & Appreciation:** I learned a lot of basic statistics, however, I feel like my understanding was never fully complete because we didn't go through the actual math of some of the things we learned. We used code instead, which was fine, but I wish I knew more of the actual math.
- **Intellectual Growth:** I learned how to use R-coding, which I wasn't similar with before.
- **Quality:** Cipolli wasn't my favorite teacher, but he wasn't my least favorite. He was genuinely interested in the material, but I think sometimes we spent too much time focusing on some concepts, and not enough on others. As the material got more confusing, I feel like the explanations got less complete. There were two classes where we looked at lectures asynchronously instead of physically meeting, and honestly, those classes made me fall behind. One of those classes specifically had really important concepts and I feel like we really needed an in-person class to focus on it. His grading system wasn't my favorite either- I spent so much time studying things I was already examined on because it appeared on the next test too and a lot of the time, I would be too focused on the new stuff I wouldn't do as well on the old stuff and my grade suffered.

○ Student: 41

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; It was supposed to be the easiest math course.
- **Effort:** I put a lot of effort into this course. I consistently attended office hours, tutoring sessions, and class. I also spent a lot of time working on the homework and studying with my peers.
- **Understanding & Appreciation:** This course helped me better comprehend statistics and how to properly read them. Now, when I see stats on news reports or on medical ads, I can better interpret the true meaning of it.

- **Intellectual Growth:** I was able to tie this course material in with some of my other courses where I was doing research and had to interpret statistics to better understand what I was researching.
 - **Quality:** Cipolli was always available to work with students, even outside of office hours and on the weekend. His grading methods confused me at first, but over the course of the semester I've really seen the benefit to using them. Also, he posted so much information on Moodle that I never felt like I was lacking materials to study, and he took feedback each week, which really helped improve the course during the semester.
- o Student: 42
 - **Reason(s):**
 - **Effort:** I put a ton of effort into this course.
 - **Understanding & Appreciation:** Greatly
 - **Intellectual Growth:**
 - **Quality:** Professor Cipolli was one of the best professors I had at Colgate. His course was so accessible and he was so understanding as a professor. I learned a ton!
- o Student: 43
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a high amount of effort in this course
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** Strengths are definitely lecture and lots of examples.
- o Student: 44
 - **Reason(s):** Other requirement
 - **Effort:** I did the homework assignments and in order to prepare for the exams I went over the practice free response questions.
 - **Understanding & Appreciation:** This course gave me a greater appreciation for the applicability of statistics.
 - **Intellectual Growth:** I was able to see how statistics could be valuable in any field.
 - **Quality:** The professor was very accessible whenever I had a question and there were plenty of opportunities to review topics.
- o Student: 45
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this class, especially since I had already taken some statistics courses before, I was expecting it to be easier than the class was but in reality, I did struggle with the material so I had to put a lot of effort outside of class time to complete assignments and try to

grasp an understanding of the concepts that we had learnt.

- **Understanding & Appreciation:** This course contributed to my understanding and appreciation of the course subject as even though I have already taken some statistics courses previously, this was the first time going into so much depth within concepts and I appreciated that as it helped gain a proper understanding of the concept rather than skimming over it.
 - **Intellectual Growth:** Because Professor Cipolli used data and studies from real life, it really helped to see how statistics are calculated and are applied outside of a classroom so this definitely contributed to my intellectual growth in that way as I can relate class material with studies that may present themselves in news articles or other scholarly sources in other classes.
 - **Quality:** I think that the quality of teaching in this course was really good as Professor Cipolli wouldn't hesitate to answer any questions or to revisit material that we had gone over before to make sure that we understood everything properly, so this is an important strength. However, at times, I felt like things were being explained in a confusing way as I felt like extra things were being said without getting straight to the point so it added confusion which may be a weakness. With a class that is so cumulative and with many terms, sometimes it is appreciated to just get straight to the point and explain and add details after so we can understand the fundamental part first.
- Student: 46
- **Reason(s):** Major or minor requirement; Other requirement; I needed it for potentially majoring in econ and for an areas of inquiry.
 - **Effort:** A lot. I think it was much too challenging for an intro math course that most people take in order to fulfill a req or some sort.
 - **Understanding & Appreciation:** I don't really know much to be honest. The lecture size is not the Professor's fault but it is hard to learn in a class that big.
 - **Intellectual Growth:** I learned a lot of valuable lessons about how stats are used in the real world. I do think Cipolli is a good teacher however I am not a math person so this was really hard for me and I wish we weren't almost exclusively graded on testing.
 - **Quality:** Taught very well, I would just change the assignment types. More writing opportunities for those who are more into non-math related subjects, and perhaps extra credit opportunities? This course demands you know A LOT. And I don't think that's necessarily necessary for an introductory math course.
- Student: 47
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I came to class every time prepared to learn and take good notes. I did homeworks assigned and studied several hours for each standards.

- **Understanding & Appreciation:** I learned nothing in this course. Had I not previously taken statistics courses I would have failed. Instead of appreciating statistics, as I had beforehand and actually enjoyed the subject this course sapped that out and I have an active dislike for it.
 - **Intellectual Growth:** It didn't.
 - **Quality:** It was bad, like BAD. For starters when taking notes I could either copy down the context for the problem, or try to solve it not both. There was not enough time, so I could either have tried to practice, but then have no context on my page for what I was solving when going back to study, or just copy the problem down, but that gives you no practice. Also there was no real opportunity in class to learn how to use R so we were put into the deep end when doing homeworks, and I never understood it. The general volume of information was also significantly too much to actually digest and learn. The expectations put on students, especially as its an introductory course was significantly too high. The homeworks took me hours to complete, and information in either the lecture slides or notes was very wordy and difficult to understand while reading. All in all the course was way too hard for an intro course, the lectures were poorly designed, the workload was too much, and there were not enough in class chances to think and learn. As for strengths, hard to understand answers in the stack overflow was a pretty big one.
- o Student: 48
- **Reason(s):** Other requirement; Interest in the course material; I took this course because it is a pre-req for medical school. I also heard amazing things about Professor Cipolli and wanted to experience class with him.
 - **Effort:** I put in a lot of effort in this class, I was really intrigued by the material and if I was not pursuing medicine I would love to have done a math major just so I can take more classes with Professor Cipolli. Professor Cipolli truly left a mark on me with his teaching style but also his kindness, he definitely allowed me to see what true compassionate and supportive professors look like and I am so grateful to have taken this class with him.
 - **Understanding & Appreciation:** This course taught me how to think about things in life conceptually, of course I wont go around and try to assume the probability of something happening but it gave me a holistic approach to materials outside of my biology major.
 - **Intellectual Growth:** I grew in appreciation for math, I haven't used math since high school primarily because it was not convenient in my major or the requirements set by Colgate but I am glad I decided to take it and hope to pursue some higher level classes for personal intellectual growth.
 - **Quality:** The quality was amazing, my professor was unique in the way he graded but also in the way he taught. He stopped after each lesson and made sure all students understand and if not he did not mind slowing down the lecture for students which was greatly appreciated. I recommend

everyone try to take at least one class with Professor Cipolli to truly understand what having a caring and smart professor is like.

- Student: 49
 - **Reason(s):** Other requirement; Fulfills Honors requirement
 - **Effort:** Ample amount, since I did fairly well, I would have benefited from going to office hours more often and asking for help, although I was fully capable of doing better in this course.
 - **Understanding & Appreciation:** I'm not very into math at all, but I think I'm taking away a better understanding of stats after taking this course.
 - **Intellectual Growth:** I'm not sure how applicable this course is beyond statistics. It helped me to think about biases that may exist every time I see a figure from a poll.
 - **Quality:** Overall great quality of teaching. I think the greatest strengths of the course were how well questions were addressed and the thoughtfulness that went into making our exams very fair.
- Student: 50
 - **Reason(s):** Exploration of possible major or minor
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** Professor Cipolli is awesome, he's very nice and knowledgeable, and passionate about stats. He cares a lot about his students and makes sure we know. 10/10 :)
- Student: 51
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a pretty good amount of effort into this course.
 - **Understanding & Appreciation:** The instructor was excited and knowledgeable about the material, and that helped me understand why statistics is so important.
 - **Intellectual Growth:** This course helped me learn how to material on my own and forced me to constantly be reviewing notes. The professor's grading policy also helped me focus on understanding the subjects rather than just getting a good grade. I think my study habits improved as a result of this course.
 - **Quality:** The teaching in this course was excellent. The instructor was accessible and very helpful and understanding towards his students. The only weakness in this course was that, towards the end, the pace at which we went through the material was really fast and because of that, I struggled with one of the last homework assignments and the last exam.
- Student: 52
 - **Reason(s):** Major or minor requirement; Interest in the course material

- **Effort:** I put a great amount of effort into the course. This was the first statistics course I have ever taken, so learning everything was quite amazing. Learning how to use R was also a difficult aspect of the class and took a significant amount of effort.
 - **Understanding & Appreciation:** Due to the fact that this is really the first time I have learned about statistics in a proper way, this class has fully contributed to my understanding of the course subject. Furthermore, now that I have learned about some of the harder material the course has to offer my appreciation has also increased.
 - **Intellectual Growth:** I think working with R instead of a calculator for the most part has greatly contributed to my intellectual growth. I got to experience a whole different world in coding and I think it has expanded my knowledge. Furthermore, just the way we thought about the samples, looking for sampling and non-sampling errors has unlocked a different way of thinking about statistics.
 - **Quality:** I thought the quality of teaching is pretty good. I like the format in which the professor teaches. I think the use of a large number of examples when explaining the course material is very helpful and a great way to teach the course. The only thing that I found a little confusing is the grading scale. The weights and how everything comes together to get a final grade makes no sense whatsoever. However, everything else I really found to be top quality.
- Student: 53
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put great effort into this course because the material was new to me and some of the resources we used (R code) were not easy for me to pick up quickly.
 - **Understanding & Appreciation:** I understand all of the ways to use these different methods and what scenarios to look for when approaching a problem.
 - **Intellectual Growth:** I had to think differently in this course than I have in others and it is much more than just math problems but critical thinking.
 - **Quality:** The professor was very passionate about what he was teaching and this helped to keep the class engaged but some of the grading requirements were unclear on the exams.
 - Student: 54
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a decent amount of work into this course, but I found it sometimes difficult to keep up with the pace in the second half of the semester.
 - **Understanding & Appreciation:** This course moderately contributed to my understanding of the course subject. I feel as if this was more of a coding course at times than learning foundations of statistics.

- **Intellectual Growth:** This course was effective in building my analytical and critical thinking skills and applying them to real-world concepts.
- **Quality:** Cipolli was an outstanding professor, and certainly one of the best I've had during my time at Colgate. He is really passionate about the course material and helping students in any way possible. I really appreciated the "stack overflow" forum in which we could post questions regarding homework and class. My only issue was that it seemed that R-Studio coding made the bulk of the homework and left me confused when exams were taken with pen and paper, in essence, I didn't feel like there was one correct direction to study the material and I sometimes felt confused and overwhelmed with the course.
- o Student: 55
 - **Reason(s):** Exploration of possible major or minor
 - **Effort:** I put a considerable amount of effort into this course. The course was considerably challenging, urging me to study very frequently and reach out to others when I needed help.
 - **Understanding & Appreciation:** I did not know much about the course subject before the class and I feel like we covered a wide range of topics, thereby greatly expanding my knowledge of the course subject.
 - **Intellectual Growth:** This course urged me to practice good studying habits. Furthermore, this course encouraged me to focus less on overall grades and more on understanding of individual topics (as this is how the grading is designed).
 - **Quality:** Professor Cipolli's greatest strength is his availability. However, class is sometimes quite dull as it is completely lecture-based. Professor Cipolli could encourage a greater sense of engagement from students by employing other teaching methods. Also, while this is not a coding course, it felt like my success in the course depended a lot on my ability to interpret R code. The centrality of R in this course is somewhat understandable, but I believe students would benefit if their success was not as dependent on their abilities to understand R code.

Spring 2021: Section A

- o Student: 1
 - **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** I was very interested by the subject so I accordingly put a good deal of effort into the work I was given.
 - **Understanding & Appreciation:** I knew very little about the course before taking it, but now I have gained an acute knowledge for the subject that I plan to use in future courses.

- **Intellectual Growth:** It helped to show me how the concept of statistics applies to the outside world and how we see it every day without even noticing it.
 - **Quality:** I found the teaching methods to be very effective, with the question based lectures being a strength, but the long videos may have been a bit of a weakness, which is understandable during COVID so I cannot see this being a problem moving forward.
- Student: 2
- **Reason(s):** Interest in the course material
 - **Effort:** - watched all weekly YouTube lectures - referred back to chapter readings for clarification of particular topics - comprehensive notes were taken for every lecture - attempted most of practice questions made available for students in preparation for exams
 - **Understanding & Appreciation:** - YouTube videos are well planned out in advance and organized; allows me to refer back to the videos/ rewind video for clarification - appreciation for RStudio is at an all-time high after taking this course; definitely see the perks of relying on the software now that I have some experience with it
 - **Intellectual Growth:** - Stats is a topic that is well applicable to many fields. I often find myself making connections in epidemiological data. For example, I can analyze the odds ratio of Cholera cases in a population and use confidence intervals to see if those cases are statistically significant or not.
 - **Quality:** - great lecturer; concise and practical - nice personality and understanding - GREAT lecture content; will most definitely be using statistical techniques in research
- Student: 3
- **Reason(s):** Interest in the course material
 - **Effort:** I put a great deal of effort into this course as I kept up with all of the assigned readings and lectures as well as never missed a class or due date for an assignment.
 - **Understanding & Appreciation:** This course contributing greatly in my understanding of statistics as the class providing a good background on statistical analysis including when and how to use different metrics for displaying data as well as how to best gather that data in the first place. That being said, I still struggled with using R throughout the course and wished there was a greater focus in teaching us how to use R given that it is such a large part of the material and work for this class.
 - **Intellectual Growth:** By providing me with a general background in stats, I have been able to be more critical about the information and data I consume, particularly in regards to political polling which can often be intentionally distorted in a way that may not be apparent to someone without an understanding of statistics.
 - **Quality:** On the whole, the teaching for this class was very good. All of the work was uploaded

well in advance, allowing me to better adapt the coursework in my schedule. Additionally, the lectures provided were often direct and well executed, allowing me to gain a good understanding of the material. If I had one complaint, it would be that I wished there was more time and resources devoted to teaching R. While there was a fair bit provided covering how to use R, I still felt more confused than I would have liked as the semester continued and R became more central to the work being done in the class.

○ Student: 4

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I put in a good amount of effort and time into this course. Statistics is a challenging class so at times, it felt like I was putting a lot of time into it compared to some of my other classes, and this frustrated me in time. I participated in class discussions and on the Moodle discussions.
- **Understanding & Appreciation:** This course is a great introductory course for statistics in my opinion. I feel like I started off really strong and did well this semester. Towards the end of the class, it kind of went down hill once we really started to get into hard math concepts that were not explained extremely well. I think some students were confused about homework's and problems sometimes.
- **Intellectual Growth:** I think statistics is a class with a lot of concepts that I will take with me as I go further in the Economics major and with my career being in the Business field as a whole.
- **Quality:** Professor Cipolli was a really good professor this semester in my opinion, definitely one of my favorites. I enjoyed the way he came to class each day being very positive and enthusiastic about the material. He is very knowledgeable and has a lot of background with math in general, so he was very well equipped to answer any and all questions. I think the video lectures could have been better throughout the class. Making them more concise and to the point. Also I think he could have paid more attention to the people who were online in the google meet calls too during class. Overall, I think Professor Cipolli is a good professor and I definitely enjoyed taking Stats with him this semester - would recommend to someone looking at taking this class in the future for sure.

○ Student: 5

- **Reason(s):** Major or minor requirement; For and introduction to statistics course, I felt that the coding aspect was excessive. We were told that if we got stuck on something in the code to reach out, but we were never really given straightforward answers. It ended up being the hardest part of the course even though it was extremely unnecessary.
- **Effort:** I would spend about 1 to 4 hours on each of the weekly homework's depending on how hard they were, along with watching all of the lectures and reading the notes. I also spent about 6-7 hours studying for each test.

- **Understanding & Appreciation:** I felt like the lectures were long and hard to follow, so I didn't really get much out of them. Figuring out how to use R was extremely frustrating and I feel like I didn't really learn the math aspect, but I'm still doing well in the class.
 - **Intellectual Growth:** I feel like R could have been cool if I actually understood it, but I don't understand it at all.
 - **Quality:** I feel like the Professor tried to be accessible and he was really kind, but he wasn't very helpful in actually conveying the material in a way that I would understand it.
- Student: 6
- **Reason(s):** Major or minor requirement
 - **Effort:** It was always a bit of a struggle to get through the online lectures, but for me that was preferable to reading the textbook only. The actual homework assignments were reasonable but often required me to check back into the textbook to find the answer.
 - **Understanding & Appreciation:** I'd already taken a college level stats class before but this class got into more overall material than the previous course I took, and I think that gave me a much better understanding of the overall subject.
 - **Intellectual Growth:** Introduced me to R.
 - **Quality:** The overall quality was good. Quick to respond to questions, provided in-depth lectures as well as the textbook, etc. My one issue is that I believe (surprisingly) that class would have been more efficient if it stayed online. While online students had their work and the homework more accessible to them, and class often seemed to be best used when students asked questions about aspects of the assignments or course that were unclear.
- Student: 7
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of time and effort into this course. Given that I am not typically the strongest science/math student, I made sure to put extra time into this class and utilize office hours and individual meetings in order to best understand the material, complete the HW, and prepare for exams.
 - **Understanding & Appreciation:** This course contributed to my understanding and appreciation of the course subject quite a bit through the use of the textbook, lectures, recitations and R. I think that this multi-faceted/many sources was helpful in gaining a good understanding of the material.
 - **Intellectual Growth:** This course contributed to my intellectual growth/education by applying this statistical knowledge to the rest of the world. By making it applicable outside the world of mathematics I found it much more engaging and useful than math classes I have taken prior. This happened in particular when completing the optional writing assignment.

- **Quality:** The quality of teaching of this course was very high. I can candidly say that I was not the most excited about taking a math class, but Professor Cipolli made this class much better than I had anticipated and I ended up really enjoying it and learning a lot. I really liked how accessible he was as a professor and in facilitating questions and feedback. I constantly feel like he really cares about how his students are doing, and I think in this unique semester in particular, that's really important. This was especially helpful when it came to being flexible with deadlines when students felt they needed more time, or adding in an extra credit assignment to allow more space for improvement. There was also space for improvement in all of the exams, which I also really liked because it allowed the retested sections to be even better understood in the end. One weakness that I would mention is that I think at times the recitations (moreso at the start of the semester) felt a bit repetitive and less focused on the newer, more complex material. But, I do think that this review process was helpful in the long run for those beginning standards.
- o Student: 8
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Much of this class involves learning outside the classroom, so for many hours per week I had to put incredible effort into learning the material, especially before a test.
 - **Understanding & Appreciation:** I do not like math but I needed another credit in math/science. Stats is important to the real world, but is not of much interest to me.
 - **Intellectual Growth:** Collaboration with peers and professors was crucial to performing well in this course. I know that skill will prove helpful for the rest of my time at Colgate and beyond.
 - **Quality:** Professor Cipolli is an excellent professor, maybe the kindest and most diligent that I've had here at Colgate. You can tell just how much he loves the course material and his job, and that energy is contagious amongst his students. Though he expects a lot from his students, he is there to help at any time of the day. He is truly a great teacher in every sense of the word, even if I may disagree with some of his grading and assessment techniques.
- o Student: 9
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Other requirement
 - **Effort:** This class has been honestly quite draining. But it's mainly because I've almost no math background whatsoever. HW's and exams have been tough. But I've been able to overcome them with lots of work
 - **Understanding & Appreciation:** Professor Cipolli is great at making material interesting and relatable. So I grew to like various aspects of this subject
 - **Intellectual Growth:** Biggest thing for me would be that it taught me the various overlaps or applications of math with/ in political science.

- **Quality:** Professor Cipolli is simply amazing. His commitment to the well being of his students is immeasurable. The amount of time and care that he invests on helping us makes all the difference in the world for struggling students like myself. Im glad that I had him teaching this class, because I would have completely given up had it not been professor Cipolli's help and resources he facilitated that helped me get through this class
- o Student: 10
 - **Reason(s):** Major or minor requirement
 - **Effort:** This class did require a decent amount of work and effort. wasn't one of my classes that had the most work but definitely had a good amount of work for class whether it was lecture videos, notes, or homework.
 - **Understanding & Appreciation:** I think this course played a key role in my understanding of the subject at hand. Going into the class I wasn't too familiar with statistics and the practical use of it but after taking the class I have a better understanding of the material and the application of this material in the real world.
 - **Intellectual Growth:** I think this class pushed me in many ways. Since there were lecture videos that covered each week's subjects and textbook chapters that also went with the videos it allowed me to think of the different ways I learn and what ways are best for me.
 - **Quality:** I thought the class was taught very well. Professor Cipolli taught each subject matter well and made sure to give each student all the resources they needed throughout the semester.
- o Student: 11
 - **Reason(s):** Elective outside major or minor; Interest in the course material
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:** I think when I consume the news materials, I will check the validity of the statistics given to me as evidence (i.e. was the sample representative of the population the researcher is trying to make a statement about? What was the experiment design like? Which graph/numerical statistic are they using to recap the research? Can it be misleading than using other statistics?) Honestly even when I was getting the covid vaccine I felt less anxiety because we learned about the medical research process before FDA approval
 - **Quality:** Professor Cipolli is absolutely caring and understanding. By providing multiple channels for learning, encouraging questions, being available even on weekends, and adjusting the syllabus through active feedback from how students are doing, he made sure that learning can happen at its best during the pandemic. Answering repetitive/similar questions from different students is not easy and can test one's patience. And keeping students engaged during a pandemic (especially with

a challenging topic like this) is also difficult. But I think that professor Cipolli did so successfully. I never thought I would enjoy a statistics class, but I did even though it was extremely challenging for me, and if it wasn't for professor Cipolli I don't think it would have been so. Many thanks to his extraordinary commitment to teaching. And also for being so lenient with workload (ex. optional exams) despite his commitment — in the end it made me absorb the material with more time and better understanding. I have zero complaints in regards to this course.

○ Student: 12

- **Reason(s):** Major or minor requirement
- **Effort:** I have never been the greatest at math so I was nervous coming into this course. I was definitely challenged every step of the way but I applied myself and got the outcomes I wanted.
- **Understanding & Appreciation:** I believed stats was easy and straightforward but I discovered the depth, thought, and creativity that goes into it and I really appreciate statisticians because without them and without proper experimental designs we would not have strong scientific support.
- **Intellectual Growth:** I thought statistics was easy and I now feel very dumb for thinking that, but now when I read a research project or journal I apply the course material from this class and it is very beneficial.
- **Quality:** Professor Cipolli is the most accessible professor I have ever met. He has multiple platforms and avenues to ask questions and at first I was skeptical but warmed up to asking every and any question. I think having to write my questions down on a forum post also helped me articulate what I wanted to ask even better too. The lectures we did asynchronously were difficult for me because I get distracted easily if I'm not in a classroom setting, but considering all the changes we have had in the past year this class was one of my favorite.

○ Student: 13

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course, I ask a lot of questions on the online questions forum he has, I email him, as well as watching all of the lectures and taking detailed notes. I spend a ton of time on the lectures and they often take me a while to get through because I like to really understand the material before doing the homeworks. The homeworks also take a long time for me to complete but they really help to synthesize what I learned in the lectures and I find them very helpful.
- **Understanding & Appreciation:** It has contributed a ton to my understanding and appreciation of the course subject as I have never taken a stats class prior to this class. I'm not super confident in the recent material but I have learned a lot about what it means to conduct an experiment, how to use a good sampling technique, and how to pick the right experimental design.

- **Intellectual Growth:** I have actually found that this class has helped a ton for my Sociology courses where I have to do research and apply research methods. And I predict this to really help me in Metrics next year, as well as my thesis.
- **Quality:** Strengths: SUPER good at responding to students which i REALLY appreciate as a lot of professors take a while to response which I totally understand but Cipolli is extremely reliable and wants to answer any questions you have which I really enjoyed from taking his class. He also really cares about hist students and really wants to see them succeed and has been understanding with the stressors of the pandemic. Another strength is giving us just the right amount of information and resources to really learn from the material rather than just "copying" what he says. this allows you to really understand the information. Weaknesses: This isn't a weakness of him as a professor because honestly this is probably a good thing so students can learn more but as a student, I don't necessarily like it. When students ask him questions about the HW he really dances around the answer which is actually more beneficial, I have found, in the long run so you really understand it but in the moment I don't like it.
- o Student: 14
 - **Reason(s):** Elective within major or minor; I thought I wanted to be an Econ major therefore I took this course as a requirement. However, I soon realized; that being an Econ major was not for me, and my interest in this course went down significantly.
 - **Effort:** I put in a lot of effort in this course. I have never been a math or computer science person, and this course strained all of those regions of my brain
 - **Understanding & Appreciation:** This course made me understand how challenging and conceptually straining statistics really is
 - **Intellectual Growth:** This course has made me recognize how building upon a poor grade is incredibly beneficial.
 - **Quality:** I feel as though this class was taught at an incredibly high level. Professor Cipolli embodies every attribute of a great professor: cares greatly about students, passion about the material, and open to feedback. One weakness I would say which is less in his teaching style and more in the class structure is the lengthy weekly R studio assignments. If I know that their was going to be a coding aspect to this course I would most definitely not have taken it. Nevertheless, even though I will not take another statistics course, professor cipolli is the gold standard of what it means to be a great professor.
- o Student: 15
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** At first it was minimal, towards the end I put in more effort. I just didn't care at first and

my grade dropped.

- **Understanding & Appreciation:** I do not appreciate statistics or math.
 - **Intellectual Growth:** I just really had to apply myself.
 - **Quality:** Professor Cipolli has been the most accommodating and supportive teacher I have had at Colgate so far. Especially in a year such as this, he was very understanding. A strength I believe of Professor Cipolli is giving the same attention to all students, those who do well and poorly. Even though I am terrible at statistics, Professor Cipolli always was helpful through zoom whenever I asked to meet. His personality made it feel like we were facing the problem together. He was extremely helpful and if he was not a math teacher I would absolutely take one of his classes again.
- Student: 16
- **Reason(s):** Exploration of possible major or minor
 - **Effort:** I put upwards of 6-7 hours into this course some weeks. I put a lot of effort, and it was because I felt like I was learning a lot.
 - **Understanding & Appreciation:** I now know not to believe every statistic online and I know how to tell if a study was carried out correctly and if I can believe the results.
 - **Intellectual Growth:** I wanna do data science maybe.
 - **Quality:** One of the best professors at Colgate. Very clear about grading and expectations from you. Also created a safe place where you can ask questions without the feeling of being judged.
- Student: 17
- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I felt that I put a very good amount of effort into the course.
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:**
- Student: 18
- **Reason(s):** Elective outside major or minor
 - **Effort:** I put a decent amount of effort into this course, could have reviewed for exams more but other than that I think I gave it my best shot
 - **Understanding & Appreciation:** Integrating R into the course definitely helped me appreciate the content more as it allowed us to spend more time talking about the concepts of what we were actually doing rather than doing algebra
 - **Intellectual Growth:** As a foundational math course I believe it helped further my knowledge in an area that can be applied to almost anything
 - **Quality:** Very high quality, strengths lie in deep understanding of the material and an ability to

explain it in several different ways for students struggling to grasp a concept.

○ Student: 19

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor
- **Effort:** This course required a lot of effort as each topic builds upon the past ones. It is imperative to fully comprehend each lecture because that information will continue to be used throughout the rest of the semester. I took detailed notes on each video lecture in addition to reading the chapter notes that Professor Cipolli wrote up himself in order to be able to complete the homework assignments to the best of my ability.
- **Understanding & Appreciation:** I had never taken a statistics course prior to this one so I wasn't really sure what to expect from this subject. The earlier topics were definitely easier than the later ones and I know that these concepts will be easily applicable to whatever field I choose to pursue after Colgate.
- **Intellectual Growth:** This course made me a better collaborative worker. I completed many of the homework assignments with peers and we were able to critically think through and talk over our answers and thinking processes.
- **Quality:** I think Professor Cipolli did a great job with this course. Some of the material is very difficult to understand so he always did his best to explain it. I also liked how he consistently checked in on our understanding throughout the in-person classes before moving on. The weekly diagnostics were also used as a chance to submit questions and let him know how we were feeling about the material.

○ Student: 20

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a medium amount of effort into this course.
- **Understanding & Appreciation:** I definitely understand statistics as a whole much better now which is nice.
- **Intellectual Growth:** I feel like I can understand what stats actually mean when I see an article that incorporates them.
- **Quality:** I really enjoyed the teaching in this class. Professor Cipolli was always available to help and he was a great help. Additionally our class tutor Marc was very helpful whenever I would go to his office hours.

○ Student: 21

- **Reason(s):** Exploration of possible major or minor
- **Effort:** I put in a relatively good amount of effort to this course. The first week, I watched all videos and read the notes. As time went on, I stopped reading the notes as I found they were

competitive. That being said, I do think the videos took more time than if we were to meet twice a week and learn the material in class. That is a nagging side effect of asynchronous learning.

- **Understanding & Appreciation:** I feel like I understand the material well, I just wish we did the work by hand instead of through R, because that adds confusion that wasn't totally necessary.
- **Intellectual Growth:** I feel like this course helped me manage my time since it was so well organized. I could see what was coming up next very clearly.
- **Quality:** I think this course is well thought out. As I mentioned before, I wish the videos weren't as long because it felt like I was doing more than two classes a week worth of learning.

○ Student: 22

- **Reason(s):** Other requirement
- **Effort:** We had to watch a series of videos every week. We had class in person once a week. We had problem sets almost every week and had two midterms.
- **Understanding & Appreciation:** I feel like I understand probability and chance more, as well as research methods, ethical issues, and response and non-response bias. I also understand statistical significance more than I have before.
- **Intellectual Growth:** I learned how to retain information really fast. I feel like stats will also help me in the future when I am conducting my own research.
- **Quality:** Professor Cipolli was good. He was there for his students and wanted us to do well. However, the methods were really tedious. Because we only met once a week, we were always a week behind, so we had to complete homework (graded on accuracy) before we had even learned the material. As a result, I feel like I taught myself all of the material as opposed to the professor. It also made class really tedious because we were always learning something that we had already learned or had to have already taught ourselves. One strength, however, was the interesting examples that Professor Cipolli used to convey material. He made an effort to connect stats to current times and current issues, which I think is probably really difficult.

○ Student: 23

- **Reason(s):** Major or minor requirement
- **Effort:** I put in an average amount of effort that ended up still being a large portion of my time during the week. The material was occasionally long in video lectures and the homework took a long time to complete well.
- **Understanding & Appreciation:** It greatly increased my understanding and appreciation. I had no prior knowledge of this course and this gave me a true introduction to the topic.
- **Intellectual Growth:** It gave me not only a way to think about a different aspect of mathematics but a great way to find time to do assignments. The class set up was ideal for zoom learning.

- **Quality:** I very much enjoy the teaching quality and attention Professor Cipolli gives to each of his students. I would recommend taking this class to peers at Colgate because of this professor. I think that this class in person would be a very enjoyable class altogether.
- o Student: 24
 - **Reason(s):** Elective outside major or minor I'd never received any instruction in statistics and had realized that understanding basic statistics is important to understanding quantitative studies in any discipline, so I felt taking this class would be beneficial to my work in other courses.
 - **Effort:** Lower than I'm proud to admit. It was really hard for me to stay motivated with the asynchronous model. I always watched all the lecture videos and took notes, but I can't say I was super focused. I always put effort into the homeworks. I would study a bit for exams, but since I felt I had a good understanding of the material thanks to the homeworks and we were allowed to reference our notes, I didn't put that much time in.
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** I think Prof Cipolli did the best he could for this course given the pandemic circumstances. His enthusiasm definitely made the class more enjoyable. The asynchronous format didn't work that well for me, but I also can't think of a format that would've worked better this semester. I did find the amount of material (videos, notes, recitation) to be far more than I needed to understand the material, but since it didn't seem to be a problem for me to pick and choose which I utilized, I can't complain. The homework assignments were definitely the most valuable aspect of this class as far as what helped me learn.
- o Student: 25
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I dedicated a good amount of time outside of class to watching the lecture videos and reading some of the hypothesis chapters. I probably could have spent more time over the course of the week on the homework assignments (also to give myself time to ask questions), but I still put a lot of effort into them even when a bit rushed. In terms of exams, I put a lot of effort into them and on reviewing the chapters before each one.
 - **Understanding & Appreciation:** I had taken statistics in high school and honestly really did not like it. This course definitely gave me a much more positive view on stats and I understand the material a lot more now. While using R was definitely confusing at times, it took a lot of the confusion with calculating things out of statistics and allowed me to focus more on actually understanding the concepts and why we use certain techniques in various situations.
 - **Intellectual Growth:** The coding aspect of this course was definitely new to me and provided a

good learning challenge! We also focused a lot on the real world application of statistics, which gave me a new perspective on how to approach problem solving more generally; it felt like we were learning more than just math and calculating equations, but something more relevant.

- **Quality:** Statistics was taught really well! It was my only in person class this semester, so I appreciated that we had the opportunity to attend the recitations in the auditorium. Professor Cipolli was very understanding and accessible; although I didn't use it as much as I probably should have, the overflow was a really great resource (even just to see responses to classmates' questions). I also appreciated the very quick responses to emails and flexibility with deadlines. Additionally, he had clear enthusiasm and passion for teaching the material!

o Student: 26

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I have worked hard in this class. The work load is manageable you just have to use your time wisely.
- **Understanding & Appreciation:** It helped me understand and appreciate this subject more than I did before.
- **Intellectual Growth:** It has contributed to my intellectual growth in a big way. Professor Cipolli has been a great teacher and role model throughout this semester which has helped me appreciate this course a lot more.
- **Quality:** The teaching has been great. Professor Cipolli truly cares about each one of his students. He is constantly answering your questions in a timely manner and makes sure to answer all questions so everyone understands. He makes the classroom setting feel a lot more relaxed and welcoming which is a very good thing because people are not afraid to make mistakes with Professor Cipolli. He's great!

o Student: 27

- **Reason(s):** Other requirement; Reputation of the instructor; Interest in the course material; I needed this course for my math requirement, but I had heard good things about Prof. Cipolli, and as a humanities major, I felt stats would be the most approachable of math classes to take.
- **Effort:** I am not good at math, so between the course offering a lot of material to consume and my own skill level, I spent a lot of time on this class. Probably at least 12-14 hours a week excluding in-person class time.
- **Understanding & Appreciation:** This course gave me a good foundation for understanding statistics and really built upon and expanded my previous knowledge based on the high-school level stats course I took.
- **Intellectual Growth:** I used coding language for the first time, which was scary and difficult but

something very different from my normal coursework, which I'm glad I tried. I also learned to tie very conceptual, more abstract concepts with math.

- **Quality:** I think Prof. Cipolli is an amazing professor and teacher, maybe the best instructor I've had at Colgate. He is very passionate, knowledgeable, and accessible. He goes out of his way to make sure students understand the coursework and provides so many different forms and methods to do so, despite the fact that he could be doing a third of the work he does and still be fine. I really enjoyed his weekly check-ins we have to do, and I was genuinely moved as a student by the amount of times he reached out to me first either to offer help when I needed it, or respond to feedback I had given about the class. My only criticism is that I still felt that at times some of the math execution was a little advanced for an intro course a lot of non-math majors take, and even when I asked for help understanding the math, the explanations I received were a little abstract and vague. However, that is from the perspective of someone who really struggles with math in general. Overall, I found Prof. Cipolli to be a very impressive instructor, and I genuinely feel a lot of other instructors here could learn a lot from his teaching style and dedication to accessibility and student success. I also found Marc, our tutor, to be a great help and a wonderful resource.

o Student: 28

- **Reason(s):** Major or minor requirement
- **Effort:** I spent arguably more time on this class than some of my much higher level courses (not by choice and honestly, I think it was overkill)
- **Understanding & Appreciation:** I definitely found ways to apply general statistics to my other classes
- **Intellectual Growth:** It kept me accountable.
- **Quality:** I did not enjoy the way this class was taught. I think that Professor Cipolli would have been much more receptive to the students had he made the most of the time we had in person in class. He explains things well most of the time, but the examples we used in class were never helpful when I went to study for the exam or do the homework. I was almost always confused by the R, as there were many times the code for the R was in moodle as the unhelpful data from class, but I never had any idea how to incorporate the data from the homework into a code that already had data loaded into it (anytime I asked about this the answer was usually "its in the lecture notes" or "its in the videos" which is honestly just false. I combed through those videos and notes to find anything that could help and I never could. I heard so many great things about Professor Cipolli and I am sure this is a result of the pandemic semester, however I really hope he does not continue to rely on teaching the most important material in videos that, quite frankly, I had to watch at an increased speed to be able to get through them as they took FAR too much time. I am sure I

speak for many when I say that I signed up for this class because I knew it would have in-person aspects, and I attended every one of those sessions, but the information presented in person was never useful, and I know that Professor Cipolli can be a better teacher than that. Overall, there is really only so much we can keep blaming on the pandemic, and wasting in person class time was definitely a bummer this semester.

- Student: 29
 - **Reason(s):** Interest in the course material
 - **Effort:** Spent significant time going through lecture videos and working on homeworks
 - **Understanding & Appreciation:** I have a better understanding of how statistics are used in real world applications and especially in the scientific community.
 - **Intellectual Growth:** I have a better understanding of data, graphs and stats often cited in the news, media, etc
 - **Quality:** Strength: professor was extremely easy to reach and always ready to give helpful answers
Weaknesses: the lecture videos often had more information than was necessary making it harder to understand what was needed and what was not
- Student: 30
 - **Reason(s):** Other requirement
 - **Effort:** I put my best effort into this course. I attended each class in a timely manner and did my best to turn in all assignments and exams on time.
 - **Understanding & Appreciation:** This course gave me a different feeling for math and how to study numbers. This course also made me realize how much we deal with numbers not only in academia but in every day life.
 - **Intellectual Growth:** This course prepared me to start being able to tell stories about numbers as well as what these numbers might suggest about greater society. This will help me as I continue my academic career.
 - **Quality:** the quality of teaching in this course was exceptional.
- Student: 31
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this class by going through the notes multiple times and asking for help when I needed it.
 - **Understanding & Appreciation:** I had never taken a stats course before this, so I gained a lot of knowledge and understanding from this class.
 - **Intellectual Growth:** Due to the partially asynchronous part of this class I was able to learn how to make time for the lectures on my own and appreciated being able to go through the material at

my own pace.

- **Quality:** Professor Cipolli was clearly very knowledgeable and passionate about the subject and was helpful when I needed help.

o Student: 32

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; Had to take this class so I can minor or major in Econ.
- **Effort:** I put in a lot of effort into this course, between the readings and the homeworks and the tests. To be honest though, I did not go to class often as he did not grade class participation.
- **Understanding & Appreciation:** I really appreciate stats more now, this was a super in-depth dive into stats for a 101 class I thought – learning how to do things on R over excel was cool too. I really appreciate the diverse and novel range of use for stats, and I hope to learn more in the future.
- **Intellectual Growth:** I think that it helped me better understand just how important statistics was in life – learning how to use aspects of R was really cool too I thought.
- **Quality:** I think that the quality of teaching was 10/10. Will was easily accessible, and responded quickly to his emails. His in class teaching was excellent, and I thought that him putting so many lectures up online really helped me better understand the material at my own pace and prepare for tests; his textbook is also excellently written. I think that he is also pretty nice, despite what other students have said on his rate my professor.

o Student: 33

- **Reason(s):** Interest in the course material; I have always wanted to take a statistics course and this was my last opportunity before I graduate!
- **Effort:** I always attend class, watch every lecture video that is posted and take thorough notes, complete all the diagnostics (except the one on my birthday that I forgot) and complete all the homework. I do not attend office hours or the tutoring sessions - I have always preferred to complete my work on my own unless I really need help with something.
- **Understanding & Appreciation:** I have learned a lot about statistics and R. Some of what we learned I have a little knowledge of through other courses at Colgate but my understanding of statistics has certainly grown this semester.
- **Intellectual Growth:** This course was a great way for me to remember my previous experience coding and the frustrations I had with coding. Coding requires a lot of patience and incredible attention to detail, which working with R forced me to have this semester.
- **Quality:** I think Professor Cipolli is a great professor. His content is clear, direct, and engaging. If you follow the lecture videos, attend class, and complete the assigned homework you should have no problems on the exams. I found the content interesting and the examples engaging. I was

challenged by this course but really appreciated how conscious Professor Cipolli was of covid and the grace he gave us throughout the semester. This helped me appreciate the material more than if I had felt forced to cram. Even though I was not active on the discussion board, I would always reference it when I was completing the homework to see if other students had asked questions on anything I was confused about. I have really enjoyed this course and am so glad that I got to take it before graduating.

○ Student: 34

- **Reason(s):** Elective outside major or minor
- **Effort:** In this class there were weekly homework and 2 exams. The weekly online video lectures were quite long most weeks and required a lot of time and focus to complete, however the assignments were not that strenuous.
- **Understanding & Appreciation:** Using real life examples in both the homework question and exam question made me appreciate how what I'm learning in class can be applied to the real world.
- **Intellectual Growth:** In this class we utilized the software R to complete most statistic calculations. Use of this program will be helpful in the future if I am required to use it for a job or other class
- **Quality:** I believe professor Cipolli did a great job teaching this course. He is very enthusiastic about statistics and wants to see his students succeed. He was always available for question and took students opinions into consideration. I would definitely recommend him to other students looking to take statistics

○ Student: 35

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement Reputation of the instructor; Interest in the course material
- **Effort:** I watch the videos and do the hw over the week. If I have any questions I spend time restudying my notes and possibly go to office hours
- **Understanding & Appreciation:** This course allowed me to understand the parts of studies that used to be "complex math". It has allowed me to more critically engage with studies and asses them using my own means
- **Intellectual Growth:** Taking this intro statistics class will be very useful in understanding how facts and figures get to me, but also how they were obtained
- **Quality:** I think this course was taught very well, however I'm not sure what it'd look like in non-covid times. Having the video notes was extremely helpful in learning the material, as they focused on what was important but also included further explanation that I wouldn't have gotten given I just read the book

○ Student: 36

- **Reason(s):** Major or minor requirement
 - **Effort:** I watched all the recitation and did all the assignments on time. I put in a lot of effort and expect to do well.
 - **Understanding & Appreciation:** It made me think about how statistics is applicable in all subject matters
 - **Intellectual Growth:** Made me think about its use in technology
 - **Quality:** did a great job using recitations videos to explain material
- Student: 37
 - **Reason(s):** Interest in the course material
 - **Effort:** A fair amount of effort for an introductory class
 - **Understanding & Appreciation:** I learned some but didn't really appreciate it anymore
 - **Intellectual Growth:** not much honestly
 - **Quality:** Maybe it's just because it was corona, but I felt like I was teaching myself the entire course. I really wish Cipolli woulda taken the in person class time to actually teach us instead of making us teach ourselves and then just ask questions in person. It was hard to learn that way
- Student: 38
 - **Reason(s):** Interest in the course material
 - **Effort:** Not that much effort. Homeworks were tough to complete every week.
 - **Understanding & Appreciation:** It taught me a lot. First math class at colgate.
 - **Intellectual Growth:** Grew a lot as a student but wish it was an in person course.
 - **Quality:** Love Professor Cipolli. So understanding of student's needs.
- Student: 39
 - **Reason(s):** Major or minor requirement
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:**
- Student: 40
 - **Reason(s):** Exploration of possible major or minor
 - **Effort:** Hours watching lectures, studying and doing practice questions, and completing homework/ getting help with it.
 - **Understanding & Appreciation:** I really enjoyed learning about how to apply statistics to real life.
 - **Intellectual Growth:** I learned how to apply things to real life and use common sense to look at

stats.

- **Quality:** Professor Cipolli was very helpful and always available, he taught the course very well and gave visual demonstrations and examples which was very helpful. I found the homework to be helpful, but also very stressful - there were a lot of questions to complete alongside the lectures and I found it quite challenging to use R, which I felt shouldn't be a big issue as it is not a coding class. Overall though Prof Cipolli was very nice and helpful and I would definitely recommend his class to others and take another cores with him again.

o Student: 41

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a great deal of effort into this course. I had taken a stats class before, but this class expanded on my previous knowledge and challenged me in many new ways. So, I felt I had to put in a lot of effort to try and understand the new material and the new ways it was being applied.
- **Understanding & Appreciation:** It made me have a stronger appreciation for statistics, something we see constantly in news articles and news television today.
- **Intellectual Growth:** I feel like I have become a more informed reader of news, especially that which includes statistics because of this course. Most people take statistics at face value, but I have now learned the ways to assess statistics otherwise.
- **Quality:** I have never had a professor that paid attention and responded to student questions so thoroughly than Professor Cipolli. He had more avenues for discussion and questions than I have ever had in any other class and he was great at responding comprehensively to all of them. He was also very attentive to his students' needs, which I really appreciated. Perhaps, in the future more group work or class practices could be helpful. I also thought the lectures were too long frequently, which made it hard to stay focused and engaged at times with the material. But other than that, I really enjoyed this class and Professor Cipolli's teaching of it.

o Student: 42

- **Reason(s):** Major or minor requirement
- **Effort:** This course's material builds on itself and got more challenging as it went on. The first 4 units of the course were very easy in my opinion while the final five were hard.
- **Understanding & Appreciation:** I now appraise statistics much more than I did before and I now understand how important statistics is in my day to day life.
- **Intellectual Growth:** I feel like I can change my behavior now in small ways with my knowledge of statistics. I also feel like this course has helped me digest material better.
- **Quality:** I thought professor Cipolli did great job of provided us with the material to succeed and went above and beyond in being there for his students.

- Student: 43
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put in a lot of effort into this class
 - **Understanding & Appreciation:** It made me understand math in a different light. Especially statistics.
 - **Intellectual Growth:** It made me have to actually learn the material instead of just memorize it.
 - **Quality:** Although this course was challenging I believe that the structure of the class, specifically the grading with the standards rewarded hard work which I enjoyed.
- Student: 44
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I think out of all my classes, I spent the most time per week on material for this course. Watching the videos, reading the textbook notes, doing the homework and diagnostics, and asking questions require a lot of effort to be put into this class.
 - **Understanding & Appreciation:** It gave me a broad foundational understanding of statistics that I think I will be able to use and apply in other disciplines.
 - **Intellectual Growth:** As someone who focuses more on humanities, I'm always challenged by STEM classes. This class helped me grow by teaching me how and when to ask questions about the material and working hard to understand something that doesn't come easily to me.
 - **Quality:** Prof. Cipolli did a great job of organizing the class and having many different ways and times I could ask questions. Sometimes, though, I found that the responses to the questions I asked could have been a little clearer and did not immediately help me understand the material. Overall, I thought the class was well-organized and the material was well-taught.
- Student: 45
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put a ton of effort into this course due to classes being online. I had to manage my time with the online lectures and worked hard to figure out the material on my own.
 - **Understanding & Appreciation:** I have taken stats before but this class took a bit of a different approach to it so it was great to switch it up.
 - **Intellectual Growth:** I think I gained a great deal of independence from taking this course and loved that we could, for the most part, learn the material at our own pace.
 - **Quality:** Professor Cipolli was without a doubt one of the most attentive, engaging, and caring teachers I have ever come across. I really appreciate how understanding he was of students' difficulties during these trying times and cannot thank him for his kindness throughout the semester.

His eagerness to help and support students is very admirable and I hope he continues that in the future!

○ Student: 46

- **Reason(s):** Major or minor requirement
- **Effort:** I read the chapters and watched videos every week to make sure I understood the material and if something didn't make sense immediately I would review again later.
- **Understanding & Appreciation:** This course reinforced my knowledge of statistics and helped further my understanding in areas I wasn't as strong in.
- **Intellectual Growth:** It helped me to learn how to apply my knowledge from other classes to my learning in this class.
- **Quality:** This course was taught well. The content was not overbearing nor was the workload. The grading was fair and clear so that we always knew how we were doing. My only problem with this course was not even about the course itself and rather the effects of Covid on courses. I found meeting only once a week led me to paying less attention during class since all of the content was available elsewhere. Overall I enjoyed the course and feel good about my knowledge of the content. If I was a math major I would want to take more courses with professor Cipolli and I will definitely keep an eye out for courses I can take that he teaches.

○ Student: 47

- **Reason(s):** Major or minor requirement
- **Effort:** I would say that I put a lot of effort into this course. Each week, I watched the video lectures and read through the hypothesis notes to get a good grasp of the material. After doing that I would complete the homework which took many hours each week. When studying for the exams I prepared days ahead due to the difficult topics that would be on the tests.
- **Understanding & Appreciation:** I took a statistics class in high school and this course expanded upon subjects that I had already learned and taught me a lot of new material.
- **Intellectual Growth:** This helps me beyond the classroom as statistics in general is such a central part of our world. Additionally, a lot of the material that I learned in this class will be applied to upper-level classes that I take in the future.
- **Quality:** I thought that the professor did a great job of creating an extremely welcoming environment in the classroom. There was always room for questions to be asked not only in class but also in multiple places outside of class. The professor was also very quick and clear with his grading making it easier for me to improve upon my standards each time. The only issue I had with the course was the use of R. I struggled to grasp it and found it frustrating sometimes as it would make the homework very difficult and time consuming to complete.

- Student: 48
 - **Reason(s):** Major or minor requirement
 - **Effort:** Studying, completing homeworks
 - **Understanding & Appreciation:** Greater understanding of statistics, statistical models
 - **Intellectual Growth:** Knowledge of how to use softwares like R
 - **Quality:** Professor was good at answering questions Professor put effort into displaying information in a way that could be easily digested Professor gave extensions when students needed them
- Student: 49
 - **Reason(s):** Other requirement
 - **Effort:** I asked questions in class and came to class prepared to learn. I went to office hours when I needed extra help.
 - **Understanding & Appreciation:** Having never previously taken a statistic course, this class has helped me broaden my knowledge of the field and develop a basic understanding of the material.
 - **Intellectual Growth:** This class pushed me to be a self-advocate and manage my time well.
 - **Quality:** Professor Cipolli answered questions really well and always made time for us. However, I do wish we had more chances for small group work in class, in which we could interact with and learn more from our peers. This also would have been helpful for people that didn't feel comfortable asking questions during our large class.
- Student: 50
 - **Reason(s):** Interest in the course material
 - **Effort:** My performance slowly went downhill when the materials became too quick to catch up. In other words, I gradually lost my energy to put effort.. which is my fault.
 - **Understanding & Appreciation:** This was a study area I've never looked into before, and there has been some cool concepts and materials that made me appreciate the subject here and there.
 - **Intellectual Growth:** In classes like these where students have to be caught up with the material, I learned I need to give extra attention to be chasing the class properly.
 - **Quality:** I really liked how the instructor gives feedback and answers to questions as fast as possible. The material was frankly too much for me to digest this quickly every time, and I wasn't really a fan of having no-curve grading system.
- Student: 51
 - **Reason(s):** Elective outside major or minor; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** This course required for me to put in a lot of effort to fully understand the material, but I feel that the work I put in was necessary and beneficiary for my learning.

- **Understanding & Appreciation:** This course did a really good job of increasing my overall understanding of statistics. I've taken classes that have involved statistics before but this course really helped me understand what I was doing and why. The way the class was set up was really good for making sure that I really understood each concept that we did in class and retaining that information.
 - **Intellectual Growth:** This course contributed to my intellectual growth as I had to think critically about the problems and apply what I learned in class to real world problems.
 - **Quality:** The teaching for this class was very high quality, the professor was well-versed on the subject and was able to explain things in a clear way and answer questions fully and thoughtfully. The professor also showed an understanding for students' well-being as he listened and adjusted to our needs.
- o Student: 52
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Few hours a week watching lecture videos and doing homework
 - **Understanding & Appreciation:** This course reinstated the knowledge I already had about statistics, but through real life examples I really got an appreciation for the math and the outcomes given.
 - **Intellectual Growth:** This course allowed me to think about studies and the process of analyzing data in a whole new way, and I plan to use these as I continue through my life
 - **Quality:** Professor Cipolli was the best professor I had this semester. His lessons were very interesting and the way he conveyed the material really kept my interest. He was very accessible when I had an issue and was very accommodating to his students needs. All in all, a great experience in this class!
 - o Student: 53
 - **Reason(s):** Major or minor requirement
 - **Effort:** A pretty good amount. It wasn't my top priority in terms of classes, but it didn't mean I didn't try my best
 - **Understanding & Appreciation:** I have never taken a statistics class before so i gained a general understanding of the course material.
 - **Intellectual Growth:** Learned to think about certain things in a more statistical manner
 - **Quality:** Teaching quality was good, the covid environment did not help this class as watching the youtube videos, while helpful to look back upon, was hard because it was hard to find the motivation to watch them when I didn't have to at a certain time.

Spring 2020: Section A

- Student:1
 - **Reason(s):** Major or minor requirement;
 - **Effort:** This class was a lot of work.
 - **Understanding & Appreciation:** It broadened my thinking in mathematics.
 - **Intellectual Growth:** I did a project on insurance companies and assessed their risk using tools from the class.
 - **Quality:** He was a good teacher. Sometimes threw too much stuff at us with constant emails but overall he means well and only wants the best for his students.
- Student: 2
 - **Reason(s):** Exploration of possible major or minor
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** Overall, Professor Cipolli is a fantastic Statistics teacher. Unfortunately, however, I think his plan to incorporate R coding into the class was overly ambitious, and as a result, turned my interest away from the course material and contributed to a lack of understanding in topics. Statistics was one of my favorite classes in high school, and I feel as though this course only scraped the surface of statistics rather than go into detail and understanding, and I think much of this is the result of R. R added an unnecessary source of confusion among students, and when making calculations in R, I often times felt as though I was just following instructions without actually knowing what I was doing or calculating. If instead we had actually learned subjects more conceptually, I felt as though I would have had a much better understanding of things.
- Student: 3
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a significant amount of effort into this course. Much more than I expected when I signed up.
 - **Understanding & Appreciation:** I appreciate the world of math a lot. I am not good at math and it does not come easily to me but I appreciate the information we learned in class.
 - **Intellectual Growth:** I would say this course made me more interested in learning coding.
 - **Quality:** The teaching was at a very high level for this course. I enjoyed learning but it seemed to be a lot of work at times. Learning R was very interesting but at the same time I was forced to work harder in this course than in my other classes which were 200 and 300 level courses. Maybe that is because math is difficult for me at times but still I feel as though the concepts were difficult

to grasp especially once online. The teaching when we were at Colgate was very good.

- Student: 4
 - **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** I put in a lot of effort in this class. This was probably my most demanding course this semester.
 - **Understanding & Appreciation:** This course will have a lasting impact on the way I interact with data for the rest of my life. I have gained a tremendous appreciation for statistics from this class.
 - **Intellectual Growth:** This class has provided me a newfound understanding of data that will enable me to interpret information with from a more informed and skeptical standpoint.
 - **Quality:** The quality of teaching in this course was stupendous. Professor Cipolli has demonstrated a clear and powerful mastery of the course material and effort to provide his students the highest standard of teaching. Colgate needs more people like Professor Cipolli! Thank you for a wonderful semester.
- Student: 5
 - **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** I put a significant amount of effort into the class, but mostly before exams.
 - **Understanding & Appreciation:** it aided both my understanding and appreciation greatly.
 - **Intellectual Growth:**
 - **Quality:** I think the quality if teaching was very high. Professor Cipolli was extremely organized with his material on moodle, making it easy for students to access what we needed. He is always willing to do what is best for the students and looking to help them in any way he can.
- Student: 6
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this course but never felt like I was given busy work.
 - **Understanding & Appreciation:** I really enjoyed this class and would consider exploring a math minor because of it.
 - **Intellectual Growth:** I learned how to look at things with a grain of salt. Statistics are not always what they seem to be and that applies to a lot of other things as well.
 - **Quality:** Professor Cipolli is an awesome professor. Going through the bubble things above I genuinely was excited to answer them so he could know that he was a great professor. Even in a lecture class, we were still encouraged to learn from our peers using moodle. He was incredibly accessible in the form of office hours, appointments, moodle boards, and emails. He graded tests

in a crazy short time and the standard of his grading was top-notch. Not only did it make his expectations clear for tests, but it also allowed students to better understand the material and retain the knowledge over the semester. It is the one class I have taken at Colgate where I feel like if we had a comprehensive final exam, I would be pretty okay to take it without further studying. The homework assignments were challenging but extremely helpful to work through. Also, his notes are impeccable. He genuinely wants his students to be able to have all the resources they need to succeed. Nothing is left up in the air. However, he also doesn't just give away the course material that would make going to class trivial. Even the writing assignment which seemed dreadful at first was quite fun to complete and I felt that it really enhanced my knowledge of R and the course material. Professor Cipolli has a unique way of connecting with his students that goes beyond the occasional anecdote in class. During the writing assignment and a few other lectures, he shares a story of how he was shaped as a person, not just a statistician. These lessons made it obvious that the actual math was not the important part of the intro class, but instead, the skills we gained by applying stats and trying to figure them out were the important takeaway. I would take a class with him again and again because of this.

o Student: 7

- **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
- **Effort:** I showed up on time and prepared for each class and diligently took notes. I also completed all homework assignments and the vast majority of my diagnostics. Lastly, I studied hard for each test.
- **Understanding & Appreciation:** Professor Cipolli's own enthusiasm for the course material is infectious and caused me to appreciate it more as well. He clearly loves what he does and it makes the class more interesting and engaging.
- **Intellectual Growth:** Professor Cipolli loves connecting his course material to the real world. For example, we examined polls during the Democratic primary and made sense of the results together as a class, as well as determined which polls might be more or less accurate than others. In recent weeks, we have looked at a variety of real-world experiments to apply what we have learned in class. Lastly, the writing assignments contributed to our growth as a writer in general, even if the prompts themselves were not exactly related to core course material.
- **Quality:** The quality of teaching in this course is second to none. I am routinely shocked by how much effort Professor Cipolli puts into the course, and that level of effort forces me to step my game up as well. He offers learning methods for every type of student – he is an effective lecturer, posts lectures online, allows students to annotate them and ask questions, and also routinely checks in on a public forum on Moodle where students can ask questions and learn from Professor Cipolli

and one another. He handled the transition to online classes beautifully and the class continued without any major interruption. I would recommend his class to anyone, even those not majoring in a math-related field.

○ Student: 8

- **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
- **Effort:** This course required one to use a coding program and to fully understand how to use it given the notes and concepts.
- **Understanding & Appreciation:** It made me understand how much more complicated statistics can be and how applicable it is in real life.
- **Intellectual Growth:** It made me appreciate how helpful statistics can be, but aware how much room for error there is as well.
- **Quality:** The professor was very well educated and knowledgeable in the course matter and was always willing to delve more deeply into it if desired. He was readily available in person and online, even when we had the ability to meet in person on campus.

○ Student: 9

- **Reason(s):** Major or minor requirement
- **Effort:** I put an appropriate amount of effort into this course. I always paid attention during class and did the homework assignments.
- **Understanding & Appreciation:** This course deepened my understanding and appreciation of the course subject. Before taking this course, I had never taken a statistics class. Therefore, I did not understand how much thought and effort goes into calculating statistics. However, this course has exposed me to a handful of different statistical methods. Whenever I read statistics on the news now, I have a greater appreciation for these numbers.
- **Intellectual Growth:** This course helped me develop as a student. This was my first class at Colgate that had more than 25 students. Therefore, at the beginning of the semester, I was not used to being in a big lecture class. Over the course of the semester, I adopted different styles of learning to help me succeed in this big class environment.
- **Quality:** The quality of teaching in this course was excellent. For starters, the lectures were very clear and easy to follow. Secondly, professor Cipolli is incredibly organized. Lectures, detailed notes, and diagnostic summaries were all posted on Moodle. He also utilized a stack overflow on Moodle, which made it very easy to ask questions online. He was also always available during office hours to answer any of my questions. Despite being a big class, professor Cipolli did a great job of being available and making sure that all students understood the class material.

○ Student: 10

- **Reason(s):** Interest in the course material
 - **Effort:** I put in a good amount of effort into this class. There was always work to be done, whether it was reviewing notes, doing the weekly homeworks, or studying. Not as difficult as some of my other classes such as economics, but it definitely was challenging and required significant effort.
 - **Understanding & Appreciation:** It added to my appreciation of statistics. I thought going in to the class that I would enjoy it, and I was right. It was a class I enjoyed going to.
 - **Intellectual Growth:** It made me realize how important working with others is and asking questions. At times where I felt lost, I could easily ask questions or look at other students' questions that were posted. I learned a lot by working with others.
 - **Quality:** Professor Cipolli is a phenomenal professor. He is one of the best I've had at Colgate throughout my two semesters. He is knowledgeable, approachable, friendly, cool, and funny. He makes class interesting and the work easier to follow.
- o Student: 11
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I worked very hard on this course. I never missed a class, completed all of the homework and diagnostics, and frequently asked for help. This class seems a bit excessive because it is only a 100 level course. I think Cipolli's standards should better resemble a 100 level course.
 - **Understanding & Appreciation:** I understand a lot more about statistics now than I did when the semester first started, but there is still a great deal that I do not understand.
 - **Intellectual Growth:** I think that this class made me think about accessibility in a way that no course before has. After switching to the online format, I soon became aware of the many hurdles and difficulties that will be needed to jump through to complete this course.
 - **Quality:** Overall, I think Cipolli is a good professor. He certainly knows the material well and is clearly very passionate about statistics. With that being said, I think that his structure of homework assignments was extremely challenging, especially after the switch to the online format. Having a 50+ problem set due weekly on top of 3 hours of videos to watch, plus having exams all while trying to keep up with my other courses was almost impossible. He wanted to get through absolutely everything, and that clearly was not possible. More sacrifices should have been made to accommodate students after the online switch. Another noting point is that in general, most of the class found the use of R as more of a hindrance than helpful. Students have made comments several times throughout the semester and he would generally reply with, "R is meant to be more helpful than not, if it is being a problem that is because it is not being used properly. Check notes from earlier in the semester to figure it out." This advice was unhelpful and honestly frustrating. If students are saying this is not helpful, than it is important to listen to that and not just project the

outcome that you want onto students. Going forward, if he wants to use R in this class, I think he should spend much more time during the beginning of the semester going through it and how to work it, instead of just constantly insisting it is the easier route to take. I would like to note here that I think Professor Cipolli means well and tries his best to be there for students. In terms of asking for help on statistics, he is more than available for that. I so greatly appreciate how ready he is to take questions, and how quickly he responds to students inquiry. With that being said, I think there is a bit of a disconnect between him and students in that he says he cares, but in his practices through his course, it does not feel that way. For example, when he remodeled the syllabus for online learning, he changed the format of exams and called it an "exceedingly kind syllabus." He advertised this 'exceedingly kind syllabus' several times to us students. After looking at this supposed kind syllabus I noticed that nothing was changed except for the fact that our exams would now be in the take home format. To read the syllabus and still wonder how in the world I am going to complete that and then see him label it as 'exceedingly kind' was a bit of a slap in the face. It felt almost condescending in that I still thought it was extremely challenging, but to him he was doing us a solid favor. My last point, is this, I have had conversations with Cipolli about my personal struggles with the class, and the response I got were always along the lines of that once I reach my goals and where I want to go in life, then all the struggle will be worth it. I want to end this by saying that I do not think Professor Cipolli is a bad person or a bad professor. I think he does his job very well and is extremely ready to answer questions about statistics, and I do not expect my coursework or academic career to be easy. I expect struggle, but what is frustrating is when certain students on campus experience this struggle at disproportionate levels. Some students have experiences that greatly differ from that of the majority voice on campus. There is no need to make students struggle if it can be avoided in the first place. Accessibility and accommodations is everything, not just on paper, but in practice too.

o Student: 12

- **Reason(s):** Major or minor requirement; I needed to take a math class in order to fulfill a requirement
- **Effort:** I worked very hard in this class, because of the fact that I am not someone who generally enjoys or understands math very easily. But I did understand a lot of the material.
- **Understanding & Appreciation:** I came to a much better understanding of statistics than I previously had, and I appreciate the material a lot more than I used to.
- **Intellectual Growth:** It helped me realize that even though I do not love a subject that does not mean I can not learn it.
- **Quality:** This professor was one of the most caring professors that I have had at Colgate. He would

do anything to help out a confused student and I really respect how much he cares about each of us in the classroom.

○ Student: 13

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; It's just a fun class, innit?
- **Effort:** I did all of my homework and my exams were aight.
- **Understanding & Appreciation:** T-testing was bare interesting.
- **Intellectual Growth:** It helped me graduate cuz I really needed a natural science credit.
- **Quality:** The lad is a good laugh.

○ Student: 14

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Interest in the course material
- **Effort:** I put a great deal of effort into this course in order to maximize the benefits I would receive from taking this course.
- **Understanding & Appreciation:** I have a greater understanding of how statistics are calculated, which is important when they are so often used in the media.
- **Intellectual Growth:** Having a greater understanding of statistics is a great asset in modern society, as they are extremely present in the media. Statistics are also a great thing to have knowledge of when coming to things such as budgeting, investments, etc.
- **Quality:** Professor Cipolli was extremely accessible throughout the duration of the course, both in person and electronically. He was able to handle the shift to online education very well, as there was minimal course disruption. Professor Cipolli was also very accommodating with the dramatic shift in instruction, while also maintaining a fair timeline and grading policy.

○ Student: 15

- **Reason(s):** Major or minor requirement
- **Effort:** I put a great deal of effort into the course.
- **Understanding & Appreciation:** It broadened my understanding of statistics.
- **Intellectual Growth:** It made me understand the news more.
- **Quality:** Professor Cipolli is simply one of the best professors I have ever had.

○ Student: 16

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I kept up with all assignments and spent a reasonable amount of time studying for exams.
- **Understanding & Appreciation:**
- **Intellectual Growth:**
- **Quality:** Professor Cipolli conveyed the course material effectively during lectures and gave ample

opportunities for students to ask questions.

○ Student: 17

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I am definitely not much of a math/science person, but I took this course because I needed to fill another distribution area, and also because I am sort of interested in Statistics and I thought I would learn a lot. I did have to put in a good amount of work into this class, but it totally paid off and I feel like I really learned a lot! I am so glad I put in the effort that I did.
- **Understanding & Appreciation:** I had never taken any kind of a statistics class before, and this class totally eased me in while also teaching me a lot. I feel like I really can look at statistics in all place of the world differently and actually understand what they might mean and how they might be flawed. I really appreciate Professor Cipolli's dedication and enthusiasm about the material, because it really made me appreciate the subject matter more. Although I'm not planning on taking another math class because it's not required in my major, I totally would, just because of how well this class went/how much I learned.
- **Intellectual Growth:** Going into this course I was a little scared that it would be super hard and just such a struggle. I did have to work hard, but in a rewarding way—not in a way that made me never want to see Statistics ever again. I think this definitely allowed me to grow as a student, because it showed me something that I actually turned out to be good at that I wasn't expecting. I think Professor Cipolli creates a class where all types of students can succeed and learn—not just math-minded people. I really appreciated this and I think it showed me that I can be good at humanities courses as well as math and science courses. I also feel like I just know so much more about the way that statistics is portrayed in the news, which is something valuable that I can question and think about always throughout the rest of my life.
- **Quality:** Professor Cipolli is hands down the best professor I have ever had at Colgate University. Like I said in the questions above, I was nervous going into this class, but I felt totally reassured by the way that Professor Cipolli led the class, from the very first day. People always say that small liberal arts schools have the benefit of small classes with teachers who care about you and want to see you succeed. Even though our class was 75+ people, Professor Cipolli learned everyone's name—I can't even say that about some of the professors I've had in 30 person classes. He is EXTREMELY willing to help when you need it, especially once we moved remotely. He sends daily emails reminding us to reach out if we need help, and he is so quick to respond over email. Sometimes I feel like with my other professors I am burdening them by asking questions or for extra help, but with Professor Cipolli, I rarely feel that. The way he teaches is great, he posts lots of materials on Moodle so that you can reinforce what you discuss in class. His tests are challenging but very very fair, and his

method of re-testing previously tested material on every exam is genius. It allows for true learning and fixing your previous mistakes, rather than just seeing the grade you got on a test and never looking at that material again. I think every professor should structure course exams this way. I honestly cannot even think of any weaknesses to this course. Even my parents are impressed with the care and dedication Professor Cipolli has for the material and his students, and they are so impressed that I am actually doing well in a math class (thanks to all that is mentioned above!). I could continue to rave about this course and Professor Cipolli, but I think the point has been communicated. I am so glad I ended up in this class with this professor, 10/10!

○ Student: 18

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I think I put a lot of effort into this class, always studying a lot for exams, trying to make the most out of the homework, etc.
- **Understanding & Appreciation:** I think I understood the material most of the time, I do think though that some chapters got confusing once we switched to online learning. I came into the class with a lot of background knowledge and I feel like if I didn't have that I would have struggled a little, especially when we switched to online.
- **Intellectual Growth:** It definitely my intellectual growth, mostly because of the way homework and exams were created. Our professor gave us real studies and experiments to look at and analyze based on what we were learning in class.
- **Quality:** For the most part, I thought the teaching of this course was pretty clear, and the professor was very understanding of the reality of all the craziness going on in our world.

○ Student: 19

- **Reason(s):** Major or minor requirement; Elective within major or minor
- **Effort:** I put in a ton of effort to this course because of the professor. I mean this in the best way possible, Professor Cipolli's class made learning fun for me and I hadn't felt this way at Colgate up until I took a class with Professor Cipolli. He has made learning so fun and inspired me to continue to push myself to become better at whatever I choose to do.
- **Understanding & Appreciation:** It grew immensely. I came into this class with intention just to try and do well, but Professor Cipolli gave me the opportunity to go above and beyond. He taught the class how to use the challenging "R" computer programming system and I ended up having so much fun learning how to use it and calculate difficult math equations with it. This course has easily and by far been my favorite to take at Colgate strictly because of Professor Cipolli and his love for teaching and deep knowledge about mathematics.
- **Intellectual Growth:** This course contributed to my growth in so many ways. I for one became

a lot more interested in my school work especially for this course because Professor Cipolli was so accessible. Since I am a student-athlete, time management is so important to me, and Professor Cipolli was so great about giving me quality answers without answering the question for me in any way but pointing me to the correct material that we had learned in class that would be useful in helping me answer any question I had. He also just never seemed irritated at all, and his obvious joy for life in general really inspired and motivated me to be more like him.

- **Quality:** Professor Cipolli has no weaknesses. He literally does everything for his students to help them be successful and in a class of over 70 students that is remarkable. He is always up to date on Moodle, always timely in answering questions students post to the stack overflow board, and always prompt in responding to emails. He is always willing to make time in his busy schedule to help students, and his tests are challenging but fair and understandable. If I could ever recommend anything to people that have the power to make decisions it would be to tenure Professor Cipolli, he is by far the best Professor Colgate has on campus, and he is a star in his field and Colgate is blessed to have him teach on campus. I know my life and mindset towards academics has changed in the most positive way ever since I met Professor Cipolli and I am forever grateful to him. Thank you Professor Cipolli, I truly appreciate you.

o Student: 20

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; really organized dude
- **Effort:** honesty really impressive teacher. very methodical in his teachings. you can tell hes a math/logic guy
- **Understanding & Appreciation:** good
- **Intellectual Growth:** good
- **Quality:** good

o Student: 21

- **Reason(s):** Major or minor requirement
- **Effort:** I studied the notes for each chapter on my own and made in-depth study guides for each chapter to use for homework and to study for tests.
- **Understanding & Appreciation:** I understand statistics more and I can apply it to my other classes.
- **Intellectual Growth:** I learned how to better interpret statistics I see in the news.
- **Quality:** Professor Cipolli is one of the best professors I have had at Colgate. I cannot think of any weaknesses. He is very approachable in class, in office hours, or through email. He organizes plenty of opportunities for students to meet with him and ask questions and it is clear that he truly wants every student to succeed and puts in effort to make that happen. He graded our assignments

quickly despite our large class size and he responded to emails promptly.

○ Student: 22

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this class. I took lots of notes, started homework early, and studied well for exams.
- **Understanding & Appreciation:** I have learned a lot when thinking about how to survey and sample from the population.
- **Intellectual Growth:** I am happy to say that when I read statistics in media or other classes, I can confidently understand what is going on and if I think it's credible.
- **Quality:** I think that this course was taught extremely well with a lot of effort from Professor Cipolli. I really enjoyed his lectures and his sense of humor.

○ Student: 23

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** I put in a great deal of effort to prepare for the exams and on the weekly home works
- **Understanding & Appreciation:** I usually do not like math but Professor Cipolli really tried to use a lot of examples and make the material engaging.
- **Intellectual Growth:** I feel confident in analyzing data sets now.
- **Quality:** Professor Cipolli cared about all of our learning and checked in with weekly diagnostics. He was very accessible when we transitioned to online learning and put a great deal of effort into making videos and retaining normal class structure.

○ Student: 24

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I am not math inclined by any means but Professor Cipolli set this class up so even those of us who are only taking it for a requirement could scrape by. I really applaud his pedagogy and the way he sets up his class. It made it as least painful as possible.
- **Effort:** So much. I just, I am not a math person so I struggled. I just have trouble retaining information that I don't find super interesting point-blank so I really had to put in the effort to remember everything we learned and figure out how to apply it effectively. But that is definitely a "me" problem. Professor Cipolli did his absolute best to help me when I needed it.
- **Understanding & Appreciation:** So much. I knew next to nothing about stats before.
- **Intellectual Growth:** I dusted off my mathematical and problem-solving skills which was nice. It's good to stay in touch with those sides of you.
- **Quality:** Professor Cipolli truly is an amazing professor, truly. Like I have said before he has gone out of his way to be available, to make the material relevant, to just generally be kind and make

the experience the best for us that it can be. I think overall the small things I would want to have changed would be perhaps I'd want to little more step by step instruction when it came to R. I know there is a lot already, but it wasn't always just "copy and paste" and so I would find myself trying to figure out how to change the things I needed to and make things way more complicated than necessary and then I'd try the next day and suddenly I'd have it down only to go back the next day and forget everything I had done. I think also adding slides with our "toolboxes" in them so that we had like a general list of our go-to formulas at the end of the chapter would be helpful because then it would all be in one place and, at least for me, I wouldn't have gotten confused and overwhelmed while trying to organize everything. It's a lot of material and for people who already don't really feel comfortable are enthralled with the material it can be easier to just say "this is too much I can't sort this out and it's taking too long" which is not fun. I think that the last thing would be that if we have to stay online, letting us know how many of the lectures we should probably be watching in one day or how many days we should break the lecture up into would be nice. I like the video lectures but sometimes they accumulated in time and I ended up spending 5-5.5 hours on lectures per week which is 2 hours longer than we would have had for class time in a week. At that point, it seemed unfair that we covered so much when we wouldn't have been able to in class. It got better as I got more settled into my routine but think some guidance on the structure would have been nice so that if someone needed it they could have it and if someone didn't they could do it when they wanted. Overall though this was the best way a stats class could have gone for me and I really really really like Professor Cipolli. He also has nice outfits that are fun to comment on in the weekly diagnostics.

- Student: 25
 - **Reason(s):** Major or minor requirement
 - **Effort:** I had to put a lot of effort into the homework because of how time-consuming they were but it was nice that they were spread out. I also had to study a lot for the test to be ready to think on a theoretical level.
 - **Understanding & Appreciation:** I understand a lot more about the applications of statistics.
 - **Intellectual Growth:** I now can understand a lot of real-world statistics and where they come from.
 - **Quality:** I wish the grading was a little more straightforward. I understand the theory behind it, but there are so many moving parts to the makeup of the grading scale that its a bit difficult to keep up. I also wish we only tested each standard once because I personally did worse on the second try.
- Student: 26
 - **Reason(s):** Major or minor requirement

- **Effort:** As the course went on, it definitely got more difficult and required more effort.
 - **Understanding & Appreciation:**
 - **Intellectual Growth:** Collaboration and critical thinking
 - **Quality:** Very accessible and helpful with many outlets for help
- Student: 27
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I was super excited to take stats as I had heard really good things about the course in general and I loved AP Statistics
 - **Effort:** I worked a ton on this course and organized meetings with both my Professor and peers regularly outside of class to go over or assist one another with the assignments and topics covered. I attended classes and took notes on lectures. I stayed after class and emailed to ask questions or clarify. I spent a very long time on the R software trying to get things to function.
 - **Understanding & Appreciation:** I think I am so confused at this point. I learned at the beginning of the semester some basic concepts/foundation but as the semester went on I got more and more behind and then more frustrated with myself as I felt like I must be doing things totally wrong, only to find that my peers all felt the same way. I took AP Stats prior to this class and succeeded thoroughly in my understanding of that class. This Stats class requires use of R code and it is not easy for those with no coding/technological experience or expertise. I think that I often felt like giving up in this class due to the extra level of work and time it required and the low level of reward I experienced.
 - **Intellectual Growth:** This course definitely taught me persistence and also that it is ok to give up trying at a certain point. It is the kind of thing where when you keep doing the same thing and expect a different result you end up being somewhat insane. I would continuously find myself playing around with R code and looking up error after error in weird help forums on the web because I did not know what was wrong and if it was conceptual or technological. In AP Stats, I worked things out on paper with algebra. It gave me conceptual understanding and I applied what I had done previously in math in a way that made sense. Using R, I have no way of drawing a line from what I have done in the past and what I am telling a software to do through specific streams of numbers and letters that I could never seem to grasp or remember. So much trial and error taught me that at some points you need to take a break, especially when your computer starts overheating.
 - **Quality:** I think that Professor Cipolli is really passionate about his students and this subject. However, I think that it is important to recognize that his computer science background is uncommon in a beginner-level class and both overwhelming and intimidating. It becomes an issue when students spend more time trying to figure out the technological way of problem solving than actually

working through the concepts and material of the class. Professor Cipolli is the most accessible and available Professor I have encountered when it comes to questions or emails and I truly admire that. However, I think that this class needs to come with some level of expectation for the computer programming elements and the ways it differs from traditional statistics because those expectations are not equivalent with what I originally thought I was signing up for.

○ Student: 28

- **Reason(s):** Other requirement; Reputation of the instructor
- **Effort:** I believe that I put a substantial amount of effort into this course, which is reflected in my participation and course work. I was a consistent contributor in class discussions and handled my weekly and exam writing submissions with care and detail.
- **Understanding & Appreciation:** Having never taken a statistics class before, I tried to go into the semester with an open mind. Luckily for me, Professor Cipolli provided succinct and engaging lectures and course material throughout the semester. Despite looking forward to having discussions in class and the information being readily available/explained well, I never felt as if I grasped a good understanding of the concepts.
- **Intellectual Growth:** Being one of the larger classes taught at Colgate, Math 105A allowed me to find my voice and participate freely in class. This was remarkably easy to do in Professor Cipolli's class, as he provided nurturing support and great feedback throughout the semester.
- **Quality:** Professor Cipolli was incredibly passionate about her course work and subject matter, which was greatly apparent throughout the semester. Lectures were enjoyable and a comfortable environment to participate in because of Professor Cipolli's affability. While I probably wouldn't take another of Professor Cipolli's courses during my time at Colgate due to the fact that I do not have an interest in pursuing a math-related major or minor, he provided invaluable support that I will cherish throughout my remaining 3 years.

○ Student: 29

- **Reason(s):** Elective outside major or minor; Interest in the course material
- **Effort:**
- **Understanding & Appreciation:** Just barely learning how to begin to understand R and looking at the code that was provided to us when doing the homework and writing assignment, I really began to appreciate the value of coding when doing math.
- **Intellectual Growth:**
- **Quality:** I think professor Cipolli is actually the best instructor I have had at Colgate. He is very organized, his lectures make a lot of sense, he provides a lot of material on moodle so that we can review the notes, lectures and do practice problems, he responds to emails very quickly and is a very

understanding and considerate professor. I also like the retesting policy on exams and the fact that homework actually does contribute to the overall grade. Additionally, I think his grading procedures are fair and he is generous when grading exams. At times using R became very frustrating but I thought it was really beneficial to visit him in office hours. I also liked that each week he uploading all the lectures for the week on Monday so people could have plenty of time to watch the lectures whenever they could.

○ Student: 30

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this course, especially because I had to do well because we were assigned so much work.
- **Understanding & Appreciation:** This course did not really help my understanding or appreciation of the course subject. I think part of this was due to the fact that we were assigned so much work when Zoom classes started and it was simply overwhelming so I began trying to merely complete the assignments rather than create a strong grasp on the material.
- **Intellectual Growth:** The course contributing to the intellectual growth and education by insisting me to problem solve and embrace concepts that were out of my comfort zone. I am not a math savvy person and this course forced me to try and not only understand the concept, but apply them to my everyday life.
- **Quality:** There is no denying that Professor clearly cares about his students' success and is beyond passionate about mathematics. He always came to class with great sense of humor and an infectious passion for whatever he was teaching in a given class. He is a very organized individual and is returns exams and homework in a timely manner in order for his students to learn from their mistakes and apply their new knowledge to their future work. I think Professor Cipolli did assign way too much work in the transition from classes to Zoom though. I think it might have been overlooked by him that people who are not that strong in the mathematics field may have been struggling even more by learning the information over video lectures. I think he should have slowed down the pace of the class at the end, but overall I think Professor is an excellent professor. I can safely say that he is without a doubt one of the best professors I have had at Colgate.

○ Student: 31

- **Reason(s):** Major or minor requirement
- **Effort:** This class took a lot of time to learn how to use R. I think it was worth it.
- **Understanding & Appreciation:** This course was my first introduction to statistics. I now feel more confident in my ability to analyze data.
- **Intellectual Growth:** This course increased my analysis skills and I learned a new programming

language.

- **Quality:** He is an awesome professor who is very clear about everything he expects from you. He is constantly available and provides regular check-ins.

○ Student: 32

- **Reason(s):** Major or minor requirement
- **Effort:** This course started out fairly simple and got progressively more difficult as we began to tie concepts together. The tests were definitely more difficult than the homework in the first half of the semester, and both homework and exams became difficult towards the end. I put a good amount of effort into this course in order to do well.
- **Understanding & Appreciation:** This course contributed to my understanding and appreciation of statistics because there is much more to the subject than I initially thought. I used to think statistics was just p-values, but now I know a little more about its complexity.
- **Intellectual Growth:** I definitely had to be very organized and be able to learn the material on my own. This is because every problem is different and requires a deeper understanding of the topic, rather than just regurgitating information.
- **Quality:** I thought that this course was taught very well. Professor Cipolli is extremely organized and cares greatly about his students. He is very accessible and it is very evident how much time he puts into the course. He answers our questions within minutes and provides us with an abundance of both fun and educational resources. You can really tell how passionate he is about statistics.

○ Student: 33

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I read the class notes and attended all the lectures. I think I put the most effort that is possible for this class.
- **Understanding & Appreciation:** I definitely think I will be able to apply the knowledge I gained in the classroom to outside of class. I do appreciate this class and what it taught me.
- **Intellectual Growth:** It allowed me to analytically apply different statistical models and evaluations to different scenarios. The use of the real world was integral to the subject matter and I really feel like that as utilized.
- **Quality:** Great teaching style and always willing to talk to students. Definitely one of the most thoughtful professors I've gotten the pleasure to have class with. He wants everyone to succeed but on their own merit, so he will work with any student to help them get there. His only weakness is not making it completely clear on the exams when we should fully explain our answers. I think it would greatly benefit the students if the questions mapped out the question more.

○ Student: 34

- **Reason(s):** Major or minor requirement
 - **Effort:** Lots - difficult subject for me
 - **Understanding & Appreciation:** Helped understand basics of topic
 - **Intellectual Growth:** probably will be some helpful knowledge in my future
 - **Quality:** Very good, despite my dislike of the subject. Professor did a great job. Not just the math, but also taught how to think in the way a statistician would, even if you don't know any of the math, which is a valuable skill.
- Student: 35
- **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** This class required a lot of effort for although it is a subject that usually comes easily to me, I found that the use of R coding created a lot more challenges and effort.
 - **Understanding & Appreciation:** increased my understanding
 - **Intellectual Growth:** It helped me understand there are multiple ways to attack a problem and grow from a mistake
 - **Quality:** I didn't like the use of R coding, I found it to be a lot more stress-inducing and I don't think I'll ever use it again, I would have much rather used a calculator and focused more on stats less on code. I liked how our professor was always very accessible and open to making our lives easier - it was great to know how much he cared even in such a large class!
- Student: 36
- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** The course consisted of weekly homework, a writing assignment (research paper), and periodical exams. All of this work kept me engaged throughout the semester and inspired me to put consistent effort into this course.
 - **Understanding & Appreciation:** The course taught me the basics of statistics and showed me how powerful the tools we are presented with can prove to be. It also showed me the applications of statistics in real life which motivated me throughout the course.
 - **Intellectual Growth:** The course was helpful at teaching me concepts in-depth and built a strong base for statistics. This enabled me to read about more complex topics as well.
 - **Quality:** Prof. Cipolli was absolutely outstanding and always prepared in class. The way in which he taught concepts using real life examples helped me grasp the material easily. Even when the semester became online, he was available for plenty of time to clear doubt and was of great help throughout the course. 10/10 recommend.
- Student: 37

- **Reason(s):** Elective outside major or minor
 - **Effort:** I put a great deal of effort into this course. As someone who considers themselves "bad" at math, I put a lot of effort into understanding the concepts by doing the homework, reading the chapter notes, doing practice problems and later in the semester, watching and taking notes on the lectures.
 - **Understanding & Appreciation:** I did not really know anything about statistics prior to this course so I think I have a good foundational knowledge now.
 - **Intellectual Growth:** It helped me critically think in ways that I have usually not at Colgate. I have not taken a mathematics course, besides this one, so it really helped me think of how to approach a problem and think logically.
 - **Quality:** I liked that Professor Cipolli made statistics approachable and was very aware of the fact that some of us were very uncertain about the class topic. I also appreciated how he really made himself available and genuinely cared about our progress. I did not think that he taught R very well. I felt that I always understood the concepts and then I got to R and was stuck on how to execute it. I never felt truly comfortable with it.
- Student: 38
- **Reason(s):** Other requirement; Reputation of the instructor
 - **Effort:** I often put a lot of effort into trying to succeed in this class. I would say the plenty of assignments ensured that I was always on track with the course materials, and that I was applying them correctly.
 - **Understanding & Appreciation:** I was always worried about taking a statistics course in fear that I would not be able to understand the course material. Thankfully, the professor's dedication to his students' successes motivated me and granted me a greater appreciation for the course subject.
 - **Intellectual Growth:** As our knowledge of statistics increased, I was able to apply the course material to courses outside of this subject. As a result, I was able to better understand other subjects more thoroughly than I otherwise would have.
 - **Quality:** The quality of Professor Cipolli's teaching was incredible. I admired how much effort he put into his work and how dedicated he was to all our successes. I was also impressed at how easy he was able to make the transition to online classes for us. There were always plenty of resources and always an overwhelming amount of support. Truly a wonderful professor!
- Student: 39
- **Reason(s):** Elective outside major or minor
 - **Effort:** For this course, I did the necessary homework assignments and weekly diagnostics, and also came to class each day to take notes and ask questions about the material.

- **Understanding & Appreciation:** This is my first math course at Colgate, and I found this course to be very interesting in that it related a lot to the real world, unlike some of the math courses that I took in high school. I'm not a very big math person, but I would say this course taught me a lot about the importance of math in our modern world.
- **Intellectual Growth:** As mentioned previously, this course helped me apply my mathematical knowledge to the real world. I'm a psychology minor, so part of the reason that I took this course was to help with my knowledge of statistical terms as they relate to psychology. Through the learning I did in this course through homework problems and real-world examples given in lecture notes, I was able to relate my Research Methods (PSYC200) class to this one and better understand statistics in terms of psychology.
- **Quality:** Professor Cipolli was wonderful to take a class with. He is great at explaining the material that he teaches, and more importantly is always there for his students when they need a helping hand with any assignment. He always would go out of his way to emphasize that he was always there for help, and even set up a Moodle page for us to post thoughts and questions on the lecture material. Lectures moved pretty fast, for the most part, so having this was very helpful and comforting. He's a great professor and I feel that I learned very much about statistics from him.
- Student: 40
 - **Reason(s):** Other requirement; Pre-req for a course for my major.
 - **Effort:** I think I put more effort into the class than the average student in the class. I've gone to office hours several times, do whatever work was assigned with enough time to ask the professor before the deadline, and review the powerpoints and notes posted online.
 - **Understanding & Appreciation:** It definitely made me realize how important and significant doing statistics correctly and properly is in the real world.
 - **Intellectual Growth:** I realized that statistics can be used in so many different contexts in the real world and is important to have the knowledge and skill.
 - **Quality:** The quality of teaching is amazing. The professor is very on top of things and is very understanding toward students' situations, especially during this pandemic, which is a time of stress and anxiety for many. He adapted the course and made it extremely flexible, while still allowing us to learn the material effectively. He is very accessible on multiple online platforms and in-person as well, which I highly appreciate.
- Student: 41
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put quite a bit of effort into this course, first for understanding the material and then to apply the concepts to the homework, then the tests. Statistics is a tedious process, so it requires a

bit of effort and time to complete.

- **Understanding & Appreciation:** This course has been really great to understand statistics in the real world, especially as Professor Cipolli includes various real-world data examples within his lecture notes to provide an understanding as to why we are learning the things we are, and how it can be applied to everyday life.
 - **Intellectual Growth:** This course encouraged critical thinking about data that is provided to you. Throughout this course, I have gained a better understanding as to understanding the reliability of data and possible errors that occur throughout the whole statistics process.
 - **Quality:** Professor Cipolli is a wonderful professor. He is organized and attempts to be enthusiastic every class period that I had him for. Even in such a large lecture hall (Olin), he did his best to foster a comfortable environment and encouraged for his students to ask questions if there was any confusion. He is patient and unbelievably kind - I would definitely recommend any course taught by him to my fellow classmates!
- Student: 42
 - **Reason(s):** Major or minor requirement
 - **Effort:** Showing up to lecture and taking detailed notes was often enough to complete all homework assignments and do well on exams.
 - **Understanding & Appreciation:** statistics, while a underappreciated topic, is still very important, and the professor managed to communicate to us very effectively how statistics is used and misused in the modern day.
 - **Intellectual Growth:** While we learned about the topic we also learned how statistics can be misrepresented to prove one point or another.
 - **Quality:** The teaching was very good. While it was a lecture class so power-point was the core of the lectures the professor managed to keep the class very engaging by including relevant examples from current events.
 - Student: 43
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor
 - **Effort:** Completed all homework for the course and took notes on materials. did not study a great deal but did fairly well on exams
 - **Understanding & Appreciation:** Stats provided real examples for data that would otherwise seem dry and boring, and concepts were conveyed using real world analogies and strategies used in science and the public sector. These tropes allowed me to see statistics in action as opposed to in theory.
 - **Intellectual Growth:** Intro Stats allowed me to apply concepts and work to convey information.

The writing assignments given were an excellent example of this and helped me apply and convey concepts in both statistics terminology and plain English.

- **Quality:** Prof. Cipolli gave excellent and enjoyable instruction with reasonable assignments and exams. The teaching conveyed topics that were heavily grounded in mathematics and made them accessible for people who did not have a strong background in math

o Student: 44

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; I was considering being a History major and I figured that statistics would be helpful in that major.
- **Effort:** I put a lot of effort into this course as it was the first math course I had taken since high school. I attended as many lectures as I could even though they were generally optional, reviewed the notes frequently, and completed the homework as carefully as I could.
- **Understanding & Appreciation:** This course inspired me to consider a math major, although I don't think I will just because it isn't super relevant to my career choice.
- **Intellectual Growth:** I learned how to absorb material in a more productive way. In prior cumulative classes, I had a hard time remembering things from the beginning of the year and this course has made that significantly easier for me to do.
- **Quality:** The professor was extremely accessible, understanding, and helpful in teaching the material. Although all of this was extremely new to me for the most part, I feel like I learned the course material completely. Professor Cipolli is one of my favorite professors I have had at Colgate so far. Given I have only been here a year, but he has taught in a manner that has gone above and beyond any of my other courses.

o Student: 45

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I attended every class although attendance was not mandatory and completed all of the assignments.
- **Understanding & Appreciation:** In the first half of the semester Prof. Cippoli taught at a great pace and gave interesting lectures which helped me gain appreciation for the course and material.
- **Intellectual Growth:** Again, in the beginning of the semester, before moving online, Prof. Cippoli made the class interesting by relating it to the real world showing us how statistics were used and manipulated through the news and specifically in politics.
- **Quality:** Prof. Cippoli is clearly a very intelligent man who knows the course material inside and out. The first half of the semester was fantastic and I believe that if we stayed with in-person teaching it would have been a more successful class. Since moving online Prof. Cippoli has made the class overly difficult, specifically forcing us to use RStudio a complicated computer program for

an introductory math course. The material became far more challenging and was very difficult to keep up with. I feel that he made this class far more difficult than it needed to be and failed to teach us the basics about statistics. I do not feel that this class was valuable in anyway. By forcing us to use RStudio instead of using excel or a calculator, he shifted the focus away from statistics and onto computer programming. I feel disadvantaged from my peers who took MATH 105A with different professors.

○ Student: 46

- **Reason(s):** Reputation of the instructor; Interest in the course material; I took this course because I thought statistics would be important in my other classes and possibly my future.
- **Effort:** I put a great deal of effort into this course. I attended every class, read the class notes/readings, read the diagnostics, and attended office hours.
- **Understanding & Appreciation:** I have learned how much statistics intersects with other courses and fields of study. In light of COVID-19, I believe that knowing how the numbers are being determined makes me feel like I have a better world understanding.
- **Intellectual Growth:** As I said previously, statistics influences all other research topics and is an important part of the workplace.
- **Quality:** I think the professor was incredibly accessible. He also made a strong effort to make statistics understandable and manageable for individuals from all different types of backgrounds. He handled the change from COVID so well. His class was the only course that I actually felt okay about after the switch to online learning, and I am incredibly grateful.

○ Student: 47

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course, I really appreciated the way the presentations were structured and allowed students to take control of their learning
- **Understanding & Appreciation:** I had only done a very basic level of statistics in high school math and this allowed me to delve much deeper
- **Intellectual Growth:** Statistics is a particularly interesting subject because of the way that it applies to our daily lives, even in just reading the news numbers can be misleading exploring this was very interesting to me
- **Quality:** Prof. Cipolli is incredibly understanding, available and enthusiastic, his approach to the class/ subject is full of passion and translates to students, making us want to learn and develop our statistical analysis skills

○ Student: 48

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I put a great deal of effort into completely weekly chapter problem sets as well as in my studies for exams.
 - **Understanding & Appreciation:** I love the course. Previously, I never thought i would be interested in a stats class. Boy, was i wrong.
 - **Intellectual Growth:** This course ahs taught me about the amazing qualities of failing. In the pursuit of knowledge, ive learned to embrace failure as a stepping stone to understanding.
 - **Quality:** Quality of teaching was amazing. I love professor Cipolli with all my heart. He's witty, understanding, and able to connect with students on a personal level. He is the best kind of professor out there. He made statistics, in the Olin Love Theater, the class i looked foreward to attending most every week. He is a fantastic professor, and an even better man.
- Student: 49
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; I am a very humanities-leaning student and this is the only math course I felt comfortable taking for my natural sciences/math requirement.
 - **Effort:** I had to change the way I learned a lot for this class given how far removed from mathematics I have been for years. I struggled to grasp concepts during class time, making me teach myself a lot of the material from Professor Cipolli's well-prepared notes and materials provided to us. I also worked hard in test preparation, given that I felt I could not contribute much to discussions or questions.
 - **Understanding & Appreciation:** I learned to appreciate the mathematical side of politics, given that math rarely applies to me within my majors. I enjoyed seeing this overlap.
 - **Intellectual Growth:** This course required me to step outside my comfort zone of papers and debates. I felt like I was learning a new language at some points, and I feel that I grew in terms of my ability to challenge myself and to be less intimidated by new subjects that seem irrelevant to my career path.
 - **Quality:** Professor Cipolli was a great professor to have for students of all academic backgrounds. He did not assume that we all knew much about math going into it, as I had feared. He provided tons of examples that we could use when reviewing materials. After the transition online, Professor Cipolli was consistently in contact with students and understanding of our hardships. Sometimes when he answered questions (online and in class), his answers seemed to over-complicate what was asked and confuse myself and others more. This would be my only complaint; overall, he made the class about as enjoyable and reasonable as a non-STEM student could hope for It to be!
- Student: 50
- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; In-

terest in the course material

- **Effort:** I put forth a great deal of effort into this course. Such effort was exemplified by scheduling individual office hour sessions and asking the professor many questions in class and via email.
 - **Understanding & Appreciation:** By taking this course, I was able to understand how important statistics are in the world around me. Furthermore, I learned how valuable it is to be able to accurately decipher the precise meaning of a statistical value. In other words, being able to understand what the statistic is telling me, as opposed to arriving at the mathematical value, is something I took away from the course.
 - **Intellectual Growth:** The course made me think about how statistics and quantitative analysis plays a key role in finance. Additionally, I was introduced to "R," a coding platform that was used for much of the course content. Learning the basic concepts of R provided me with experience on a foreign computer program, while learning statistics at the same time. Pertaining to intellectual growth, my horizons were expanded after being introduced to the usefulness of R.
 - **Quality:** The professor was extremely motivated to teach their students, indicating a genuine passion in the course content. In addition, the professor was very accessible by email. Most inquiries were addressed within 24 hours at most. The professor conveyed the course material through very detailed lecture slides, filled with plenty of real-world examples and studies which elaborated on any given chapter. To supplement to lecture slides, the professor posted very detailed chapter summaries. Such summaries contained definitions, examples, charts, R code, tables, FAQs, and homework questions. After taking the course, I would recommend that an index be added to the summary notes in order to make it easier to locate useful information. I also recommend that the professor indicate exactly which R code is to be used for each set of questions on weekly homework assignments ahead of time. Overall, the professor exceeded my expectations set at the beginning of the semester. I certainly hope to learn from Professor Cipolli in the future.
- o Student: 51
- **Reason(s):** Other requirement; Interest in the course material
 - **Effort:** I have attended all lectures, done all of the homeworks, filled out weekly diagnostics, done a writing assignment, and taken multiple exams, preparing beforehand.
 - **Understanding & Appreciation:** The course has allowed me to gain multiple toolboxes to understand real life statistics.
 - **Intellectual Growth:** This course has taken multiple real-world examples and addressed how we can use proper statistics to make sense of numbers and their contexts.
 - **Quality:** I loved this course, don't change a thing. An awesome professor that cares about the students.

- Student: 52
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Math is not my strong suit, so I had to work harder and put in a lot more time and effort into this course, but the results led me to keep trying and seek answers/spend as much time as needed to learn and understand concepts.
 - **Understanding & Appreciation:** Stats is not that bad! After taking this course, I see connections to Statistics everywhere and in every subject-Netflix documentaries, the news, etc. Statistics is not the traditional math course that is all numbers and difficult formulas. The applications were very interesting.
 - **Intellectual Growth:** I grew a lot in terms of critical thinking skills, and becoming comfortable being uncomfortable with a course subject/asking questions. I challenged myself by taking something outside of my comfort zone.
 - **Quality:** Professor Cipolli is fantastic. He has a wonderful, positive attitude and gives great care in making all students feel intelligent and appreciated. He answers questions quickly and kindly, and always asks us to think outside the box or apply the material to our life. One of the best professors I've had, and I'm not a STEM major!
- Student: 53
 - **Reason(s):** Other requirement; Possibly required for some med-schools.
 - **Effort:** I put a lot of effort into understanding the material in this course in order to perform well on the homework and exams, which require more than just spitting back information.
 - **Understanding & Appreciation:** This course made me think about statistics from other perspectives than looking at scientific data like I am used to. This course also made me have to actually think of solutions to problems when doing homework and exams, and see how statistics can be applied to the real world.
 - **Intellectual Growth:** This course taught me how to accurately analyze statistics and how to use R, which seems pretty useful and easier to use than I expected.
 - **Quality:** The professor of this course was great in many aspects: organized, clear in teaching and expectations, loves to help students and respond to questions, etc. Great quality of teaching!
- Student: 54
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This class took a lot of effort for me but I believe that is mostly because it is not in my comfort zone and therefore the more advanced parts of the class were harder for me.
 - **Understanding & Appreciation:** I have grown to have a further appreciation for statistics in the media especially in this class and question statistics more. Although I won't be going much further

with this area of study, I have definitely taken that away from this class which I think is valuable.

- **Intellectual Growth:**

- **Quality:** I think Professor Cipolli is extremely organized and a good communicator. Sometimes the pretty constant emails felt a bit stressful because I always felt like I had something to do or work on in this class but I don't think that is particularly bad. He provided notes in many different ways, especially while in quarantine, which I think allowed for many different learning types to adapt to what worked for them best.

o Student: 55

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I engaged with the materials by asking many questions and I put a lot of effort into homework assignments and exams.

- **Understanding & Appreciation:** I now understand the importance of "good" statistics and how to interpret things like margin of error, confidence interval, significance level, and so on.

- **Intellectual Growth:** I learned to appreciate the importance of good communication in academia.

- **Quality:** Professor Cipolli did his best to make the course materials fun and relevant for his students. He made himself available for students' questions and always went out of his way to craft extremely detailed and helpful responses.

Spring 2018: Section A

o Student:1

- **Reason(s):** Major or minor requirement

- **Effort:** I put in a lot of effort to this course. There was a significant amount of homework every week. We had diagnostics which were due every Monday after class on Friday and we also had regular homework assignments on moodle that were very long. One of them was about 90 questions. They usually range from 75-90 questions which I think is too much.

- **Understanding & Appreciation:** I definitely have a better understanding of statistics now and I think this course prepared me well for my major.

- **Intellectual Growth:** Professor Cipolli taught me to pay attention to the news and other things because statistics are everywhere. Now I understand news reports and graphs more easily.

- **Quality:** Professor Cipolli is a very nice and polite professor. He respects his students very well. However, I do not think everyone agrees with his style of teaching because he teaches such large classes. No one talks in our class and that frustrates him a lot. He also teaches every possible way to do a problem and I think that makes it more confusing to learn.

o Student:2

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:**In this class you really had to know all of the material. Cipolli made sure that you knew stuff from chapter one and didn't forget about it along the way, this made it necessary to do the homework and put in a lot of work.
 - **Understanding & Appreciation:** I learned a lot in this class, I wasn't really interested in statistics but i learned a lot.
 - **Intellectual Growth:** I learned how to study more effectively.
 - **Quality:** I think that this class was good, I think that it's hard since everyone is at such a different level with what they know about statistics so I feel like he went too fast a lot of the times but I'm not sure how he could fix that since it's a large class with people at all different levels.
- Student:3
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I think the course is taught in a way that isn't particularly cohesive to learning the material. The information is not displayed in a coherent order; it's taught in ways that are strung out and confusing. Also, we would learn things and do things on homework assignment that had no relevance to what was on the tests.
 - **Effort:**I didn't work as hard at the beginning then started putting in immense effort when I realized how the information that was taught in class didn't correlate directly with what we were tested on.
 - **Understanding & Appreciation:** It made me gain appreciation for the topic
 - **Intellectual Growth:** It made me more aware and understanding of statistics in the world.
 - **Quality:** I think the professor is extremely accessible, kind, reasonable, and wants everyone to succeed. However, I think the course needs to be taught in a more effective way. I struggle to follow what we talk about in class, then feel completely confused by what we have to do at home, as if we didn't learn any of it in class.
 - Student:4
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:**I have put a great deal of effort in this class
 - **Understanding & Appreciation:** I grew as a more comfortable mathematician
 - **Intellectual Growth:** Being able to interpret data more efficiently
 - **Quality:** Professor Cipolli was a geeat teacher, I wish the class was smaller so I could've been more successful...I imagine it being hard to make all 75 of us successful, but as from what I can see, he's done a good job.
 - Student:5
 - **Reason(s):** Exploration of possible major or minor
 - **Effort:**I put in a strong effort in the course for all of my major assignments, homework and tests. Meeting with the professor helped me prepare a lot.

- **Understanding & Appreciation:** Since this is an intro course, it is the first time I have been introduced to many of these topics, so therefore much of what I have learned in the subject has come from this course.
- **Intellectual Growth:** It may be helpful for other math courses I plan on taking in the future.
- **Quality:** He is very clear with the terms that he teaches us, and his office hours have been very helpful.
- Student:6
 - **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** I come to class every MWF for this course because he teaches the material very well. The homeworks are very long and challenging but he gives a decent amount of time to get them done. I take a few days to study for each exam as well.
 - **Understanding & Appreciation:** I have never taken a statistics course before and I am really happy that I did because we use stats everyday in the real world. Cipolli is very passionate about the course makes me appreciate the subject a lot more.
 - **Intellectual Growth:** I have never taken stats so I have learned a lot more on this subject.
 - **Quality:** Cipolli is a very energetic and great professor. He explains the material very well, using graphs and examples to portray his points. He motivates me to want to do well in the course and to understand the material.
- Student:7
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** The course subject matter is new to me, and the way lessons as well as exams are delivered are different from my other classes, so it took me time to truly adapt to the learning environment of this class. I usually spent about 3-4 hours on a homework assignment, and about 4 hours on exam reviewing.
 - **Understanding & Appreciation:** The course facilitated my understanding of statistics, which before was a blurry concept to me. Though I only took it to finish the area of inquiry, it has often times prompted me to think about the uses of statistics in everyday life.
 - **Intellectual Growth:** The course facilitated my attention to detail while completing assignments and doing exams, as well as my serious attitude toward learning.
 - **Quality:** The professor is attentive to details, dedicated to student progress, easily accessible, and efficient in handling grades. However, the lecture styled lessons delivered can get boring at times.
- Student:8
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; As a comp sci major I felt knowledge

of statistics would be an important skill to learn, so I chose this class as my last natural math/science requirement.

- **Effort:** I took a lot of time to do my homework assignments, first going through looking at my own notes from class and then a few days later reviewing my work with the class notes and lectures. This class was very challenging but at the same time not ridiculously time consuming—I very much appreciate how the HW assignments are excellent preparations/study guides for the upcoming exams. I also felt that reviewing the homework and spending a few hours before each test working on the example test problems were helpful.
- **Understanding & Appreciation:** When I took a pre-alg class in high school, we had a stats&probability unit: I hated it and I got the worst grade I've ever gotten! This class however took away my bad perception of it and I actually enjoyed taking it. I learned and understood far more than I had before, and enjoyed being challenged.
- **Intellectual Growth:** I took the class because I thought it would be helpful for computer science. I am in a theoretical course right now, so I don't make my own programs as much, but I'm sure when the time comes this knowledge will apply.
- **Quality:** I loved professor Cipolli's class. I think it was pretty hard to change my mind about how I felt about statistics, and professor cipolli managed to do so! Even though it is my earliest class and I don't like getting up, i enjoy coming to stats because class was always upbeat and entertaining—though challenging and required my full attention. I think Professor Cipolli did a very good job of creating a positive environment while also creating a very reasonably difficult course.
- Student:9
 - **Reason(s):** Interest in the course material
 - **Effort:** I put a moderate level of effort into this course. I completed the diagnostics and homeworks on time but should have spent more time reading the chapter notes because they are very useful.
 - **Understanding & Appreciation:** It significantly furthered my understanding of statistics and its application to real world issue - I also found that it applied to my other courses as well.
 - **Intellectual Growth:** It was a significant challenge to me as it required a lot of effort and time to learn this difficult material. The info in later chapters did not come to me easily so I had to teach a lot of it to myself.
 - **Quality:** I think Professor Cipolli truly cares about the progression of his students and his teaching methods. He is very passionate about it and appreciative. He wants to make the lectures as interesting as possible and I like how he grades by progress.
- Student:10
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I think that it would be a great

motivator for students to attend more recitations if for every 10 recitations attended (sign in sheet or something), you could add 2 extra credit points to your lowest test grade or something. I think that also because the class is SO large, like 75+ students, it would be awesome if somehow this course could be split into two or more smaller person classes for a more intimate learning environment. It is definitely very intimidating to ask questions or raise your hand in a class that is so big, and even when my friends or I didn't understand something completely, it is hard to gather the confidence to speak in front of so many people in fear of looking stupid in front of so many classmates. This is absolutely not Prof. Cipolli's fault - he treats every question like it is a good one. Also, if at all possible this class would be better I think if it was taught in Ho 101, where we took one of our exams, because of the room setup (stage and different levels) it made it much easier to see the board and the professor.

- **Effort:** This class definitely demands a lot from its students. There is always an assignment to be completed, and extra credit opportunities that are offered definitely motivated me to help me get my grade up.
- **Understanding & Appreciation:** I took AP Statistics in high school, and compared to that course, this course was taught in a much more comprehensive way - definitely more challenging but also much easier to understand in the way that Professor Cipolli teaches the course matter.
- **Intellectual Growth:** This course definitely made me appreciate statistics more, and I think that it is a course that many students should consider taking because it is applicable to almost every other subject that you may encounter in other classes.
- **Quality:** The quality of teaching in this course is definitely 10/10. Professor Cipolli is young, energetic, and eager to engage ALL of his students and he does it well.

o Student:11

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Reputation of the instructor
- **Effort:** I put a lot of effort into this course. I studied a lot for the test and I spent a lot of time completing the homework assignments.
- **Understanding & Appreciation:** After taking this course I now understand how to interpret polls that are focused on the news and in articles. I think that is a valuable skill because I learned that I did not previously understand that.
- **Intellectual Growth:** The course contributed to my intellectual growth because I learned new study methods and I learned to not forget the information that I have already taken a test on because the following information will build off of it .
- **Quality:** I think the quality of teaching in this course was great. Professor Cipolli provides many

resources for students if they do not understand a specific topic.

- Student:12
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** i put a lot of time and effort into the hw and studying for the tests but it didn 't pay off at all
 - **Understanding & Appreciation:** that statistics are everywhere and its important to understand them
 - **Intellectual Growth:** i learned some real world examples that i never would have before.
 - **Quality:** Strengths: good guy, very smart, dresses well, loves math and loves to teach the subject
weaknesses: he thinks everyone understands stuff on the first time, he has to spend more time on material and less time on R. We shouldn't be coding in a intro to stats class, doesn't make sense.
- Student:13
 - **Reason(s):** Major or minor requirement
 - **Effort:** I do all of the assignments and study for exams. I put in a fair amount of effort because the course material does not come that naturally to me
 - **Understanding & Appreciation:** I had never taken a statistics course before, so this class introduced me to the subject.
 - **Intellectual Growth:** This course taught me/is teaching me how to deal with subject areas that may not be as interesting or come as naturally to me.
 - **Quality:** I think Professor Cipolli does a good job about being excited about his material, which in turn makes students more excited. I think the course could be a little bit better designed to reward students who do their own work and come to class, although I recognize that is hard to accomplish in a class of this size.
- Student:14
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put in an average amount of effort and studied somewhat thoroughly for the exams
 - **Understanding & Appreciation:** Although I have a good grade in here I, I feel like I do not have a greater appreciation for the subject but do generally have a greater understanding of it
 - **Intellectual Growth:** It forced me to critically think at times
 - **Quality:** Professor Cipolli did a good job creating a positive learning environment in a large class with a subject that in my opinion is somewhat dull. Overall, he did well to facilitate the course and keep things interesting
- Student:15
 - **Reason(s):** Interest in the course material

- **Effort:** Every week a fair amount of homework and diagnostics. Continuous learning through retesting of standards during exams and paper was fun
 - **Understanding & Appreciation:** Promotes my understanding and cultivates my continuous learning through exercises and class
 - **Intellectual Growth:** I have become more adept at using R and the statistical way of thinking
 - **Quality:** Professor Cipolli is awesome coz he is so passionate about teaching and is super caring and patient.
- Student:16
- **Reason(s):** Other requirement; Prerequisite for econometrics.
 - **Effort:** This course required effort during class through actively paying attention as well as required learning outside of class . This included completing weekly diagnostics, homework, writing assignments, and studying for exams.
 - **Understanding & Appreciation:** I have learned not to take studies and reports for face value. Understanding biases, in sampling methods and design, is key to avoiding generalizations and false conclusions. Further, understanding the limits of statistics in finding confidence intervals, and using statistics to infer parameters, is important in understanding the scope of the subject area and all that goes into analyzing data.
 - **Intellectual Growth:** I have learned how to pace myself, while completing homework assignments with due dates in the future. Additionally, I have learned the importance of longterm learning through the two tries on standards.
 - **Quality:** Strengths of Prof Cipolli's teaching include responsiveness to Moodle posts and diagnostic questions, the continuous opportunity to provide feedback on diagnostics, and the emphasis on longterm learning. Further, Prof. Cipolli is very approachable during office hours and fields questions, both in and out of class, very well. On that note, his office hours are the same time on MW, so these could be improved on because, if one has a class, the only way to ask questions or get tests is by making an appointment. Other weaknesses include moving very slowly in class but requiring a much deeper and different understanding of course material for homework. Also, more smaller group work may facilitate better class involvement.
- Student:17
- **Reason(s):** Major or minor requirement
 - **Effort:** More effort than I expected, but not overwhelming
 - **Understanding & Appreciation:** Enhanced my ability to evaluate statistics I hear in the news, etc
 - **Intellectual Growth:** Greater quantitative skills

- **Quality:** Professor is very accessible to all students, showing a genuine interest in our learning as well as our comfort in the classroom
- Student:18
 - **Reason(s):** Elective within major or minor
 - **Effort:** I put a lot of effort into this course and spent a lot of time on homework assignments and preparing for tests .
 - **Understanding & Appreciation:** I went into this course with little to no knowledge about statistics, and I definitely learned a lot more than I expected and I have come to appreciate this course more.
 - **Intellectual Growth:** I learned more about myself as a learner and what steps I need to take to be successful in school.
 - **Quality:** I think that the professor did an excellent job of teaching this course and explained the course material extremely well. It was helpful that he went slow and repeated himself often, although this could make the class a little dull at times. He was clearly very knowledgeable in the subject matter and was able to answer all the questions that I had.
- Student:19
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I took AP stats in highschool and didn't feel like I really got the most out of that course in terms of understanding. Taking this course has been great in actually learning and understanding the material.
 - **Effort:** I made sure to keep up with all the chapter readings, homework, extra opportunities, and will do the extra credit soon. I went to some review sessions and office hours.
 - **Understanding & Appreciation:** I think it made me appreciate the material itself more because it was like putting a face to a name when we went through PDF and CDF– I finally actually learned what the acronyms stood for.
 - **Intellectual Growth:** Whenever I watch Tv and they provide statistics I do genuinely question where they got it from and how it could be skewed to fit their narrative.
 - **Quality:** I think it is a very high quality of teaching in this course as the professor really takes care and effort in explaining things to the class and making himself available for outside questions and help.
- Student:20
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** The homework and standards were challenging, so I worked hard to prepare for them. The course load was fair and not too much and not too little in my opinion.

- **Understanding & Appreciation:** I can apply statistics to my daily life. I understand how data is presented in the news, and how statistics can be misleading.
 - **Intellectual Growth:** I am able to use stats in my business. I can make informed decisions based upon the data for myself, without skewed information or misleading statements.
 - **Quality:** I thought Prof Cipolli was a great professor who made learning a collaborative process and actually had us remember the material instead of just cramming for a test the night before. For instance, since the standards were cumulative and your second standard grade counted for 75 other classes I was tested on the material once and crammed the night before and then forgot the material soon after.
- o Student:21
 - **Reason(s):** Major or minor requirement
 - **Effort:** I studied and read the notes everyday before class.
 - **Understanding & Appreciation:** It has helped me a lot with understanding Econ as that is my potential minor
 - **Intellectual Growth:** I am not really a math person and this course challenged me to be better at it
 - **Quality:** I loved professor cipolli he was very accessible and enthusiastic about teaching. He made me excited to come to class everyday.
 - o Student:22
 - **Reason(s):** Major or minor requirement
 - **Effort:** I did all the homework assignments and studied for all the tests.
 - **Understanding & Appreciation:** I think this class allowed me to understand what goes into an experiment. A lot of times we only see the statistical outcomes of a poll/experiment in the media but we don't actually know how they reached that estimate.
 - **Intellectual Growth:** Statistics are used all the time in everyday life. This class allows us to be able to interpret what these statistics actually mean
 - **Quality:** I think that the homework assignments were a lot harder than anything we did in class.
 - o Student:23
 - **Reason(s):** Major or minor requirement; Exploration of possible major or minor
 - **Effort:** I probably put in around 8 hours a week outside of class into this course. I read the posted notes and go through the PowerPoint slides on my own as well. I also do the extra practice when it's available.
 - **Understanding & Appreciation:** I understand stats a lot better now. Before I came in with knowledge of more complex calculations, some of which we learned in the end of class, but now I

have a strong understanding in the methods I.T takes to be able to get the accurate data to perform accurate statistical inference.

- **Intellectual Growth:** I could see this course impacting me positively in the work world. Thinking with statistics and using R also helped me with COSC and ECON courses.
- **Quality:** With a large class, Professor Cipolli did a remarkable job being available and explaining tough material as best he could to a wide range of understandings. I think HW problems more like exam questions would help in the future

○ Student:24

- **Reason(s):** Major or minor requirement
- **Effort:** This course started easy and ended up very challenging. I had to put many efforts in reading notes and doing exercise problem sets to understand the class materials.
- **Understanding & Appreciation:** This is a very good intro class for stats. It covers most basic knowledge, while the course also deepens in difficulty as it approaches the end.
- **Intellectual Growth:** I got a chance to learn about the logic and theories behind statistics.
- **Quality:** The instructor is really easy-going. He always tries to promote the contribution of all class participants. I like the idea of testing the students' understanding of the class material twice. I got the chance to see if I made any progress on the same topic as time passes. But there were too many tests.

○ Student:25

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I believe this course requires a lot of effort so I put in a lot of effort into this class. The homework assignments require a lot of time but they are definitely manageable. I also had to put a lot of time towards studying for tests in this class.
- **Understanding & Appreciation:** This course challenged me in many ways. It has helped me develop new critical thinking skills through completing homework assignments. It has challenged me to think in different ways and has helped me in figuring out the best ways to solve certain problems.
- **Intellectual Growth:** Statistics is very relevant to the real world so I believe this course was definitely beneficial to my life outside of the classroom.
- **Quality:** I really enjoyed having Professor Cipolli. It is obvious that he really cares about his students and their education. He gives a lot of examples in class to help us understand the material better and also is very open to contributions from anyone in the class.

○ Student:26

- **Reason(s):** Major or minor requirement

- **Effort:** This class definitely took some work, especially going back to review past material. However, we had ample time to complete all assignments so it was really just a question of time management.
 - **Understanding & Appreciation:** I had very little knowledge of statistics before taking this class but I now feel that I will be able to apply what we learned to analyze statistics I observe in the real world.
 - **Intellectual Growth:** This course required learning rather than memorization because each topic was tested twice.
 - **Quality:** Professor Cipolli is a nice guy and really wants us to learn. However, he can be a little condescending in office hours. Other than that, I really enjoyed his teaching methods and how organized everything was, including the notes and powerpoints. He often planned on covering way more information in class than we actually did but the slower pace was good for making sure everyone understood. He tried to make the class not be just another boring lecture.
- Student:27
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put a lot of effort into this course by completing every assignment and studying heavily for the exams .
 - **Understanding & Appreciation:** It gave me a better view of what statistics is so this made me appreciate the course more.
 - **Intellectual Growth:** I learned new ways to study and manage time based upon this class.
 - **Quality:** I think the teacher was a very good teacher however he could have been more clear in class and prepared us for tests better and the type of questions you see on tests.
- Student:28
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I tried to do the best I could.
 - **Understanding & Appreciation:** I don't think it helped very much. I do not like math as it is, so taking this course I knew wouldn't be great. I took it because I needed to for a requirement.
 - **Intellectual Growth:** I don't think it helped with that very much. I learned a few things, and the professor is a very nice guy. Just don't think you can learn very much outside of math when you are learning math.
 - **Quality:** The Professor was very nice and cared about the students. He always tried to get the class involved, and was great with emails and reminders about assignments, tests, and opportunities. I think that it's hard to get everyone in a lecture hall class to understand small details about math, especially when it's esrly in the morning. I think he could do a better job making sure everything is understood in the material before moving on.

- Student:29
 - **Reason(s):** Other requirement
 - **Effort:** I attended all classes, completed all homework assignments and went to Professor Cipolli's office hours.
 - **Understanding & Appreciation:** This course contributed to my understanding and appreciation of the course subject because I had not taken a math class since high school and I forgot how challenging math courses are and how different they are to my other courses for my major. Also, I previously understood little about statistics whereas now it is much clearer.
 - **Intellectual Growth:** This course contributed to my intellectual growth or education because it forced me to think big picture and how to apply the problems we did in statistics to real world scenarios.
 - **Quality:** Professor Cipolli is an amazing professor. He is extremely knowledgeable about the material at hand. He brings energy and passion into the classroom every morning even though it is not always reciprocated by the somewhat sleepy students. He continuously tries to improve his teaching through the weekly diagnostics asking for feedback and assessing how students are processing and understanding the material. His grading system is beyond fair and focuses on long term retention. For class time, he used numerous methods (slides, notes on the board, printed notes) that helped access all students.
- Student:30
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I go to tutoring sessions, read the chapter notes, and make sure to complete all the homeworks. I also make sure to take well organized notes and remain attentive all of class.
 - **Understanding & Appreciation:** I learned how to critically examine statistics in the media and that are supplied in studies. I also am better at understanding how to accurately and effectively illustrate data sets.
 - **Intellectual Growth:** The examples the professor used ranged from various subjects and were actual surveys that were conducted. So I learned about various other subjects in this class and background for why the outcome of the 2016 election was not accurately represented in studies, thus was not predicted.
 - **Quality:** The classes were very interesting because of the examples that were used for each lesson. I think it could be useful to go more in depth into the chapter notes in class, because I felt like I had to learn information on my own that we did not extensively go over in class.
- Student:31
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I spent so much time on the homeworks because I had to reteach myself a lot of the subjects in order to complete them. I made study guides for each of the tests and did all of the extra problems provided before tests.
 - **Understanding & Appreciation:** I now understand statistics but I don't like statistics That much so I don't really have a love for the course after taking it.
 - **Intellectual Growth:** It helped me learn how to condense my thoughts into simplistic sentences for exams.
 - **Quality:** At times this course made me very frustrated. I did not like how the homeworks were not due until usually the day before or the day of the exam... I wish that more time was spent in class going over some of the homework questions. As well, the homework questions did not line up with the format of the exams which I think could change and would probably improve test scores if they were of similar format. The homework did force me to learn the subject matter.
- Student:32
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of effort into this course. Professor Cipolli was sometimes confusing and we often had to teach ourselves the material.
 - **Understanding & Appreciation:** I am happy that I have a basic understanding of statistics now because it will help me in my next 3 years at Colgate.
 - **Intellectual Growth:** I know how to apply statistics to real life situations.
 - **Quality:** Professor Cipolli tried to be open to feedback and be an engaging professor but he had so many typos on things that it was confusing and very frustrating. Almost every day there was a typo in the power point or in the notes so it was hard to learn the material when we were wondering whether or not it was written correctly.
- Student:33
- **Reason(s):** Interest in the course material
 - **Effort:** I put in a lot of effort into this class. The way it is designed enforces students to really learn the material and remember it throughout the semester as it is retested. This was very tough and scary and frustrating as you could possibly destroy your whole grade by going from a 100
 - **Understanding & Appreciation:** I appreciated the accuracy of statistics a lot more and recognized how to accurately assess them.
 - **Intellectual Growth:** As above, it helped me with real life applications.
 - **Quality:** Quality of teaching is good. Professor shows a great amount of care for students. However, I strongly disagree with the entire standards based grading system. Standards are fine as long as they are not retested, especially if one gets a perfect score on the first time, because they can only

remain the same or go down, they can't improve.

○ Student:34

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** This course contained challenging homework sets that took hours to complete, and a writing assignment that incorporated many of the chapters we learned. Study for exams also took a great deal of time.
- **Understanding & Appreciation:** It has helped me to understand the intricacies of statistics and how difficult it is to come up with them.
- **Intellectual Growth:** It has helped me to understand what I am looking at in the outside world when I see a statistic and what it means to me.
- **Quality:** This course work is very hard, but Prof. Cipolli has worked extremely hard to create an environment where every student is able to learn the material.

○ Student:35

- **Reason(s):** Major or minor requirement
- **Effort:** I would start studying two days before exams and made sure to finish my homework to the best of my ability.
- **Understanding & Appreciation:** This course introduced statistics and their importance.
- **Intellectual Growth:** I now know more about statistics than I ever have.
- **Quality:** I thought his teaching style was good and easy to understand. However, sometimes his lectures were repetitive and boring

○ Student:36

- **Reason(s):** Other requirement
- **Effort:** I put forth maximum effort in this course. With completing everything on time and to the best of my ability, I am able to understand the material being taught.
- **Understanding & Appreciation:** There were a lot of ways to understand the material if you didn't understand it in a lecture. There were review sessions almost every week, his office hours were always available etc. which gave everyone the opportunity to understand and appreciate this course.
- **Intellectual Growth:** I am now able to understand the true meaning of statistics and how it is used everyday almost. There are many things in life outside of the classroom that I can relate to this course, which contributes and also broadens my knowledge about this course subject.
- **Quality:** Overall, this professor is amazing! By the way he teaches, you can tell that he is never bored with the material. In fact, he even says that many subjects in this course are his favorite and that he cannot wait to teach it to us. Some strengths about him is that he is very accessible

via moodle, email, office hours and review sessions. He does his best to make sure that everyone succeeds in the classroom.

○ Student:37

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I reviewed the material continuously, did the extra opportunities, and asked for help when needed. Also came to class.
- **Understanding & Appreciation:** This course gave me a better understanding of statistics which I had never learned before. It also showed me how integral stats is to a wide variety of other subjects.
- **Intellectual Growth:** This course demonstrated that stats presented in the news or other places should be looked at critically and that people should be more aware of what makes up good statistics.
- **Quality:** Professor was extremely accessible and willing to help/listen to students. He was very good at explaining concepts and making sure all levels of experience with stats would be challenged but not lost. Made a great effort at getting a class of 75 people to be more of a discussion and succeeded to a certain point with that goal. Weaknesses would be occasional spelling errors on homeworks and notes that could make understanding the question difficult.

○ Student:38

- **Reason(s):** Other requirement
- **Effort:** I put a fair amount of effort into the course. I made sure to do all the assignments on time and study for the tests. I put in the amount of effort that I thought it would take for me to do well.
- **Understanding & Appreciation:** This course taught me a lot about the course subject that I didn't know before so in that way it increased my understanding. It contributed to my appreciation for statistics because you encounter them a lot in everyday life.
- **Intellectual Growth:** It helped me apply information I learn in class to the real world. Learned to think about class information in a broader context.
- **Quality:** I think Professor Cipolli did a good job teaching this course. I think because it was such a big class he really tried to make the pace okay for everyone even though it was too fast for some and too slow for others. You could also tell that even though it is early and not a subject a lot of people are interesting in he tried to make the class interesting and fun. Also, while I didn't really go, it was clear he tried to make himself accessible for questions and whatnot. One issue with that though is that some of his review sessions were at bad times— I know a lot of people couldn't go to them because they had class at that time.

○ Student:39

- **Reason(s):** Major or minor requirement
- **Effort:** For this class I would always come prepared with the notes printed and attended several office

hours and recitations. For exams I would study with friends for multiple hours and study off of our old exams to improve on what I did wrong .

- **Understanding & Appreciation:** I took AP stats in high school and Cipolli's class was far better and more interesting. Here, I was actually able to understand what I learned and how it was all related / why it was important. That is something that I did not get from my AP stats class in high school.
 - **Intellectual Growth:** Cipolli taught me the importance of starting assignments early so that if you were confused you could seek help from outside sources.
 - **Quality:** Cipolli is a great professor who is very passionate about the subject matter. Despite our class being a little tired in the mornings and at times mute, he continued to give enthusiastic lectures. Furthermore, Professor Cipolli was always available for office hours and could always help to make things clear that I was a little foggy on. I would say a flaw of this course is the students who don't come to every class because it is a lecture and they think they can get away with it (though I do think this is reflective in their grade).
- Student 40:
- **Reason(s):** Major or minor requirement
 - **Effort:** I put an average amount of effort into this class, I did what was required of me but did not go above and beyond that.
 - **Understanding & Appreciation:** This course helped me learn the basics of statistics and how to use R if the code is provided to me. It has also helped me gain a better understanding of how statistics are used in publications and real world applications. However I do not feel as though I was taught how to effectively apply these statistical methods on my own.
 - **Intellectual Growth:** It helped me become more punctual with deadlines.
 - **Quality:** I think that Professor Cipolli has some great teaching moments and some that are not so great. In terms of grading, his standards have a great idea behind them in that you get a second chance to be able to improve upon your grade in a certain aspect of the course, which is a great help, however this does make the tests more difficult to prepare for and more stressful the second time you see a standard as they are worth more. Another area where there is a great idea but poor execution is in the way the course is structured, we review constantly in class what we have done previously, which is great because we get to know the material better, however I feel like we have learnt less material than anticipated because of how slowly the pace of the course has been moving with all of this review.
- Student:41
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I put a lot of effort into studying and preparing for exams.
 - **Understanding & Appreciation:** I have learned to better analyze statistics, especially when presented in polls and surveys in the news.
 - **Intellectual Growth:** Being able to understand statistics aids greatly with many other subjects. The research methods also prepared me greatly for other research projects.
 - **Quality:** Professor Cipolli is a very good lecture and does very well given the size of the class. He is very accessible during office hours and truly makes it seem like he cares for all his students. He always responds to emails and Moodle posts very fast, making communication easy despite the amount of students in one class.
- Student:42
 - **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I never actually took Statistics in high school, so this class is very new to me. I had to print out notes just to be able to keep up with that class.
 - **Understanding & Appreciation:** The course contributed to my understanding and appreciation of the sl course subjects because it made me realize the errors that appears in news especially during political campaigns I.
 - **Intellectual Growth:** I learned that statistics can be applied in almost all aspect of information and everyday lives.
 - **Quality:** I really love the enthusiasm and compassion of Professor. Cipolli. He makes the class bright up with his personal life jokes especially on Mondays.
 - Student:43
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of effort into this course and came to all the classes.
 - **Understanding & Appreciation:** I have definitely been able to use what I learned in this course in others subjects as well as been able to successfully apply it to real life, which makes me really appreciate what I have been learning.
 - **Intellectual Growth:** It really helped my intellectual growth as I now am able to apply a lot of statistics to other areas of thinking that help me learn better and easier.
 - **Quality:** Very considerate teacher, who is always prepared. The frequent emails are very nice, and he spends a lot of time working for this class. I have never had professor or teacher who has put so much time and effort into a course before. Very articulate and knowledgable, but spends a lot of time breaking things down so everyone can understand. Writing is also very legible and neat. I have no critiques for this course.

- Student:44
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put in a lot of effort to reading the notes and reviewing previous exams to prepare for tests
 - **Understanding & Appreciation:** It helped create a framework for statistics and increase my knowledge even further.
 - **Intellectual Growth:** It helped me remember everything we learned over the semester instead of taking an exam and forgetting it once you finish. Each test built off the previous one.
 - **Quality:** I think a strength of Cipolli is through his attitude in presenting which allows the class to be attentive even though we had a quiet class. I would consider just simply doing more problems out on the board.
- Student:45
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put effort into this course by following along with the notes, doing the weekly diagnostic, completing online homework, and studying for tests.
 - **Understanding & Appreciation:** I knew very little about statistics before this course, and I now feel like I have a firm understanding of the basics of statistics.
 - **Intellectual Growth:** This course has allowed me to think critically about statistics that we hear in the news, so I am better able to recognize misleading headlines and articles which cite statistics incorrectly or in a deceiving manner.
 - **Quality:** I think Professor Cipolli did a good job in thoroughly explaining the material and was very accessible when I needed help. If I were to change one thing, it would be the class size, which I know isn't in his control. I think it would have been easier to have discussions and people would have been more willing to ask questions if the class were smaller.
- Student:46
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put great effort into this course when preparing for exams and completing the homework.
 - **Understanding & Appreciation:** It helped me learn the basics of statistics and why we use them.
 - **Intellectual Growth:** It helped me grow as a math student.
 - **Quality:** I believe that the teaching of this course was not as helpful as learning the material on my own. I believe that the class lectures were very repetitive with the same examples but important information was spread throughout so it was important to go to class. I do think that the professor displayed a great sense of knowledge for the material and he was very good at one on one teaching. I think that the material itself could have been presented better in class for a better understanding

in order to learn it.

○ Student:47

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this class. I spent a lot of time on the homework and studying to prepare myself for exams.
- **Understanding & Appreciation:** This course contributed to my understanding of the course subject greatly. I took statistics only to fill an area of inquiry, and I had never taken a stats class before or had a desire to. However, I enjoyed this class a lot, and was happy with how well I performed in it. It gave me a new appreciation for math classes and statistics in particular.
- **Intellectual Growth:** This course pushed me outside of my comfort zone a lot. I am not comfortable with math or science classes, so I had to make a conscious effort to go to office hours, review the class notes and study, and to get help if I needed it. It helped me improve my critical thinking skills gave me a greater understanding of real world uses of statistics.
- **Quality:** I think the quality of teaching in this course was extremely high. I can imagine it is difficult to teach a lecture-style class of 75 students, but Professor Cipolli always made a strong effort to make it interesting, entertaining, and engaging. I also have never had a professor that was so engaged with students on Moodle, in office hours, and in review sessions. He really made an effort to be there to help students if they needed it.

○ Student:48

- **Reason(s):** Major or minor requirement
- **Effort:** I put in a lot more effort than I originally thought I would have to. I'm honestly not doing as well as I had hoped despite attending every lecture, utilizing tutor sessions, and attending office hours.
- **Understanding & Appreciation:** Statistics are used in many everyday life experiences, especially in research papers I read for my economics classes. Having a deeper understanding of how they work and how they can be misleading has helped me better interpret data.
- **Intellectual Growth:** Professor Cipolli was extremely accessible and this taught me how to utilize professors outside of the classroom.
- **Quality:** I think Professor Cipolli did a great job making this class interesting while still catering to the needs of each individual student. I really wouldn't change anything about Professor Cipolli's class and couldn't imagine a better Professor to teach this material.

○ Student:49

- **Reason(s):** Major or minor requirement
- **Effort:** I put in a comfortable yet consistent amount of effort for this course. Each week I reviewed

my notes to complete our weekly "diagnostic" surveys. I also would put about 3 hours of work into every homework assignment we had as well as about 4 hours of studying for each exam. I also went to office hours on a few occasions for extra help and review.

- **Understanding & Appreciation:** Before taking this course, I had taken a few math classes at Colgate, but never a statistic course. This course therefore introduced me to the purpose of statistics as well as statistical methods. I now feel that when I see stats in the news, I better understand what I am reading which makes me appreciated statistics more.
- **Intellectual Growth:** This course helped me work independently in order to solve problems and further exposed me to interdisciplinary thinking. I think that by applying mathematics to numerous examples has allowed me to better apply what I learn in class to actual situations that I will encounter.
- **Quality:** Professor Cipolli has demonstrated that he is very passionate about statistics and truly does want us to learn. I think that he has outlined an exceptionally fair, yet effective approach for allowing us to learn statistics through his testing methods. I do think that the lectures were sometimes hard to follow, but Professor Cipolli had so many opportunities to meet him in office hours or go to tutoring hours, and the material was always better cleared up in these settings. Homeworks seemed a little repetitive sometimes, and I think that maybe having shorter written homeworks would have helped me better understand material. That being said I am overall satisfied with the quality of teaching in this course.

○ Student:50

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
- **Effort:** I would say I gave 75% I could have utilized the tutoring and review sessions more.
- **Understanding & Appreciation:** I feel like I know a lot more about statistics and how they are used and collected, so in that respect my understanding is well-rounded. I don't have a new appreciation for statistics but I feel like once I take more Economics classes it will come into play.
- **Intellectual Growth:** It actually worked really well to take this class with Microeconomics. As an Economics major, this class really helped me grow in my education and my understanding of the topic.
- **Quality:** I think that Professor Cipolli was extremely energetic, accessible, and engaged. He did his best to keep the class relevant and upbeat, even when the class was silent. The only thing I would say is making the grading policy more clear. I like the way the standards were set up but it was sometimes unclear why I would get questions wrong or right.

○ Student:51

- **Reason(s):** Major or minor requirement
- **Effort:** I put in the amount of effort for which it would not have been more beneficial to keep

studying .

- **Understanding & Appreciation:** Having never taken a stats course I can now say that I appreciate and understand the subject. While it was a requirement for my major, I believe almost every college student should take this class at some point due to its applicability in everyday life.
 - **Intellectual Growth:** The course significantly contributed to my intellect growth and education outside of our class stats. Taking courses based in economics and chemistry, knowing first hand the statistics that revolve around both subjects are very important and beneficial to my understanding in those classes.
 - **Quality:** Strengths: The professor was extremely approachable and friendly nature and clearly wanted the students to both learn and participate in class. He truly enjoyed what he was teaching and wanted others to both learn in this class and take future statistics courses. Also, the grading for this class was extremely different but was understandable and was clearly designed to help students by promoting the continuation of learning which was generous and an intelligent design. Homework assignments were fair and there was adequate amount of time given to complete assignments as well as study for test. Weaknesses: One inconvenience I found was the time for the office hours. Due to my course schedule I often found it impossible to go to the office hours to ask any questions that I had regarding a test or a homework. Additionally, at the beginning of the year the professor complained about powerpoint and said he would do a majority of the teaching and examples on the chalkboard. Sadly, this was not the case as the majority of class time was the explanation of the slides found on the powerpoint with only one or two in depth examples given per class. Increasing the number of examples on the board would be very beneficial and significant help students understand the types of answers the professor is looking for on his standard exams throughout the semester.
- o Student:52
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put in much effort for this course due to the fact that it is a subject outside my comfort zone and therefore it challenged me greatly.
 - **Understanding & Appreciation:** By using real life examples in order to reach the math, I was able to see how stats is applied rather than simply its theory.
 - **Intellectual Growth:** Professor Cipolli made sure to include examples that were relevant and therefore being to light some issues I had never thought of before. For example, we talked extensively about how news outlets oftentimes report statistics that are misleading, and it is important to question these numbers.
 - **Quality:** Professor Cipolli is a fantastic teacher. He is accessible, friendly, helpful and tries his best to ensure that all of his students are doing well.

- Student:53
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:**As it was a math course (a subject i know i am not as strong in) i worked harder than usual to make sure i was successful.
 - **Understanding & Appreciation:** I have a new appreciation for statistics, as it isnt as scary as other math courses.
 - **Intellectual Growth:** Statistics forces you to think in a very contextual lens. I am more comfortable with both analytical and critical thinking as a result of this class.
 - **Quality:** Cipolli is a good professor also a very good person. I think with a class this size you will always struggle to increase class participation. Breaking up the class into small groups more often may help this. Sometimes i felt as if the class needed to ask very specific questions as the professor did not explain certain concepts clearly enough. I think small groups would help this as well.
- Student:54
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:**read the notes, showed up to class atleast twice a week, and did the homework early enough to ask the professor questions if I had any problems with it.
 - **Understanding & Appreciation:** This course enhanced my understanding greatly. I took ap stat in highschool, creating a foundation for statistics. This course built off that.
 - **Intellectual Growth:** It helped me apply statistics to real-life problems and examples
 - **Quality:** Professor Cipolli is wonderful. It is difficult to harness the classes attention when its a lecture style math course with 70 something students, but he does his best. He puts immense effort into making the class interesting and fun rather than just boring math. I would definitely recommend this course to my peers and would take another course with Professor Cipolli if I was a math minor/major.
- Student:55
 - **Reason(s):** Other requirement; Possible graduate school pre-requisite.
 - **Effort:**I put a decent amount of effort into this course. Outside of class, I reread all of the notes and attempted the extra problems.
 - **Understanding & Appreciation:** This course made me realize that statistics is a part of so many aspects of our lives. We come into contact with some form of statistics every single day.
 - **Intellectual Growth:** This course helped my critical thinking skills and improved my ability to apply concepts to life events.
 - **Quality:** Professor Cipolli was excellent overall. A lecture of 75 students is not easy to teach but he did his best to keep the class engaged and entertained while teaching. He was great at getting

grades back in minimal time and was very available to us for help outside of class.

○ Student:56

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I came to nearly every single class, took excessive notes, read all of the chapters and created a strong study guide for each test.
- **Understanding & Appreciation:** I didn't like math before I took this class, and I still don't like math. I can now appreciate when I see statistics on TV, but that has never been a concern for me so I really just took this class because I needed to. I have gained a broader understanding, but have struggled to keep up as the class pace increased so I can't exactly say I have an in depth understanding. I definitely spent more time frustrated than appreciative of stats.
- **Intellectual Growth:** It's always been important to me to challenge myself, and this class was definitely outside of my comfort zone. I learned how to take notes and make study guides in a new way.
- **Quality:** Professor Cipolli is a great professor and a great guy, but in a class this big it's really difficult to keep the pace at such that everyone can keep up. His strengths are his ability to lecture in a fun, engaging way. I would say his weaknesses are facilitating class discussion and teaching how to ask the right questions, because often times I'm so lost I don't even know where to begin asking.

○ Student:57

- **Reason(s):** Major or minor requirement
- **Effort:** I feel that I put a great deal of effort into this class. Whether it be completing homework assignments ahead of time, going to office hours/tutoring sessions to better understand class material, or studying hard for tests I feel that I tried very hard to succeed in this class.
- **Understanding & Appreciation:** I have certainly grown to appreciate the field of statistics as a result of taking this class. I now understand the importance of having a solid base of knowledge in statistics, and understand how I can apply this knowledge effectively in my everyday life.
- **Intellectual Growth:** I feel that through taking this course, I have become better prepared to analyze statistics in the real world, and apply what I have learned to things such as daily news.
- **Quality:** I feel that Professor Cipolli cared a great deal about communicating class materials to us in the most effective manner as possible. I could tell that he wanted all of us to succeed, and that he was committed to creating the best classroom environment that he possibly could.

Fall 2017: Section A

○ Student 1

- **Reason(s):** pre-med
- **Effort:** I put substantial effort into this class. But it was designed so that everyone could succeed

in terms of the homework as Cipolli have ample time to complete it and was flexible on deadline.

- **Understanding & Appreciation:** Made me see that it was harder than initially thought to be.
- **Intellectual Growth:** N/A
- **Quality:** I think Cipolli is a great guy and the lectures were fine, some were very interesting and others were quite dry, but that's the nature of a lecture class. What frustrated me the most was the standard grading method. As someone who studies A LOT for each and every test I found them unfair and didn't show my full knowledge. I don't in some standards from a 4 to a 2 which will really hurt my mark. Exam 3 was not comparable to the previous exams in terms of difficulty and I walked out feeling horrible. And i'm someone that had an above 95% homework average. Like I understood the material and felt like the questions were not representative. Other than the grading method I think the class is run well.
- Student 2
 - **Reason(s):** Interest in the course material; seemed interesting
 - **Effort:** Lots of effort. Tough homeworks. Lots of looking over class notes to try to better understand material. Studying up to a week in advance for a test
 - **Understanding & Appreciation:** It helped me know why statistics are important and how they are applicable to other areas of study.
 - **Intellectual Growth:** It helped me see things from a more analytical point of view and gave me enough insight to challenge faulty statistics when i see them.
 - **Quality:** Will Cipolli was a good professor. Clearly cared a lot. Talked a lot about how much effort he put into teaching. I believe him.
- Student 3
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I feel like I should've put more effort into this course, such as more time studying outside of class.
 - **Understanding & Appreciation:** Learning the basics of statistics has helped me understand more thoroughly the world around us.
 - **Intellectual Growth:** believe it teaches critical thinking skills that are necessary in today's political climate.
 - **Quality:** I believe Professor Cipolli is an awesome teacher – he takes a lot of time to teach subject matter and truly cares about his students. However, the standards based grading system does not work well for me personally
- Student 4
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement.

- **Effort:** I put a significant amount of effort into this course. Between the lengthy homework assignments and frequent tests, I would say this class required the most effort out of all of my other classes this semester, some of which were at a higher level than this class. This class required extra amounts of effort because of the lesser quality of the classroom experience and the lecture. Likewise, all of the tests and assignments in this course are cumulative, necessitating a greater output of effort and studying.
 - **Understanding & Appreciation:** This course did not at all contribute to my appreciation of Statistics. It did contribute to my understanding, but marginally so, as I have only had a rudimentary knowledge of statistics from High School mathematics courses. I may have been taught new concepts and formulas, but I do not think I have gained an "understanding" to a significant degree. Many of the concepts of Statistics learned in this class remain confused and complex for me. If anything, this class has pushed me away from engaging in any math or science classes at Colgate, and has reduced my confidence and interest in math as a whole.
 - **Intellectual Growth:** This course made me rely on myself and my peers more to engage in and teach ourselves the material. I would not say this course made a significant contribution on my intellectual growth or education in any manner.
 - **Quality:** This course was taught in a very poor and disappointing fashion. I feel like this course was not described accurately in its course description. I was not aware of how the use of the computer program R would be so significant to the class and important to grasping the concepts and succeeding in the course. I feel as though the use of this computer program made me more confused in the class, less confident, and learning how to use this rather complex program distracted me and many others from focusing on and learning the actual relevant subject matter. Similarly, I feel the class lectures were not intuitive and engaging, especially when taking in consideration the size of the class. Similarly, the rather obscure grading procedures instituted by the instructor made it very difficult to know how well we were doing and to know our actual grades. I will say the professor did put in genuine effort to ensuring our success, but it was not enough, and I am disappointed with this class.
- o Student 5
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I have put a lot of effort into this course. Whenever we had homework assignments, I always made sure to finish the extra problems and ask questions about them if I didn't understand the material. Overall, this was great preparation for exams.
 - **Understanding & Appreciation:** Professor Cipolli was really invested in all of his students doing well. Because he had such great expectations, and was always available if you needed help, it made

me appreciate the class. Because I appreciated the class, I was devoted to learning the material to the best of my ability.

- **Intellectual Growth:** I think one of the major factors that contributed to my intellectual growth was time management. Even though I may have learned this the hard way, due to last minute scrambling to finish homework assignments, I think, overall, I've become better at managing my time in this class.
- **Quality:** I thought the quality of teaching was great. Unlike any professor I have had, Professor Cipolli was always available. I loved the Moodle board we had. We could ask any questions we wanted, and he would get back to us almost immediately.

o Student 6

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I completed the homework and studied for tests according to the standards that were being taught plus past standards. I worked with classmates when not understanding problems fully.
- **Understanding & Appreciation:** I learned a lot more than I thought I would in the sense that I thought it would be a basic learn the formula but Professor Cipolli taught more through examples that made me more aware of the application of this course. Even though I will not be continuing in any math courses I am happy that I took this one.
- **Intellectual Growth:** It made me more aware of how to apply this in daily life and how to read things for what they really mean.
- **Quality:** I really like the teaching style of Professor Cipolli. I had friends that took this course last semester with him and at first I was a little nervous that I was going to be in over my head but I am glad that I did take this course. I like that he removed quizzes and was open to feedback from the class. He is passionate about this area of study and it shows up in each of his classes. It was really nice to have a professor that would email us randomly with new information on studies and be excited about how to apply the material to not just STATS 105 but life. Thank you!

o Student 7

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** study groups
- **Understanding & Appreciation:** made me dislike the subject more
- **Intellectual Growth:** made me a more independent learning
- **Quality:** love his personality, very genuine guy. The material is rather hard. Personally I hate cran R just because it was so hard to access, However the calculations would be almost impossible if students were expected to do them by hand. Lectures are not that helpful as he can get off track with his teaching.

- Student 8
 - **Reason(s):** Interest in the course material
 - **Effort:** I put significant effort into this course, making sure to complete all assignments to the best of my ability and on time.
 - **Understanding & Appreciation:** I gathered an appreciation for how the course material affects our lives daily.
 - **Intellectual Growth:** It made me more engaged with current events and daily news, making me a more analytical thinker and causing me to view things in a different light than before.
 - **Quality:** The teaching quality was very high, for a lecture hall it was very interactive and interesting.
- Student 9
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put in a lot of effort in this course to succeed and get good grades to pass the class.
 - **Intellectual Growth:** This helped me to learn more about basic statistics that actually apply in my other classes such as economics. This course made material in other classes easier to understand.
 - **Understanding & Appreciation:** This class taught me more about how to apply what I learned in class to the real world and why it is relevant material to know in today's world.
 - **Quality:** Quality: I thought the professor did a good job at teaching the material, at times it seemed a little too advanced for a basic statistics class, but overall I enjoyed the class and was able to understand the majority of the material covered in class. He did a very good job at applying everything we did to real life situations and backing up everything we did with actual research studies to demonstrate the relevance of the material we learned.
- Student 10
 - **Reason(s):** Elective outside major or minor; Reputation of the instructor
 - **Effort:** I put a lot of effort into the homework assignments and tests for this course. I studied well for each exam.
 - **Understanding & Appreciation:** This course made me appreciate the difficulty of statistics, yet how it applies to the real world and how much we see it in our daily lives without recognition.
 - **Intellectual Growth:** This course exposed me to a whole new category of mathematics, and made me look at statistics in a whole new way.
 - **Quality:** I think Professor Cipolli is a motivating and very understanding teacher. He takes class input and convenience into consideration, even with such a large class. Although statistics can sometimes be very dry, he used relevant examples in our world right now in order to keep us tuned in. Also, he keeps his energy high which in turn keeps ours high as well. There were many resources for extra help which I greatly appreciated.

- Student 11
 - **Reason(s):** Other requirement
 - **Effort:** Considerable studying and practice
 - **Understanding & Appreciation:** A lot
 - **Intellectual Growth:** Growth: Important stuff to know, may want to learn quant compsci
 - **Quality:** He cares a lot. Could be better at teaching but not at the effort he puts in.
- Student 12
 - **Reason(s):** Interest in the course material
 - **Effort:** This class is very challenging. Many hours of studying and doing homework are needed to do well in the class. Therefore I put in a lot of effort in this class in order to understand the material.
 - **Understanding & Appreciation:** this course helped me better understand and appreciate statistics and why it is important to learn about it.
 - **Intellectual Growth:** The course has helped me increase my learning capabilities and really challenged me as a student. It has helped me stay organized and focused on school.
 - **Quality:** The Professor has a tough job trying to teach a class of 150 students but he does a great job. Many of the students are unmotivated and its tough teaching a class that doesn't want to be taught. But he does a great job staying motivated to teach and is very clear when he introduces new topics. I think he did an excellent job teaching this semester I hope I have another class with him and recommend other students to have a class with him.
- Student 13
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry(distribution) requirement; Interest in the course material
 - **Effort:** I usually study a week in advance for exams, and attend tutoring sessions if i do not understand something. I spend a lot of time on this subject.
 - **Understanding & Appreciation:** This course taught me statistics much more in depth then AP statistics did in highschool.
 - **Intellectual Growth:** A lot of questions in this course have to do with critical thinking, so this course helped a lot with that.
 - **Quality:** Quality: I think the course is overall solid and fair, however i think that the grading system should be changed from the 1-4 on each standards. I also think that retest I'm certain standards should be offered to students who want it, not forced on every student. Because the grading is 1-4, and a small mistake will result in you getting a 3, if you get all 4s in a test the first time, the second time where the grade is weighted more heavily, even if you know the material, it is easy to

make a small mistake and get a 3 and end up with the lower grade. Retesting is definitely a good idea because it encourages students to retain the information, however mixing it with the grading system of 1-4 i feel penalizes people who study really hard to get all 4s on the first test.

○ Student 14

- **Reason(s):** Other requirement; Pre-med
- **Effort:** I put a decent amount of effort into the course. Especially outside of lectures... to be honest I found statistics to be easier to learn outside of class since it's so practice based.
- **Understanding & Appreciation:** I have a greater appreciation for probability games like roulette and cards, etc. I can see how statistics can be a valuable tool in all types of career paths. I'm glad I am better versed in these types of concepts because I can see how they are applicable to the real world.
- **Intellectual Growth:** Growth: It helped me think more logically and more holistically. There is something to be learned from the "big picture" mentality of studying populations. More than anything, statistics has helped refine my inductive reasoning.
- **Quality:** Quality: I think Professor Cipolli did a great job with the size of his class. I especially liked all the resources he made available to students on the moodle page. It was incredibly easy to communicate with him and he effectively fostered an environment where questions were encouraged. With that being said, I'm not quite bought into his grading technique using standards. It doesn't sit well with me that scoring a lower score on the most recent standard is more heavily graded than the next. By nature of the question type appearing twice throughout the semester, the more prepared student will keep up with the material cumulatively. I don't think its necessary to make the later one count more for that reason. There are so many reasons someone might do worse later in the semester/the next time he or she sees the question and its not directly indicative that they weren't keeping up with it.

○ Student 15

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material.
- **Effort:** Of all my classes my first semester of my freshman year, this class has been the easiest for me. Therefore I have put less effort into it than my other classes this semester. I only put a lot of effort into studying.
- **Understanding & Appreciation:** I knew statistics was an important subject to know about, and I was interested in the subject material. This class has taught me the basics of what I need to know for statistics, and will help me later on if I ever take a more advanced statistics course. I have grown to appreciate the subject.

- **Intellectual Growth:** This course helped me grow intellectually based on how it was designed. Although at times it was annoying and painful, having cumulative tests helped me retain the information a lot better, and I enjoyed the standard method of grading to a degree.
 - **Quality:** Quality: Professor Cipolli did a fantastic job teaching this course. The only qualm I have is about the grading system, specifically the two try method. It would be so much better and a lot less stressful if the better of the two tries was recorded as the final score, instead of the second try being weighted so heavily. On multiple occasions I was negatively impacted by this grading system, as I would get 4s on standards the first time and then 2s the second time. This was not because of me forgetting the material, but rather the question being a different style and tripping me up. Overall I very much enjoyed the class and appreciated Professor Cipolli's teaching style.
- o Student 16
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a fair amount of effort into this course. It wasn't the type of class where I have to study every night, but the course becomes most rigorous when we are getting closer to homework due dates or exams.
 - **Understanding & Appreciation:** Though I had taken a statistics class in high school, this class forced me to look at statistics from a new angle and contributed to everything I know about statistics today.
 - **Intellectual Growth:** Beyond the math of this class, this class has contributed to my overall ability, as a consumer of news, to dig deeper when a news outlet tells us about a statistical study. I know think critically about the polling techniques used in media today.
 - **Quality:** Quality: Professor Cipolli was a good lecturer day by day. However, when he tried to explain things further or answer a question, sometimes he used the same terms he had been using to describe the subject initially, and didn't fully help us understand the topic. His standard-based grading system was confusing and I wished he had taken our interest in understanding the system more seriously. Although, the system did promote a deeper understanding of topics because it gave us two attempts at a particular standard. I also found his slides very easy to understand and were instrumental in studying. I found his lectured easy to understand and straightforward for those of us who weren't very interested in math.
 - o Student 17
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I spent approximately 2.5 hours on each of the homework assignments for the course. I spent approximately 7 hours studying for each exam.
 - **Understanding & Appreciation:** This course deepened the knowledge of statistics I had acquired

in high school.

- **Intellectual Growth:** The writing assignment helped me think about statistics not from a purely mathematical standpoint. This assignment also detailed for me the structure of a scientific paper.
- **Quality:** I think the quality of teaching in this course is high. Professor answers any and all questions from students and tries to fully explain the course material.

○ Student 18

- **Reason(s):** Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement; He is very accessible in that if we ask a question on the Moodle page he answers the question almost within the hour.
- **Effort:** I did almost all the diagnostics at the end of each week and started the homework about 4-7 days before the due date.
- **Understanding & Appreciation:** Appreciation: I never took stats before taking this class and Cipolli made the course subjects very clear and understandable for me as well as everyone else in the same boat as I was.
- **Intellectual Growth:** For this intro stats class, Cipolli had us use R code, which I personally probably would never have used in my life. However, using R allowed me to see a little bit of the basis of computer science major and department, which I thought was rather interesting. It also showed me the use of coding.
- **Quality:** I believe that Cipolli wants the best for his students and pushes us to do what we are capable of doing. I felt that one of the weaknesses was that homework would sometimes be long and redundant, and often times the questions involving R-coding would be rather hard. Other than that, his grading style is rather clear and understandable, which I think is a strength.

○ Student 19

- **Reason(s):** Exploration of possible major or minor; Interest in the course material
- **Effort:** Effort: I normally reviewed my notes after every class and completed the homework problems a handful of days before the due date. Towards the end of the semester, I could have done this much more efficiently, but I tried to continue this work ethic throughout.
- **Understanding & Appreciation:** This course expanded my conceptual and theoretical thinking of mathematics as a whole and caused me to appreciate the way studies are done by using statistics.
- **Intellectual Growth:** This course fostered some intellectual growth beyond the world of statistics by teaching me ways to think about any type of problem and coming up with a solution. By considering every aspect of a problem, the solution does not have to be conventional yet requires you to sometimes think outside the box.
- **Quality:** The quality of teaching in this course represented the ideal for all Colgate professors in

how this professor was a constant resource for the students, used technology for the class as a whole to communicate and receive feedback, and allowed every student the opportunity to reach their full potential whether in class or on homework problems.

○ Student 20

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I have put so much effort into this class. I will literally study FOREVER before tests and I spend so long doing the homework (also given I work kind of slow).
- **Understanding & Appreciation:** I really have learned a lot and have a larger appreciation for this subject material. Professor Cipolli presents the material in a really interesting that gives you an appreciation for the course material.
- **Intellectual Growth:** Professor Cipolli does a really good job of showing you how the things that you learn applies to things in the real world. This course has helped me to appreciate how this material can be interpreted and used and specially how to understand statistics when confronted with them (especially in the media).
- **Quality:** Quality: I think professor Cipolli is a great professor!! I think he's very fair and very patient (even with a class that has 1/7 of all of colgate students). He present information in a very interesting and helpful way. He makes a point to learn student names even with such a large class size and he makes himself available to students, making time for the huge number of students he has. His way of grading is a little confusing, but it seems fair. He speaks loudly and very clearly. The course material is very hard but I think he does a good job of presenting it. Professor Cipolli is a great professor.

○ Student 21

- **Reason(s):** Elective outside major or minor; I thought that a good basic knowledge of statistics would be useful going forward for all the fields I am considering.
- **Effort:** I put some effort into this class, I did all the practice problems for tests, and completed all homework and extra credit but this course did not require the hours of extra work that some of my other courses did which I really appreciate!
- **Understanding & Appreciation:** It helped me understand what commonly referenced statistics actually mean which was interesting. Overall the examples were the most interesting part of the class.
- **Intellectual Growth:** I think the probability chapter will help me in assignments for my major (computer science) courses.
- **Quality:** He was a really good professor, super attentive to student needs etc. I think the class could have benefited from more practice problems done in class but I can understand how that it is

difficult with so many students. Also he seems stressed a lot which is understandable

○ Student 22

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** This course required a good amount of effort in preparing for exams and finishing homework.
- **Understanding & Appreciation:** This course has made me rethink the statistics that are portrayed and often skewed by the media. I think this is especially important in today's culture and has allowed me to be better informed on contemporary issues.
- **Intellectual Growth:** This course required me to adjust my learning capabilities for the first time in a larger class setting. I have never been a class this large and think that because of the size of the class, I had to take more of my learning into my own hands.
- **Quality:** Professor Cipolli's attention to student feedback and genuine concern with the classes grasp for the material was something remarkable. I have no idea how he dealt with all of our classes input and still managed the course in a more timely manner than any of my other professors. Although there were areas of class where I would get distracted or lost in the slides (this is merely because of the class size), I think that Prof. Cipolli's concern with our classes understanding and intellectual growth will be hard to match from any other professor I take at Colgate.

○ Student 23

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I did all of the homework assignments on time and I made sure to engage myself in class and to prepare well for tests, etc.
- **Understanding & Appreciation:** I was able to understand the course material very well through engaging myself with the topics covered and by delving into the subjects we discussed.
- **Intellectual Growth:** This course benefited me by testing my ability to organize myself and to think critically and analytically about the different topics.
- **Quality:** I liked the amount of organization and thought put into designing this course , and I thought the notes provided and the slides were crucial to my understanding the different topics covered.

○ Student 24

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor; Interest in the course material
- **Effort:** I have put forth a good effort in this class trying hard on the homeworks, exams, and writing assignment.
- **Understanding & Appreciation:** I really like how this course applies to the real world
- **Intellectual Growth:** I understand more about how the real world polls and statistical news stories

work.

- **Quality:** I think the quality of teaching was excellent. It is hard to teach a math course in lecture format, and it was done very well with tutoring and extra hours as ways to clarify something if it was unclear.

○ Student 25

- **Reason(s):** Major or minor requirement; Elective within major or minor; Core or Areas of Inquiry (distribution) requirement; I think it is great that we retest teach standard twice. But, I think each try should be worth 50% of each overall standard grade. Not the 15% the first time and 85% the second time.
- **Effort:** I went to almost all the nightly tutoring sessions on Tuesdays and Thursdays. Went to all office hours when I had questions or wanted to do practice problems. Never missed a class, and sit in front row.
- **Understanding & Appreciation:** My understanding has definitely improved substantially I think because we get tested twice on each
- **Intellectual Growth:** I want to go into government policy for a career field. I think that by understanding now how to get a thorough interpretation of what a poll is really saying about a candidate applies to my interests.
- **Quality:** Quality: I think the quality of teaching is very good. The things I like is there are two sessions a week to attend to with questions for a TA, we have class notes to access for reference and following the class, and we get two chances on each standard. The weak part I see is Professor's availability. He only has office hours, but rather than that, it is unlikely to set up a chance to meet.

○ Student 26

- **Reason(s):** Other requirement; Interest in the course material
- **Effort:** A lot. Did the extra homework to prepare for the tests, rewrote my notes from previous classes to make them into a useable study guide.
- **Understanding & Appreciation:** Gave me a bit of an introduction to R, so that's nice since I've ended up using it for other things outside of class. Other than that I think that it gave me a good foundation for statistics and a better understanding of what makes a statistic.
- **Intellectual Growth:** It's given me reasons beyond general cynicism to be skeptical of numbers and a few ways to think about their significance.
- **Quality:** It was pretty high I think. The instructor did a very good job at explaining things and was very open to questions from students to clarify or to explain concepts again in a different way.

○ Student 27

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I am a senior and needed a natural

science/ math course to fulfill a graduation requirement; All of the natural science courses were filled and taking a math course was the only option I had.

- **Effort:** I have dedicated many hours to this course to complete homework, diagnostics, tutoring, and exams outside of class. I log in to the class moodle page daily news review notes and our class discussion board.
- **Understanding & Appreciation:** I hadn't taken a math course since I was in high school. I definitely appreciate feeling like I am able to understand vocabulary and be equipped to understand how statistics are used to describe data. I am interested in many of the applications of statistics outside of this course. I am interested in researching processes and outcomes of education and this course will help me with future social science research. I am also interested in journalism and current events, and this course helped me learn how to interpret statistics that are presented in the news.
- **Intellectual Growth:** I realized that I am more capable than I allow myself to think I am and that I am able to be my best when I reach out for help.
- **Quality:** Professor Cipolli is a great educator. He cares deeply about the students, and he wants us to understand the material and to succeed in the class. He is an effective communicator and describes concepts clearly and concisely. He has taken time to write chapter notes for us so we didn't have to purchase the text book or search for what was important. He is clear about expectations, and works with us to set deadlines that are reasonable. I appreciated the weekly student diagnostics that allowed us to give feedback, ask questions and make any comments that we would like. I wish more professors would offer that as an option. I also appreciated his pedagogical note in the syllabus that described why he used the grading system that he does. I was challenged in this course and I learned more about statistics than I feel that I could have with other systems of grading.

o Student 28

- **Reason(s):** Major or minor requirement; Economics major
- **Effort:** This course is pretty rigorous. You have to put a good deal of effort into the homework and tests, but it is very possible to do well in the class if you put the time in.
- **Understanding & Appreciation:** I think this course gave me more appreciation for this subject and its importance in the media. Professor Cipolli's real world examples help with this.
- **Intellectual Growth:** It helped with time management. Also the standards forced me to really retain information since anything we learned throughout the semester could come up on any test.
- **Quality:** Professor Cipolli is a great professor. He is very intelligent and explains the course material in a clear and interesting way. He is also always finding new ways to portray the information to make it more understandable for different styles of learners. He was always available when needed for questions or help. I really enjoyed him as a professor.

- Student 29
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** In order to succeed in this course, I felt I had to put in a good amount of work. I had to read over the notes and the slides to fully grasp the concepts and the professor's use of standards forced me to study all the course material before exams and remember things I likely would have forgotten otherwise.
 - **Understanding & Appreciation:** This course gave me a new appreciation for statistics. Before this course I had of course been exposed to statistics and statistical analysis, but I never truly understood how to interpret them or grasp the information they were giving. Now, I understand more about statistics than I thought I ever would and I appreciate how useful statistical analysis can be.
 - **Intellectual Growth:** Statistics are everywhere, and while I had at least a working understanding of them before I took this course, I feel I now have a much deeper understanding of how to interpret them. Due to the prevalence of graphs and statistics in most other subjects, the knowledge I gained from this course will doubtlessly be useful in better understanding data and statistics in other courses and in other aspects of life.
 - **Quality:** felt the lectures were especially effective and it was obvious that there was a great deal of work put into creating lectures and slides that would facilitate the learning of the material. The professor would always take into account the opinions of the class, which I very much appreciated. The ability to ask questions through Moodle was also very nice, and being able to see what questions other students had was very useful, and I'm sure cut down on the number of repeat questions. The use of standards, while sometimes frustrating, was effective in forcing me to remember material from earlier in the course. Overall, the class was very well taught and I appreciate the effort that was put into the teaching of it.
- Student 30
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement.
 - **Effort:** Completed hw multiple days in advance and studied days before exams due to cumulative nature of class.
 - **Understanding & Appreciation:** N/A
 - **Intellectual Growth:** N/A
 - **Quality:** N/A
- Student 31
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; I took this class to fulfill a distribution requirement and because I felt it would be useful to have an

understanding about statistics in my career.

- **Effort:** I put a lot of effort into this class which included doing additional problems on my own , going to office hours, going to the tutoring sessions and making sure that I completed all assignments on time. I also made sure to ask questions when I did not understand something.
- **Understanding & Appreciation:** now appreciate polls that are properly displayed in the news and have a strong sense of why statistics are valuable and how they influence the world around us and how they can identify and solve issues.
- **Intellectual Growth:** This course has taught me resilience and persistence. The material was just challenging enough that I could make an effort to understand it and in turn succeed. I feel encouraged to run towards things that I do not understand until running away from them.
- **Quality:** Professor Cipolli has been hands down the best professor I have ever had at Colgate and I could not say enough good things about him and his teaching. He is the epitome of a great teacher. Professor Cipolli truly cares about all of his students and their well-being. He let the class determine the pace of the course and slowed down and spent more time on things that we didn't understand. At the same time, he was humble enough to admit when he was wrong and messed something up and always made amends for it. One major strength Professor Cipolli also had was always making himself available through moodle postings (where he probably answered over 200 questions), diagnostics, and extra appointments and meetings outside of class. The effort that he put in to helping his students understand the material was outstanding. Due to Professor Cipolli, I looked forward to going to class, studying and working on statistics and I by no means consider myself to be a math oriented individual. If he does not have tenure yet, I wholeheartedly believe he deserves it. 10/10.

o Student 32

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort in this course. Started hw early went to get help, made study guides and flash cards for exams went to review sessions.
- **Understanding & Appreciation:** I think it advanced my knowledge of the course.
- **Intellectual Growth:** Time management, studying through out the semester on everything we have learned rather than just what was new-should create an easier time studying for final exams
- **Quality:** I think the teaching was very good, he was clear and concise, very approachable and helpful in office hours. I do like the grading system and it's purupose but I think the only thing I would change is rather than a significantly more amount of weight on your second time seeing the standard it should be an average of both- this facilitates his goal of continually studying but doesn't significantly hurt your grade if you do significantly worse on he second one

- Student 33
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Because every test within this class was cumulative, this required a larger amount of studying than would have been necessary if it was only covering recent material. Therefore, it was necessary to begin to study greatly in advance. Further, the homework sets were long and extensive, and typically quite challenging, and therefore I was required to put in a large amount of effort, many days in advance, when it came to these assignments as well.
 - **Understanding & Appreciation:** I have become more cognizant about how often I use statistics and terms I have learned within statistics, particularly within other class I was enrolled in this semester
 - **Intellectual Growth:** This course, through presenting a very different way of grading called "standards" challenged me to not only learn information for tests but retain this information, due to the fact that the tests were cumulative and material was weighted much heavier when we were tested on it the second time.
 - **Quality:** This course is structured in a very difficult, hard-to-comprehend manner due to the fact that it is graded via standards. Being tested on material a second time and having it weigh 85% as opposed to only 15% seemed to eliminate the purpose of these standards, for the second one was generally make-or-break, and the testing on the first standard didn't seem to matter at all. Therefore, earlier tests counted much less, leaving students panicking and scrambling when taking those in which material is being looked at a second time, for, even though you could've done very well on the first test, it will not significantly impact your overall grade in the class
- Student 34
 - **Reason(s):** Major or minor requirement.
 - **Effort:** I put a large amount of effort into the class starting homeworks and studying for tests three to five days before these things were due. I also went to several office hours and took time to go to the tutoring sessions.
 - **Understanding & Appreciation:** It helped my understanding of statistics in that I didn't have any experience with the statistics that we have thus far paid attention to. No comment on my appreciation.
 - **Intellectual Growth:** Caused me to think better about certain problems I faced and allowed me to know when to accept that things would just simply be out of my control.
 - **Quality:** There were definitely a lot of strengths in professor Cipolli's teaching. He kept the attention of this huge 150 person class and also wanted people to give him feedback so he could then improve the course. I think the only weakness I would note are certain unrealistic expectations.

I feel like professor Cipolli expects each student to gain and achieve a lot from this large introductory course. His standards based grading are meant to produce long lasting learning, I just felt like certain areas of the course (such as combinations and permutations and probability) didn't at all fit in with the rest of the subject matter and that the course could have been taught without this additional confusion of these two topics.

○ Student 35

- **Reason(s):** Major or minor requirement; Other requirement; Interest in the course material.
- **Effort:** I put a good amount of effort into this course. Problem sets and studying worked out to about 1.5 hours of homework per class.
- **Understanding & Appreciation:** This course has been very interesting and I have gained a better understanding of statistics and the representation and summarization of information.
- **Intellectual Growth:** Topics from this course can be applied to almost any subject and frequently comes up in daily life while looking at information presented to you. Statistics are everywhere and this course has given me a basic understanding of how to interpret them.
- **Quality:** Processor Cipolli did a great job teaching this course. I appreciate the challenge that is teaching a class this large. I have taken a fair number of large lectures at Colgate and this was by far the most engaging one. If all lectures were taught like this I wouldn't hate them so much! Professor Cipolli gave countless chances to provide feedback and help steer how the course is going. Standards, although confusing at first, seem to do a good job promoting lifelong learning. The only suggestion I have is to make the first attempt at the standards worth a higher percent. Professor Cipolli was very accessible considering the class size and made an effort to get to know the students. Course materials were relevant and showed how statistics can be applied to daily life. Professor Cipolli does a great job with this class!

○ Student 36

- **Reason(s):** Elective outside major or minor; Interest in the course material; I intend to go into the health field, so I thought that a background in statistics might be useful.
- **Effort:** put in adequate effort. This was an introductory course so it did not require much effort, in my opinion. The homework assignments required the most work but we had ample time to complete them.
- **Understanding & Appreciation:** I now have a greater understanding of statistics and how statistics represent the world we live in.
- **Intellectual Growth:** Outside of this course, I am better able to understand how people may or may not be able to manipulate statistics in order to portray what they want to. Statistics can be presented in so many different ways, and now that I am aware of this I can differentiate between

biased and reliable sources of information.

- **Quality:** Prof. Cipolli was a great lecturer. He constantly was asking the class questions and keeping us intrigued, and given the fact that there were upwards of 150 or so students I was very impressed. He always made himself available, and you could tell that he genuinely wanted us to learn something from this course. The standards concept of testing was annoying because it forced you to review everything you had previously learned, but in the end I gained a deeper and more lasting knowledge of the course material because of it. Basically, he was right about everything and I'm glad I took this course. He taught us a lot of life lessons too that I will think back to from time to time. I would recommend him as a professor to anyone taking Intro to Stats.

o Student 37

- **Reason(s):** Exploration of possible major or minor; Reputation of the instructor; Interest in the course material. I had heard that it was a good class and I was interested in the material; I thought statistics would be a good subject to have an understanding of no matter the major I choose.
- **Effort:** I put a lot of effort into this class. I attended almost every lecture, asked questions, and visited the professor's office hours. I worked diligently on the homework assignments, completed the extra problems, and reviewed my materials for the exams.
- **Understanding & Appreciation:** This course gave me a greater appreciation for the course material. I already knew that statistics was an important and complex part of academia and life, but this course showed me just how important it is and how misleading it can be.
- **Intellectual Growth:** This course helped me learn how to analyze statistics and has made me a more cautious consumer of data. I enjoy psychology and this basic understanding of statistics will come in handy when analyzing psychological data.
- **Quality:** I think this professor really cares about the success of his students. He allows us to reach out with questions and allows us to have a say in the structure of the course. He tries to make the class interesting and relevant to daily life by including real-world examples in his slides

o Student 38

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I would typically spend a few hours on each homework assignment. I came to class and took notes, but generally did not need to study hard for anything.
- **Understanding & Appreciation:** I use stats in Econ, so this class was helpful for my comprehension.
- **Intellectual Growth:** I think that stats is a very practical course for both at Colgate and beyond.
- **Quality:** I think the teaching level was very high. If anything the quality was too high as the professor would be running ragged at times. Most other teachers are much lazier when it comes to

class preparation.

○ Student 39

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** Given that I took AP stats in high school, the most difficult part of this course recalling some of previous material, learning new material covered in this course, and learning how to use R instead of a graphing calculator.
- **Understanding & Appreciation:** Although I have always found statistics to be extremely useful and interesting, the course has provided even greater insight for me into statistics and data collection. I can now read studies with much greater understanding of the language and terminology
- **Intellectual Growth:** I was forced to use computer coding/R to complete the course. Although I have a strong dislike of it, it is useful that I have gained some understanding of how code works, however small that understanding is.
- **Quality:** Cipolli really does try his best to be the best professor he can be for a course of this size. He is great at explaining the lectures in the simplest way possible. The only wish i have is that he can provide more short summaries of the material covered in the chapters, as the wording can often be overly complicated and confuse students.

○ Student 40

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement. I was going to take Psych 150 so I could get the natural science requirement but then I got scared that I would fail and therefore be unable to graduate, so I decided to take this class instead. It is my first math class in five years.
- **Effort:** I put in a lot effort. I went to every class session, took notes, listened, and asked questions. I spent hours on each home, went to a few tutoring sessions and office hours, and studied a lot for the exams. I put much effort into the writing assignment also. I used the moodle board and met with peers outside of class very regularly
- **Understanding & Appreciation:** now know much more about statistics than prior. From day one when he was saying why some statistic about shooting was "the worst social statistic in history," I had no idea why it was a bad statistic. Now I do. The class has helped me to understand statistical inference and also some math parts moving from a sample statistic to a population parameter. I am confident heading into the final exam
- **Intellectual Growth:** I had to use learning methods that I haven't used since high school, I had to remember how to "study" which I haven't had to do in such a long time because my other classes only have essays. I had to learn to ask questions about what I don't understand and ask for help in vulnerability, which I haven't had to do in other classes
- **Quality:** Cipolli is really fantastic. He was super present and available to us over Moodle, email,

and office hours as well as always responding to questions in class. He was clearly super focused on class achievement and encouraging us to really learn the material (which I did, against my will even because of the standards grading model which forces cumulative thinking). I liked the grading system but I also got a good grade so if I didn't get a good grade I probably wouldn't have liked it. The grading system did encourage me to learn far more than other class systems

○ Student 41

- **Reason(s):** Major or minor requirement
- **Effort:** I worked decently hard by studying for tests and doing homework assignments, but I never felt overwhelmed after seriously focusing in on my work.
- **Understanding & Appreciation:** Yes it did as I see stats used day to day now and appreciate it much more.
- **Intellectual Growth:** I think it makes you think more analytically.
- **Quality:** I think the professor is very accessible, clearly knowledgeable, and makes the best effort out of any teacher I've ever had to truly benefit and help the students. His only weakness is due to the size of the class, such as class participation/discussion which is out of his control as it is an intro level.

○ Student 42

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** N/A
- **Understanding & Appreciation:** N/A
- **Intellectual Growth:** N/A
- **Quality:** N/A

○ Student 43

- **Reason(s):** Exploration of possible major or minor; Interest in the course material
- **Effort:** I put in a fair amount of effort to this course. I completed all homework assignments before the due date and went to class on a regular basis
- **Understanding & Appreciation:** I now have a better understanding for how statistics can help in daily lives whether it is a news report or political poll.
- **Intellectual Growth:** This course helped me to look beyond the "facts". Some "facts" presented to us may actually not be completely true and if you use statistics, you can get a confidence interval that shows a range of numbers rather than just one
- **Quality:** Professor Cipolli did an excellent job presenting class material in a clear and orderly manner. He is always prepared for class and is able to clearly answer any question a student has. The one area in which I think he could improve in is feedback on tests. I am still confused how

my exam grade is determined and do not particularly like how we do not get a percentage on our exams so I am not completely sure how I am doing in the course

○ Student 44

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** put a considerable amount of effort into this course. I always tried my best to finish assignments ahead of time and complete all the diagnostics. I studied hard and my attendance was stellar.
- **Understanding & Appreciation:** This course contributed to my understanding and appreciation of the course because i have never taken a statistics class before and didn't realize how complex they were. I was anticipating this class to be easier than it was, so now I appreciate how much complexity there is to statistics.
- **Intellectual Growth:** This course challenged me far beyond what I expected. I learned new ways to apply math and really think about what the question is asking.
- **Quality:** Professor Cipolli was one of the best professors I have had here. He is very captivating to listen to, explains the material in a way that mostly everyone can understand, he's extremely available for help, and wants all his students to succeed. He is great.

○ Student 45

- **Reason(s):** Major or minor requirement
- **Effort:** had to put a lot of effort into the homework assignments which required me to start a week before the due date. I also looked back into my AP Stats book and watched online videos when I didn't or had trouble with the course material. I also made really dense study guides prior to every exam.
- **Understanding & Appreciation:** I actually like the course – AP Statistics didn't fit into my schedule as a high school student and I was interested in taking math classes at Colgate, and this class in particular was a requirement.
- **Intellectual Growth:** A lot of what we've learned applies to real-world every day events
- **Quality:** Honestly a lot of times I felt confused or unprepared for that the tests wouldn't reflect much of what we had in the homework. I thought that the homework would help us prepare but the majority of it really seemed to never have anything to do with the tests. Also, I never use the notes to help with the homework because Ive found that it is only slightly helpful when in lecture

○ Student 46

- **Reason(s):** Interest in the course material
- **Effort:** It is on me. I failed to pay attention in a lecture class. At times I would feel intimidated to respond in class. And then R-code was difficult in the beginning so anything about r-code flew

through my head—I don't feel like I have mastered the concepts.

- **Understanding & Appreciation:** As a psychology major I am preparing myself for the quantitative side of research.
- **Intellectual Growth:** Most importantly, I have started to question research and how researchers form a conclusion based on the data available.
- **Quality:** N/A

○ Student 47

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this course, took time to study, finished homework assignments in order to push myself and get good results
- **Understanding & Appreciation:** This course has taught me a lot, I now understanding many topics I didn't know about before. I also enjoyed the course
- **Intellectual Growth:** This course taught me to understand the material rather than learning it. I am ready to apply my knowledge outside of this course
- **Quality:** I think that the material covered was sometimes too advanced for this intro class. However, the professor made it easy for students to voice their concerns and he was very open to our opinion. He knows the material and is able to teach it properly

○ Student 48

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I put a lot of effort into this course. The fact that students have normally a few weeks to complete the homework allows me to go to tutoring hours when I don't understand something. I also had to study previously learned material for tests because of the professor's standards style of grading which I like.
- **Understanding & Appreciation:** The professor obviously loves this subject so his passion for it made learning the material more enjoyable. He explained topics in multiple ways in order for everyone to understand. If I didn't understand a topic, help was very accessible through the professor directly or the frequent tutoring sessions. The style of grading also encouraged me to retain information from the beginning of the year that I would have otherwise forgotten.
- **Intellectual Growth:** learned more about time management from this course because the homework is usually due within a few weeks of when it is assigned. This encouraged me to start it early so that it would not be overwhelming and so that I could go to tutors if I was stuck on something
- **Quality:** I think that Professor Cipolli is an amazing professor. He made one of my least favorite subjects enjoyable and understandable. While some of the notes can seem overwhelming, the numerous examples he provides are helpful. I really appreciate the diagnostics and moodle discussion

board as a way to find answers to questions I didn't even know I had. He is great at making sure everyone understands the material and will go above and beyond to do so. I really enjoyed his class this semester

○ Student 49

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I put in effort by doing the assigned work, extra problems, asking questions, and going to the review sessions.
- **Understanding & Appreciation:** I did not have much experience with statistics before taking this class. I learned a lot about statistics and the way they are calculated.
- **Intellectual Growth:** By doing the writing assignment, I learned more about preparing essays and doing work that does not have clear instructions.
- **Quality:** Professor Cipolli was a good professor who is passionate about statistics and teacher. I think the class should have relied less on R. I still don't feel comfortable using it and question its usefulness outside of the classroom.

○ Student 50

- **Reason(s):** Interest in the course material
- **Effort:** I put a good amount of effort in this course. This entailed reading the notes and slides, doing longer homeworks, and studying for the cumulative tests we have.
- **Understanding & Appreciation:** I think this course definitely improved my understanding of statistics and it also heightened my interest in it because of the great job professor cipolli did in relation four lectures to real world situations
- **Intellectual Growth:** I think this course helped me get a broader view on statistics in the world and their presence in the media which helps me better understand relations that can be important in other classes
- **Quality:** His strengths are that he is very interesting during lecture and does a good job of making a PowerPoint type lecture fathomable. He also has a very well organized class page in moodle which I know helps me and my peers greatly. As far as his weaknesses, I think sometimes when he uses code to write the homeworks and assignments, it often gets typos so that we cant actually do it unless we search to see if there is something wrong on the class page.

○ Student 51

- **Reason(s):** Major or minor requirement
- **Effort:** I ws challenged by the course but the homework and extra problems helped tremendously
- **Understanding & Appreciation:** I understand much more about the subject through the course material and homework.

- **Intellectual Growth:** I now understand the importance of providing accurate information through statistics.
 - **Quality:** The lectures were very thoughtful and informative. The teaching style was easy to follow and clear.
- Student 52
- **Reason(s):** Major or minor requirement
 - **Effort:** think my effort was fairly average, this resulting a grade that will be fair. I attended class, and studied for the exams.
 - **Understanding & Appreciation:** think that this course made me realize that statistics is not something I'm interested in pursuing.
 - **Intellectual Growth:** I feel more knowledgeable of how and where stats comes from which is good for conceptual learning and life.
 - **Quality:** I think that there are strengths with the professor's teaching methods, but there are also weaknesses. I think that the grading system was understandable and helpful. However I think that there was a sense of disorganization when it came to exams. There were opportunities to redeem our grades, but on exams there were some mistakes that weren't acceptable. The professor was accessible out of class, and it is my fault for not utilizing office hours more. However I believe that others who put in immense effort would agree about the errors/organization. The workload was manageable, and I think the course could be improved with more clear exams. The other aspects were well done and Professor Cipolli did a good job for the amount of students he had to address.
Thank you.
- Student 53
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement.
 - **Effort:** I completed all coursework on time. I spent a lot of time doing the homeworks and the extra problems. Additionally, I filled out ever diagnostic and completed the writing assignment. I studied for tests by using the powerpoint slides and the extra problems.
 - **Understanding & Appreciation:** I took a statistics class in high school, but this course went further and helped me to understand some concepts that I either didn't understand or wasn't taught in high school. It also helped me to understand that I should be wary of news outlets and other sources when they talk about statistics.
 - **Intellectual Growth:** This course helped me to improve my time management skills and to think about things critically.
 - **Quality:** I really appreciated having the powerpoint slides, the notes, and the q&a form on Moodle. I didn't feel rushed in taking down notes. I also enjoyed working on problems in class, because it

helped me to apply concepts we learned in class to the homework

○ Student 54

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; I took this course as a requirement for Economics major
- **Effort:** I have taken a statistics class before but felt that I did not understand the material that well back then. For this class I put in a lot of effort to relearn the material of the past.
- **Understanding & Appreciation:** I felt that this course was a good refresher of knowledge that I had forgotten from my previous course.
- **Intellectual Growth:** I had to remember formulas and methods from previous statistics courses in order to do the problems and tests in this class.
- **Quality:** Prof. Cipolli is a wonderful teacher of the material and when responding to our questions and inquiries. He tries to inspire a classroom discussion, but with the lecture style of the course he sort of expects people to respond and sound out their ideas on a topic. Sometimes this is successful but most often it ends in a silent room. Overall, an excellent instructor of the concepts and moderately inspirational in terms of student discussion in class

○ Student 55

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor
- **Effort:** Not as much as I should have but before tests I would study mainly 1-2 days before
- **Understanding & Appreciation:** Its difficult and I don't really like the subject, however I do understand a lot about certain topics in the subject.
- **Intellectual Growth:** It helps be think about how polls especially elections are calculated. The process is very difficult, yet interesting.
- **Quality:** The quality of teaching was great. He really cared about the students and whenever a question was asked he answered it in a way until the student would understand.

○ Student 56

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Interest in the course material
- **Effort:** I put in a decent amount of effort into the course. It is very easy to access extra problems and have other resources available to further my studies in every topic covered. I probably spent more than 10 hours of studying weekly.
- **Understanding & Appreciation:** There were so many examples where real life issues were used and that helped relate what I already know into the course material. The lecture slides and the diagnostic made it very easy to reflect and review what has been learned so that the transition from one topic to the next was very smooth, and this was also beneficial for exams, as they are mostly

cumulative.

- **Intellectual Growth:** The translation of language, from a formula to english, helped tremendously as I feel that I am much stronger at understanding complex formulas and symbol meanings. Professor Cipolli placed a large focus on this matter and I think it tremendously helped my intellectual growth.
- **Quality:** I was honestly blown away by the amount of time and effort Professor Cipolli seemed to put into our class . He always ensured that everyones needs were accommodated and questions answered. I can easily say that he was has been the most willing out of all my professors to make the effort for every student's success. The notes provided are very thorough and in depth, and the extra opportunities for further studying giving on each homework proved to be tremendously helpful.

o Student 57

- **Reason(s):** Interest in the course material
- **Effort:** I would give myself a few days for the homework so that if I had questions I could go to office hours . I studied for all the exams and did all the extra opportunity questions so I could see what I needed to look back at in the notes.
- **Understanding & Appreciation:** I took the class because I was considering an econ major/minor. While that is no longer of interest to me I am still really good I took this class because it was right up my ally subject wise and I'm hoping that maybe I'll be able to take more similar classes in the future.
- **Intellectual Growth:** Since the homework was always posted in pdf form I was more motivated to print it out and work on it piece by piece over time. This definitely helped me with time management.
- **Quality:** I thought Professor Cipolli did a really good job of keeping everyone engaged. The diagnostics were a good touch to allow for additional comments and extra credit. However, I personally feel that if people eliminated themselves from being considered for extra credit because they didn't fill out enough diagnostics then there shouldn't have been another extra credit opportunity given, it was made clear at the beginning what the requirements were. Also, while the moodle board was incredibly helpful, I was definitely hesitant to post at first and I am sure there are students who were hesitant to post at all. I was hesitant because of how public it is and would have liked if I could have emailed Professor Cipolli with my questions until I felt I was comfortable with posting it on moodle.

o Student 58

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put maximum effort into this course. Like a couple other subjects, mathematical statistics is an area you cannot afford to fall behind. Every week, I was either attending tutoring sessions or looking at my notes to constantly review and stay caught up with the material from class.

- **Understanding & Appreciation:** My understanding for this course increased drastically. Additionally, it made me appreciate the course subject even more. Coming into Colgate I knew I was not keen on taking science/math classes since that was not what I wanted to deal with later in life. However, 105 allowed me to appreciate math even more especially statistics.
 - **Intellectual Growth:** Intellectually, I have seen a major growth in my ability to calculate numbers and recognize math in the real world. I am constantly finding examples in the real world that correlate with the subject matter we learned in class.
 - **Quality:** Professor Cipolli is fantastic. In a class of 100+ students he is able to cater to each individuals' needs by making himself accessible. He works tirelessly to make sure we understand the material and we do well. He motivates me every class to listen and take good notes allowing me to understand what is going on. He is constantly answering questions on his board he created on Moodle, he always makes space for extra office hours, and he sets up weekly tutoring hours with two other upperclassmen. I appreciate every single effort Professor Cipolli makes to ensure the best learning environment for his students .
- o Student 59
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** To succeed in this class I attended every lecture and took diligent notes. I completed all of the homework problems and most of the practice problems. I reviewed my notes and practice problems and lecture slides to prepare for the exams. I have not attended any of the additional tutoring sessions.
 - **Understanding & Appreciation:** Prior to taking this course I had never studied statistics or critically thought about them when I was presented with statistics in the news. While this course effectively taught me a great deal of math and of general understanding for how to calculate statistics, what I think the most important take-away I have gained from this course is the ability to understand and think about the statistics presented in the news and how those numbers may be presented more honestly
 - **Intellectual Growth:** I am not a student who has taken many math courses and I took this course because I needed to fulfill a requirement. That being said, I really appreciate being in classes that challenge me in fields I do not take many classes in. I think that it forces me to study harder and find the most effective study tools for me. This course really pushed me to avoid procrastination and to find study tools that would promote long-lasting learning.
 - **Quality:** Professor Cipolli is amazing. It is clear from day 1 of this course that he cares so much about his students and wants to work with each and every one of us to make this course understandable and digestible. He really listens to the feedback of his students and changes the

course to best fit our needs.

○ Student 60

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; The professor could have managed the class better, sometimes the class is boring and I feel like I can learn more effectively. But the professor has a very clear schedule and this is what I appreciate.
- **Effort:** Do the homework and extra opportunity very carefully can really handle the class
- **Understanding & Appreciation:** I'm very clear about what he is doing in every chapter and he makes me understand that statistics is really applicable in the reality.
- **Intellectual Growth:** Logic and carefulness
- **Quality:** He is putting much time to make us understand as much as possible, but I feel like he sometimes put too much time on easy ones but talk a little bit less on difficult ones.

○ Student 61

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** Homework assignments usually take a while so I will spend a couple days on them, and a couple days to study for tests as well.
- **Understanding & Appreciation:** I've taken statistics in high school but this class has helped me gain a better understanding of the material.
- **Intellectual Growth:** It has helped me see how statistics play a role in every day life because the professor will mostly use real studies or discuss current events.
- **Quality:** Professor Cipolli is a great educator. His friendly manner makes his students feel comfortable with him and that they can approach him for extra help which is important. He is also a clear and organized lecturer and his notes and lecture slides are easily accessible on moodle.

○ Student 62

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement.
- **Effort:** This course was the kind of course I definitely had to put a lot of work and time into to understand basic concepts. I found it very difficult and time consuming.
- **Understanding & Appreciation:** I think it made me understand what statistics were and how they were taken and what they meant but also I appreciate them less because it was hell.
- **Intellectual Growth:** It made me think about the statistics I take as fact without questioning them
- **Quality:** I think that the lecture style is hard but Professor Cipolli did his best to make himself accessible and make sure he tried to meet with everyone who tried. He was very understanding and kind. There was a lot of material but he did his best to adjust to the pace of the class.

○ Student 63

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a lot of effort into this course. I studied very hard for every single exam and always tried completing the homework with enough time to go to the tutoring hours available for my class.
 - **Understanding & Appreciation:** I have never taken stats before so it was definitely very fast paced and hard for me, but I am glad that I was able to pick up so many different "standards" as he calls them. I am very happy with how much I've learned this semester.
 - **Intellectual Growth:** I really liked when professor Cipolli would bring in real statistics to class – it made everything he was teaching more tangible and not like some of my other math classes in the past where there was no real world application that made sense. When looking at different statistics I will always think critically about them, which is a sign of the course contributing to my intellectual growth beyond the course itself.
 - **Quality:** Cipolli was very clear. He answered questions in a way that allowed us to understand the subject at hand very well. I think one of his strengths is speaking confidently about the material covered in class and never hesitating when answering a student's question. he also had a great sense of humor which made this class pretty fun at times!
- Student 64
- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** Homework assignments usually took 1 to 3 hours to complete, but I did not spend a significant amount of time studying for tests.
 - **Understanding & Appreciation:** I had wanted to take statistics since high school just to see what it was all about and I've now been able to do that.
 - **Intellectual Growth:** It helped me learn to think in a different kind of way regarding how statistics apply to many scenarios in everyday life.
 - **Quality:** Professor Cipolli is a very knowledgeable and effective professor. He does very well given the task of teaching so many students at once, but I feel that his grading procedures regarding standards could be touched up a bit. Also, I really wish tests would be returned so we could find out exactly what went wrong.
- Student 65
- **Reason(s):** Major or minor requirement; Other requirement; Prof Cipolli is a great guy and he wants the best for his students.
 - **Effort:** I put a lot of effort into this class. The homework takes a long time to complete and since all of the exams are accumulative, reviewing all the material takes memorization and effort.
 - **Understanding & Appreciation:** Since Professor Cipolli was so excited by Stats, it transferred to

the class.

- **Intellectual Growth:** It taught me that I should not wait until the last minute to complete assignments or study for exams.
- **Quality:** Professor Cipolli is a hard professor, but he wants the best for all of his students and he looks to make sure we succeed. A weakness of his may be that we have to use a computer program called R to do our homework, and if you have no computer programming background it can be difficult to navigate. A strength of his is that he is always ready to help and explain to make matters more clear for the students.

○ Student 66

- **Reason(s):** Major or minor requirement.
- **Effort:** Pre-read the class notes and review the conceptions that taught before in order to get a clear conception of each method.
- **Understanding & Appreciation:** This course helps me to understand how statistics is used in our lives and what kind of statistics is called a unbiased one which helps me to judge those news on the TV.
- **Intellectual Growth:** The use of probability and some other methods requires a lot of logic which helps me to strengthen my way of thinking
- **Quality:** Professor Cipolli is very passionate in teaching this class and prepared well during each class and he shows every conception very clearly but I think he could build the class more interesting and challenging.

○ Student 67

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I put an immense amount of effort into this course. The material did not always come easy to me in class, so I spent a lot of time studying for each exam. Also, I spent a lot of time on the homework assignments, as some of the questions challenged me and required a lot of thought
- **Understanding & Appreciation:** This course challenged me. This was my first time taking a statistics course, so now I have a solid understanding of the different components of statistics. I found the course very interesting, so I also gained an appreciation for the components of statistics.
- **Intellectual Growth:** The homework assignments typically contained many questions, and this taught me to spread out my work over time. My time management skills surely improved from taking this class.
- **Quality:** The quality of teaching in this course was very high. Professor Cipolli is a great professor who always asks for his students' input on his weekly diagnostics, and it was evident that he takes

our comments and concerns into consideration

○ Student 68

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** This class did not have day-to-day assignments, but I worked hard to complete homework assignments and study for exams effectively. I also came to every class, despite the large lecture setting.
- **Understanding & Appreciation:** I generally do not enjoy math, but I found that in this course there were times where I actually did enjoy what I was learning. While it could still be frustrating for me when I could not figure out a particular problem or I did not understand how to use R studio in the moment, I think overall I did grow to appreciate the material.
- **Intellectual Growth:** I think it is important to take courses outside our comfort zone, and statistics/math courses in general are that for me. Taking the course helped me think critically about statistics and media in a way I wouldn't have otherwise.
- **Quality:** Professor Cipolli worked very hard to make this course accessible and interesting to a class of over 100 people, and I think he did so effectively. He was always helpful during office hours, and willing to answer questions in class as well as on the moodle forum. He is engaging as a person and as a professor, which made the class environment an interesting one. The only changes I would make to the course would be 1. To teach R more thoroughly at the beginning of the semester, as it was very foreign to me and I believe many other students and 2. The homework was sometimes confusing when there would be many mistakes. I understand that this is changing at the end of the semester, which I think is an improvement. Overall, I think for an intro level math course this class was interesting and effective in facilitating learning.

○ Student 69

- **Reason(s):** Major or minor requirement; Elective within major or minor
- **Effort:** My effort was not outstanding, as I often devoted only one to two times a week for this course. However, I did go to extra tutor sessions and when I did work for this class it was for extensive periods of time. Overall, my effort was good.
- **Understanding & Appreciation:** As I have already taken stats, I wasn't sure how much different this course would be. Overall, the instructor made me learn things in new ways and this has broadened my understanding of stats. Also, we had to use technology, such as the program R Cran, which was unfamiliar to me before this class.
- **Intellectual Growth:** This course attributed to my intellectual growth in lots of ways, as I was challenged to think in different ways and fully grasp the theoretical side behind topics
- **Quality:** I thought the quality of teaching overall was very good. With such a large class, lots

of content, and not much time to teach it all, I think the instructor did a very good job getting through everything without rushing. He was always very accessible and organized which made the class run smoothly. Furthermore, his assistants who held extra tutoring sessions were very helpful.

○ Student 70

- **Reason(s):** Other requirement; Interest in the course material
- **Effort:** There was a lot of effort put into making sure my homework was done properly, and preparing for the tests.
- **Understanding & Appreciation:** This course gave me knowledge on stats and how probability and polling works in the real world.
- **Intellectual Growth:** This course gave me abilities to be a better critical thinker.
- **Quality:** This Professor had strengths in being prepared for class each day, and helping me understand what he was teaching through his teaching style.

○ Student 71

- **Reason(s):** Major or minor requirement.
- **Effort:** I put a fair amount of effort into this class.
- **Understanding & Appreciation:** Examples of really world applications made understanding the course subject much better.
- **Intellectual Growth:** I now know how to appropriately read through statistics presented in various periodicals and how to identify bias and/or misrepresentation.
- **Quality:** Statistics can often not be super intuitive to someone who has not been exposed to it in the past, especially when dealing with coding. It was always helpful when Professor Cipolli provided an example for a concept that occurs in the real world. However, there were some times we would be going through a concept and not example would be presented along with it, just the concept itself. This makes understanding the material particularly challenging for me as I don't have anything to associate the topic with. Other than this, the homework was helpful, particularly the extra problems tied to the homework. I also wish the standards grading gave more weight to the first attempt. The class was overall enjoyable, and Prof. Cipolli is very enthusiastic.

○ Student 72

- **Reason(s):** Major or minor requirement
- **Effort:** A lot of effort. Really challenged myself with a math course I wasn't too ready to take.
- **Understanding & Appreciation:** Math is hard
- **Intellectual Growth:** It shows me a lot about the news and other things we see.
- **Quality:** I didn't like the class because it was too big. The teacher was great he did his best to teach a big class which I did like

- Student 73
 - **Reason(s):** Major or minor requirement.
 - **Effort:** I found that the course was pretty easy. Despite Professor Cipolli saying that you needed to start Homework early, I always found that I could do it the night before. Same for tests.
 - **Understanding & Appreciation:** Statistics has always been an interest of mine, I think this class did a good job of stoking the fires of my intellectual interests.
 - **Intellectual Growth:** I think this class taught me how to work with numbers. Always important to know.
 - **Quality:** I think Professor Cipolli needs to get ride of R. The hassle of the program is not worth the hundredth of a decimal place worth of clarity that it provides.
- Student 74
 - **Reason(s):** Other requirement; Reputation of the instructor; It was the only "science" course offered this semester without a lab requirement
 - **Effort:** I came to class everyday, went to office hours and I tried to ask questions when things didnt make sense.
 - **Understanding & Appreciation:** I've always liked math but I never understood it or was good at it. This course helped make sense of a lot of things in math as well as my major, sociology, which uses a lot of statistical jargon that I've never understood before taking this course.
 - **Intellectual Growth:** I've always liked math but I never understood it or was good at it. This course helped make sense of a lot of things in math as well as my major, sociology, which uses a lot of statistical jargon that I've never understood before taking this course.
 - **Quality:** I think that professor Cipolli was a really good and really insightful teacher. He has high expectations for us but is also realistic about what students will/will not or can/can't do. I think that the workload was a bit much some times and the schedule was a lot to deal with but overall I was satisfied and even pleasantly surprised with how well this class went, because of professor Cipolli.
- Student 75
 - **Reason(s):** Major or minor requirement; Other requirement; Medical school requirement
 - **Effort:** I completed the homework, attended all lectures, and studied for exams. I also attended weekly tutoring sessions lead by our TAs on Tuesday and Thursday from 7-9pm.
 - **Understanding & Appreciation:** This course was taught very well and in a very interesting way that heightened my appreciation for the subject. In addition, the enthusiasm from our professor made it easy to be interested in the course material.
 - **Intellectual Growth:** Personally, this course required a decent amount of effort outside of lecture

and taught me a lot about time management. I learned valuable things about my personal study habits etc. that are applicable to all my other courses.

- **Quality:** I think a strength of the teaching in this course is the accessibility and consideration from the professor. He was always available to students and really took our opinions into consideration in terms of deadlines, the pace of the course, etc. I have never had a professor who puts in as much work outside of lectures than this class. We are given an abundance of extra practice material, summary presentations, and review sessions. One weakness to this course could be the lack of personal engagement with the professor due to the section size. I understand this is unavoidable with such a popular course, but in terms of feeling comfortable to ask questions etc. a course section of 120 students is not the best.

o Student 76

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
- **Effort:** I believe that I worked fairly hard, enough to earn me a good grade and generate a higher understanding of statistics.
- **Understanding & Appreciation:** It increased my already significant appreciation for statistics even after I took it in my senior year of highschool.
- **Intellectual Growth:** I have learned, through Professor Cipolli's unique way of grading, how to study so that I retain my knowledge from early in the semester throughout the length of the course and beyond.
- **Quality:** I absolutely love Professor Cipolli. He manages to keep a class of 125 kids entertained and alert. He also demonstrates a profound interest in his students and their well-being and often asks them questions on how to improve his class. His greatest quality, though, is that he structures the class to move at a speed determined by the students. I have no critiques for Professor Cipolli at all and, overall, he has made my first semester at Colgate one to remember!

o Student 77

- **Reason(s):** Major or minor requirement
- **Effort:** I spent most of my time doing the homework and studying for the exams in this class. This didn't involve doing work for this class every night, but when I did do work for this class it was relatively difficult and took a long time, but I think it was fair and definitely helpful.
- **Understanding & Appreciation:** I like this course because Professor Cipolli had us look at real-world examples which allowed me to see statistics all around me on a regular basis. He has definitely increased my interest and appreciation of statistics.
- **Intellectual Growth:** This class requires a lot of independence. The fact that it's a large lecture class and that the homework are due so far apart from each other allows students to manage their

own time and take charge of their own understanding in this course . This course helped me figure out what I needed to do to succeed.

- **Quality:** Professor Cipolli was a fantastic teacher. He was clear with his expectations for the class and how this course would work. He explained things clearly and did his best to ensure everyone understood the material by encouraging questions and reexplaining things that people didn't understand. He really cares about his students and wants them to succeed and is always cheerful. The only thing I would have preferred to be different is how accessible he was. All of his office hours were during my other classes and he didn't have much other time to meet. That being said, he did put his whole schedule online which easily allowed us to schedule appointments with him, even though he didn't have much time.

○ Student 78

- **Reason(s):** Elective outside major or minor; Interest in the course material.
- **Effort:** I did all the homework and extra problems in preparation for exams but I never felt like I needed to cram right before a test.
- **Understanding & Appreciation:** I took AP stats in high school and enjoyed the class so I wanted to take it in college. I like the material and found it easy to understand.
- **Intellectual Growth:** I am a sociology major so I do not do a lot of math in any of my other classes. It was nice having a class that is so different, yet still applicable, to my major.
- **Quality:** I think Professor Cipolli does a good job of engaging such a large class. He is very open to student feedback, which I appreciate and definitely makes an effort to answer questions and help students succeed. His standards grading is a little confusing at first, but I actually think it is beneficial in the long run.

○ Student 79

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** As I am not a math or science major, this course proved to be exceptionally challenging for me. That being said I had to put in a great deal of effort to understand the material in this course. I spent countless hours on the homework assignments and attended tutoring sessions on Thursday evenings. I have also attended office hours several times to ask questions about the homework or previous exams.
- **Understanding & Appreciation:** I definitely think I have a better understanding of the concept of statistics and now know that there is a lot more behind a statistic than a random percentage. I think the instructor did a really good job of making the class interesting even for people who may not be math or science majors.
- **Intellectual Growth:** I haven't taken a math class since high school so I think this class was a

good refresher for me. When I read or watch the news I now think differently about the numbers that they throw out there from polls and other surveys because I can actually conceptualize how they would have gotten that data. Statistics are a part of every day life so I think this class is really applicable to me even though I am not a math major.

- **Quality:** Despite the fact I found this course to be incredibly difficult, I do think the instructor did as much as he possibly could for all of our personal achievement in it. Class lecture was always very clear and we were constantly reminded about tutoring hours, extra credit opportunities, etc. When questions were asked on the moodle discussion board or in class, answers were provided in a very timely manner. I truly appreciate all of the effort put forth by the instructor to make sure we had as many opportunities as possible to grasp the material.

o Student 80

- **Reason(s):** Major or minor requirement
- **Effort:** A put a lot of effort, had hard time with some topics
- **Understanding & Appreciation:** It made me think very differently about probability compared to my previous knowledge
- **Intellectual Growth:** This course hrlped me a lot understand things like news polls
- **Quality:** The teaching was good, professor very open to suggestions and feedback

o Student 81

- **Reason(s):** Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement; Other requirement. Interest in the course material
- **Effort:** Most of my effort manifested itself in homework problems and exams. Besides filling out moodle forms and studying for exams, I never focused on the subject material outright.
- **Understanding & Appreciation:** This course acted as kickstart to seeing the world in different lights.
- **Intellectual Growth:** This course helped change the ways I see the news.
- **Quality:** I believe Professor Cipolli has a clear passion for statistics, and that shines through.

o Student 82

- **Reason(s):** Major or minor requirement
- **Effort:** This course demanded a fair level of effort. The course was definitely designed so that almost anyone can do well, but it is incredibly hard to do VERY well. This is the result of the standardizing grading system in my opinion.
- **Understanding & Appreciation:** I feel much better about the course material, but wish we had gotten to future units sooner. Having not gotten to hypothesis testing and regressions yet is somewhat frustrating.

- **Intellectual Growth:** I am able to think more clearly and critically about the statistics I hear in the news.
 - **Quality:** Cipolli is very organized and very smart. This is clear to anyone who walks into a room with him. However, I think that sometimes he lets "small" things go unaddressed, which can be very frustrating for his students. On our homework assignments, for example, there were constantly errors that needed to be adjusted. This was a consistent issue from the first assignment to the last. Lastly, it may be worthwhile to consider the way that his standardized system favors students who are newer to math and introduces much more double jeopardy for students who are not.
- Student 83
 - **Reason(s):** Interest in the course material
 - **Effort:** This class didn't have nightly homework, yet since the homework consisted of many problems and took lots of time, I would have to invest a good amount of time into the homework. I would collaborate with students and go to office hours. I take notes in class and read the powerpoints. This class wasn't that challenging overall, yet I needed to work for my grade.
 - **Understanding & Appreciation:** This course gave a broad introduction to the world of statistics. I had already taken a stats class before, yet this class just broadened my understanding of the subject material.
 - **Intellectual Growth:** I learned better time management skills due to the length and difficulty of the homework. Additionally, I learned how useful office hours are. I came in frequently with questions about the homework and the professor was very willing to help me.
 - **Quality:** He is clearly passionate in this subject material and really respects his students. On numerous occasions, he would ask for our opinions on due dates and course load. He wants to make our lives easier, which I really appreciate. Overall, he is a passionate, kind professor.
 - Student 84
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put in a great amount of effort that consisted of hours dedicated to studying and doing practice problems as well as forming study groups to improve my understanding of the topics.
 - **Understanding & Appreciation:** I gained an understanding on statistical analysis especially in the real-world and how to be aware if it is accurate or not.
 - **Intellectual Growth:** I feel more aware of the world around me and observant of statistics.
 - **Quality:** The quality of teaching is very high for this course, but I wish we can move at a slightly slower pace and be more clear and concise on concrete facts and formulas. There are lots of resources provided for us such as slides posted online, tutoring hours, office hours, diagnostics, etc. so it is very helpful.

- Student 85
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I have put in more effort for this class than any of my other ones.
 - **Understanding & Appreciation:** its quite cool to see how stats played a part in the real world especially when we talked about weapons of math destruction.
 - **Intellectual Growth:** I look at everyday life with a different eye now because of all the statistics thrown at us each day
 - **Quality:** I would say the quality of teaching is pretty high
- Student 86
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a great deal of effort into this class which is necessary for this class since tests are cumulative, also the homeworks are long and time consuming so dedication to this material is necessary but pays off
 - **Understanding & Appreciation:** It made me recognize the great deal to which statistics we come across in daily life are faulty and how to look at data in a more interpretive way
 - **Intellectual Growth:** It made me grow as an intellectual by helping me start from very fundamental concepts and analysis in order to apply complex and descriptive calculations. Helped me understand the importance of working from the ground up, and that laying a strong foundation of knowledge allows for better understanding once it gets difficult .
 - **Quality:** Overall the teaching quality is very high, Professor Cipolli is highly engaged and passionate about the material which is a positive reinforcement as a student. He also makes the material relevant which helps conceptualizing material and makes me feel like what I'm learning matters and is relevant. Although his grading methods are unorthodox, I do genuinely think he has the best interest of the student in mind.
- Student 87
 - **Reason(s):** Major or minor requirement
 - **Effort:** I was attentive in class and completed all assignments on time. I spend a very large amount of time preparing for assessments well
 - **Understanding & Appreciation:** It helped me better understand the importance of statistics and their real world uses
 - **Intellectual Growth:** It helped me further analyze information
 - **Quality:** Professor Cipolli is a wonderful professor he knows his craft inside and out and uses interesting examples in lecture that make this large class interesting. He always gives us access the all the lecture power points and the notes packets in advance which is incredibly helpful.

- Student 88
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a consistent amount of time and dedication into this course. Professor Cipolli's style of teaching is very interesting and constantly engages students with the course material.
 - **Understanding & Appreciation:** This course strengthened my understanding and appreciation of the course subject. Professor Cipolli's consistent enthusiasm and relatable lectures keep the students involved and interested to learn more.
 - **Intellectual Growth:** Professor Cipolli's grading system requires students to constantly review course material throughout the semester in order to do well on tests, which promotes intellectual growth.
 - **Quality:** The quality of teaching in this course has been very high throughout the semester. Professor Cipolli is a great teacher with an evident passion for statistics that makes this class very enjoyable.
- Student 89
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I took this course because it was a requirement for an Economics major and I also enjoyed the topic.
 - **Effort:** I put in the amount of effort that I thought an A in the class would require. At times it was a lot of effort and at others it was minimal effort.
 - **Understanding & Appreciation:** This course pretty much taught me everything I now know on the subject so I'd say it did a very good job.
 - **Intellectual Growth:** This course made me think in different ways and from other viewpoints. There were many different ways in which we could learn the course material.
 - **Quality:** The quality of teaching was pretty outstanding. We were able to ask questions during the lecture which is a rarity for such a large class.
- Student 90
 - **Reason(s):** Other requirement
 - **Effort:** I came to class prepared everyday including have the notes printed and paying attention to the lecture. I also visited the professor's designated office hours, met with the tutor and worked with classmates to further my learning.
 - **Understanding & Appreciation:** This course did not positively contribute to my understanding of the course. I took it to fulfill a requirement and I never wanted to take it. Nonetheless, at the beginning of the course I was optimistic that I would at least learn something and maybe even improve my math skills. I was definitely challenged by the course, but I don't think I learned much.

Perhaps it's my learning style and I work better in larger classes, but I just feel like at one point I was confused my the course just kept moving forward at a fast rate and everything was built on my confusion. Now that we're towards the end of the course I just want this to be over with so I can move on.

- **Intellectual Growth:** It didn't.
- **Quality:** I think Professor Cipolli is very organized and post a lot of resources on the portal and is open to answering questions which I really appreciate. I just think the first time he teaches a concept he could spend more time on it, that way there were are less questions later. Often times when I would go to office hours with a question he would say it was something we had discussed on a certain day in class, but during the lecture he would go over the concept once and just move on. Although the lecture slide are posted online, they don't actually show how to solve the problems they mostly just show solutions so it ends of feeling relatively pointless for me.

o Student 91

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** I put a considerable amount of effort into this course. Due to the nature of the grading, this was mostly in the form of creating detailed notes from each chapter so I can study them for each test, and just generally keeping my knowledge of past units as good as possible.
- **Understanding & Appreciation:** I actually find the real-life applications of statistics pretty interesting. I don't think I am ever going to pursue statistics alone as a career path, but I see that it connects heavily to many of my interests. As such, I think this was a valuable course to take and that I will use the curriculum from this class later in my life.
- **Intellectual Growth:** It showed me that statistics are used and manipulated all the time in my life and I had no idea. This class has taught me to be more critical of the ways in which data is presented to the public, and how to correctly read data myself.
- **Quality:** This course was well taught. Professor Cipolli clearly cares about his students and has put a lot of effort into making the class interesting, clear, and accessible. His ways of teaching are very straight forward, and he encourages asking questions, which is great. Sometimes, he cuts people off and answers what he thinks they're asking, but it wasn't actually their question, so that can get a bit frustrating. I don't know if I love the grading system, but it does make sense, and I think I am coming around to it. I feel very prepared for the final, which is a load off my back for sure

o Student 92

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I completed the assigned homeworks, attended class, and studied for exams.
- **Understanding & Appreciation:** I didn't really know much about statistics before this class and

now I feel like I have a solid grasp of the subject.

- **Intellectual Growth:** It made me evaluate problems in a way that I had not before.
- **Quality:** I think that professor Cipolli does a good job with this course. He usual interesting examples in class and he cares a lot about student feedback.

○ Student 93

- **Reason(s):** Exploration of possible major or minor
- **Effort:** Introduction to Statistics was I class I added during Drop/Add period. Right away I thought the class was very interesting but did see that it was going to challenge me in a good way. It took a couple weeks for me to really understand that it was necessary to put a lot of hard work in including, extra help tutoring hours, doing extra practice problems, and requesting a tutor. I am put in a lot of work but it is through that work I was really able to get a grasp of the class material.
- **Understanding & Appreciation:** I feel that in our everyday lives you see statistics everywhere, whether it is in the news or on websites. Therefore I am really happy I took a course on it because it will help me grasp a better understanding for statistics and knowing how accurate they are. Especially thinking about being an Econ major, taking this class will potentially help me succeed in Intro to Econ.
- **Intellectual Growth:** I think this course is going to set a really good foundation for me at Colgate. It has helped me as a student learn time management, the importance of using all the resources given to me, and showing me that I can take on challenging classes.
- **Quality:** I think the energy and passion Professor Cipolli brings to class in really special. He loves what he teaches and shares that joy to all his students. I also feel he is very accommodating, meaning that he always makes sure were all on the right page and provides many extra help resources. My only critique would be that some of the information that we learn is harder to understand. I feel being an Introduction class, students would benefit on learning information a little more simplified and direct. However all together I really enjoyed coming to this class and how he challenged us but also shared his love for the subject

○ Student 94

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** For this course, I put in a lot of effort into the homework and preparing for exams. When a due date was not approaching there was less effort required outside of class, but there was a lot of work when there was a due date or exam coming up.
- **Understanding & Appreciation:** have never particularly enjoyed mathematics courses, but this statistics class made me realize that it can be interesting to learn! It is still difficult for me, but I do enjoy learning it.

- **Intellectual Growth:** This course made me challenge myself and get out of my comfort zone, which will push me to try things I may not be the best at in the future, including other classes and beyond.
 - **Quality:** Professor Cipolli is a challenging, but passionate professor who I can tell loves teaching this subject and wants everyone to appreciate it as much as him. He made the class a lot more interesting than I thought possible, and although sometimes he moves really fast through material, I feel I learned a lot from him. I feel as if my grade won't reflect how much I have learned, however, which is frustrating as a student.
- Student 95
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Reputation of the instructor. Interest in the course material
 - **Effort:** N/A
 - **Understanding & Appreciation:** N/A
 - **Intellectual Growth:** I hope to go to graduate school, and this course prepared me for the subject area that I am interested in.
 - **Quality:** Professor Cipolli is one of the first professors at Colgate that I've had (as a senior) who truly seems to care about teaching. He is dedicated to learning what works and what doesn't and accommodating different learning styles. He listens to student feedback and implements changes. Every day, he seems upbeat and excited to help us through the material. He provides endless opportunities outside of class for extra help. One of my favorite areas of the class was the online question board. Often professors at Colgate emphasise class participation and ignore the fact that not everyone learns best this way. I learn best through listening and processing, so the online option was a great resource for me. I cannot say enough positive things about Professor Cipolli. As someone who hates math, I loved this class and am now considering taking statistics courses in graduate school. I hope he stays at Colgate for a long time.
- Student 96
- **Reason(s):** Major or minor requirement.
 - **Effort:** I put a great deal of effort into this course. Although it was tough to always have accumulative tests, I believe that I have learned a lot more than if I had just memorized the material,.
 - **Understanding & Appreciation:** Although I am not really a math person, I think that the professor did a good job of catering to non math people. He used interesting examples that helped everyone learn. My knowledge and appreciation for the subject matter had greatly increased.
 - **Intellectual Growth:** I think it made me use a different part of my brain that I generally do not use.

- **Quality:** I think he did a really good job explaining things and giving relevant examples in class.

Spring 2017: Section A

o Student 1

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** This course required a demanding but steady level of effort. With the pop quizzes, I had to review my notes every day in order to be prepared for class. Also, the homework assignments were relatively time consuming so I had to plan in advance to complete them. In order to do well in this class I did have to put in a lot of effort into the class, but it was very manageable and doable.
- **Understanding & Appreciation:** I had never taken a statistics class before this one and so I didn't really know what to expect. I ended up enjoying statistics because even though I don't plan on taking any more math classes, I can see how my knowledge from this class will be helpful in my future endeavors.
- **Intellectual Growth:** I believe the things I learned in this class will be helpful in whatever discipline I decide to go into. The knowledge from this class will also help me to simply better interpret data when presented for example in the news. Also, this class helped me to be my own advocate and take initiative because with such a large class, you had to actively seek out help.
- **Quality:** Professor Cipolli obviously cares a great deal about his students and wants us to succeed. He had many office hours and if you came prepared, he was always willing to help. It was also obvious that he put a lot of effort into the course. I found the practice problems and powerpoints he posted to be helpful. Professor Cipolli also was very open to feedback as he periodically would ask students to give input on the class and then tailor it to our wants. Sometimes in class, however, he would move really quickly or not introduce a topic well. Sometimes I would leave a class feeling even more confused and would end up just having to teach myself through the powerpoints.

o Student 2

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I came to class every day and took notes on all of the power points. I put a great of effort into this class through the homework assignments, the writing assignment, and the numerous pop quizzes/standards that we had. I was constantly reviewing material and making sure I knew everything in order to do well on the standards because for most of the semester, they were pop quizzes.
- **Understanding & Appreciation:** I want to be a psych major, so being in this class has definitely helped me to better understand statistics that would be necessary to have a career in psych, etc. I am not very much of a math person, so this class was just the right amount of math that I like

to be involved in. However, I don't think that the methods that the professor used to teach the subjects to us were very effective. For the most part, I learned most of the material from the online homework assignments than I did in class.

- **Intellectual Growth:** I think that, being in a huge lecture style class, has taught me that this is not the right style of class I can learn most productively in. For a math class, I thought it was okay, but if I want to take a math class again, it will not be in a huge class.
- **Quality:** I do believe that Professor Cipolli does want us to understand the material and get good grades. However, he seems to be very stuck in his notion of teaching and, although he gives out numerous surveys to see what we think of his teaching, he rarely actually listens to what the students have to say. The way that he does quizzes is very frustrating because we can be pop quizzed on the same topic more than once, but rather than the highest grade being the one that counts, it is the last grade that counts. I have had numerous times where I have scored well on the first standard/quiz and then on the retake of the same topic I have scored poorly, simply because it was an off day for me or I was so swamped with other work the night before I couldn't review the material. I believe that this is a horrible way of teaching because it assumes that all students are equal in their learning styles and review strategies. It also diminished all the hard work I put into studying for a specific topic simply because I didn't review all the material every single day. Overall, I enjoyed the topic of statistics and I liked the examples he used and his humor. I also liked the homework as a way to learn the topics better and as a grade booster, but there were parts of the semester that really frustrated me, and I'm sure many other people in the class.

o Student 3

- **Reason(s):** Major or minor requirement
- **Effort:** I put effort into this course by doing the homework, attending lectures, and spending time studying for the cumulative quizzes and exams.
- **Understanding & Appreciation:** This course helped me better understand the methods of calculating and representing data in a way that is easy to understand.
- **Intellectual Growth:** The concepts I've learned in Stats have found their way into my other courses; when writing lab reports for General Chemistry, I found myself going back to the methods I learned in this course and applying them to the task at hand when organizing my data.
- **Quality:** Prof. Cipolli is very down-to-earth and very approachable and has a vast understanding of statistics, both theoretical and applicable. He has a quirky personality that makes something as boring as mean, median, and mode tolerable and possibly even enjoyable.

o Student 4

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement

- **Effort:** I completed all assignments and attended all class lectures. When I did not understand a topic I found a tutor that I worked well with and attended office hours
 - **Understanding & Appreciation:** The last time I took statistics I was in high school. This course broadened my understanding of statistics and provided a space where the content of the classroom became applicable to real world.
 - **Intellectual Growth:** The course challenged me and required me to think in ways I was not necessarily accustomed to and an Educational Studies and Women's studies major.
 - **Quality:** I struggled with the large class settings and found myself getting lost in the lectures, which is symptomatic of the class size not the teaching style. The moments I learned most were in Professor Cipolli's office hours when I was able to receive more one-on-one time. Professor Cipolli took steps to try to create an inclusive space for his students.
- Student 5
 - **Reason(s):** Other requirement
 - **Effort:** There was a lot of quizzes which I felt I should be prepared for so I spent a lot of time with that. I also put a lot of effort in the homework.
 - **Understanding & Appreciation:** This course opened my eyes to the math department which I was scared of before.
 - **Intellectual Growth:** This course contributed to my intellectual growth because it is a class I didn't think I was interested in and was taking to fulfill a requirement but I realized I do like having some sort of "math" class in my schedule.
 - **Quality:** Professor Cipolli was helpful in office hours and easily accessible. However, in class, he could sometimes be belittling and rude. I also did not know what was going on in class all the time, but in such a big class, was scared to ask questions because I knew that he was not always helpful in answering them. I also did not like the standards quizzes. He counted the most recent, not the best grade, which I think hurt instead of help the students. I think the amount of testing we had was similarly not beneficial because I feel that I spent more time trying to memorize how to do problems instead of actually learning the material. I do think that 1 on 1, Professor Cipolli is helpful and personable and is definitely easily accessibly and seems like he genuinely cares about his students. However, I think the amount of testing in the class causes unnecessary stress for the students and therefore isn't beneficial.
 - Student 6
 - **Reason(s):** Other requirement; Med School Requirement
 - **Effort:** I put a great deal of effort into this class. the first half of the semester was random pop quizzes, so we had to study all the material everyday before class. On top of that the homework

typically took 3 hours to complete, and that coupled with the writing assignment and the readings was a lot to handle but also manageable

- **Understanding & Appreciation:** I now have a strong appreciation for statistics and statisticians. I didn't think I would like this course but Professor Cipolli has made it extremely interesting and engaging
- **Quality:** I really enjoyed Professor Cipolli's teaching style. He has great concern for his students at that really shows through. He is extremely funny and approachable and always brings in great class discussion. I thought he did a great job teaching this class, the only part I did not like was his grading style. There has been a lot of pushback from use of the standards (Random pop quizzes) but I actually think they are a good idea. It makes us students more often and more frequently, and as a result I know the material better and feel much more prepared for the final. What I don't like is how these quizzes are graded and scaled. I don't think that an A should be 4 (100%) on all quizzes. That's basically saying that a 90 and a 100 are the exact same grade, because if you get a 3 on just one of the quizzes you're already down to an 89 and that doesn't seem fair to me. Now I know that you have mentioned various times that you don't have to get an A on the standards portion to be able to get an A in the class, but my point is that it should be somewhat more achievable to get an A on the standards. Now yes, there are apparently 30 students in the class who do have an A, but I think that again, this grading system is not appropriate, and just because I have two 3s and the rest 4s I have an 87, and that does not seem fair to me.....Overall though I think Professor Cipolli is great and I really enjoy his teaching style, I wish I was planning on taking more classes in the math department because I would enjoy having him as a professor again

o Student 7

- **Reason(s):** Other requirement; I knew that statistics are complicated and are not always straight forward, did not need to be constantly retested on old material that I did well on but not the second time around because I was studying the new material and forgot a thing here or there; I've demonstrated that I knew the material before hand so why penalize me when I failed to remember every aspect of it while I was studying for the new material and while I had other chaotic things going on in my schedule.
- **Effort:** The course was challenging, I often had to devote more time than I expected on learning the material. I hate how our grades for the standards can drop even if we got a perfect score on them once or twice but forgot a detail here or there as we were studying for the newer material. If he told us what the older material was going to be retested again, then I would be okay. But what I am not okay with is doing hypothesis testing we learned in late April and then being asked to recall probability questions that we learned in the third week of class with no notice. I get that Cipolli

wants us to know the material but expecting us to know everything from early in the semester up until now and constantly study it, is asking for too much.

- **Understanding & Appreciation:** None, knew that statistics are complicated and are not always straight forward, did not need to be constantly retested on old material that I did well on but not the second time around because I was studying the new material and forgot a thing here or there; I've demonstrated that I knew the material before hand so why penalize me when I failed to remember every aspect of it while I was studying for the new material and while I had other chaotic things going on in my schedule.
- **Intellectual Growth:** None, knew that statistics are complicated and are not always straight forward, did not need to be constantly retested on old material that I did well on but not the second time around because I was studying the new material and forgot a thing here or there; I've demonstrated that I knew the material before hand so why penalize me when I failed to remember every aspect of it while I was studying for the new material and while I had other chaotic things going on in my schedule.
- **Quality:** I do not like his grading and learning philosophy when it comes to the standards. Cipolli is a smart and talented person but he expects way too much from a 100 level introductory course. I know that he wants us to be interested in math but no all of us are math majors, some of us just took this course to have a little breathing room from our other courses but instead he expects us to care and master the course as if it were a seminar or 300 level course. I admire the passion but it is very disproportional to the actual level of the course; some students just want to learn the material and do well but he expects us to think about statistics in such a broad way that it seems a little presumptuous for a 100 level class

o Student 8

- **Reason(s):** Interest in the course material
- **Effort:** I put a good amount of effort into this course to prepare for the frequent pop quizzes in the beginning of the semester. Reviewing the subject material on a pretty consistent daily basis was necessary to grasp the material for these quizzes. I also put in a lot of effort into the writing assignment. This assignment challenged us to use concepts taught in class along with a coding program, which required a lot of effort to try to understand how to use the R code properly.
- **Understanding & Appreciation:** This course contributed to my understanding and appreciation of the course subject by teaching me mathematical concepts and procedures that are very applicable and relevant in the outside world.
- **Intellectual Growth:** This course contribute to my intellectual growth beyond my understand of the course subject by enabling me to apply the things we learned in this class to other classes.

This course also taught me the importance of making the effort to understand what is taught by reviewing a little each day instead of waiting the day before a test to review the information.

- **Quality:** Professor Cipolli did a good job of engaging with the students. He was enthusiastic about his teaching and the subject matter. He also made a great effort to answer all questions and to be available for office hours. I feel like it was effective when we had days where students would just ask any questions they had about the chapter. I also like when professor Cipolli spends time working out example problems on the board. This is more helpful than listening to the power points, which I wasn't always clear on. I think it would have been helpful if this style of teaching was introduced earlier in the semester.

o Student 9

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I took this course to satisfy my math distribution requirement. It was the only class available that I could take without a lab.
- **Effort:** I put a great deal of effort into this course. It's frustrating that I had to struggle so much in an introductory class that doesn't apply to my major or interests.
- **Understanding & Appreciation:** This course taught me a decent amount about statistics but I had learned a lot of the material in high school. I think the instructor made it more complicated than it needed to be and as a result we didn't get through all the material.
- **Intellectual Growth:** This course didn't contribute to my intellectual growth beyond the course subject.
- **Quality:** This course was my least favorite. The material wasn't difficult yet the Professor complicated it and quizzed us relentlessly but didn't tell us what we were going to be evaluated on. I studied and did all my homework and put a great deal of effort into my writing assignment yet I continued to struggle in this course. It wasn't until the last few weeks that I began to feel like I was not only getting it but also able to demonstrate that on my quizzes. The power points he used for the beginning of the course were not helpful. The last few weeks he began to do examples on the chalkboard and this helped a lot. Also switching the quizzes from pop quizzes twice a week to once a week on a set day was helpful. The professor's office hours were not stable and confusing. I went to his office many times expecting him to be there and he was not. Also he expected us to use computer software R but didn't effectively teach us how to use it. Further, this course was a massive waste of money. The online "textbook" cost \$105 and we never used it. Also the instructor required us to buy an unnecessary book and iClickers which also are expensive and can't be reused or resold. This was a poor choice and I'm disappointed that 154 of us had to suffer the consequences.

o Student 10

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor

- **Effort:** I put in a good amount of effort into this course. I would go through the powerpoints and do the practice problems to prepare for the quizzes.
- **Understanding & Appreciation:** I have learned some introductory statistics topics. This course made me like statistics more.
- **Intellectual Growth:** It allowed me to see how statistics are prevalent in everyday life.
- **Quality:** The quality of teaching in this course was fair. The professor kept changing the way the course was taught, differing from what it said on the syllabus. He tried to challenge us and truly wanted everyone to learn. I understand this is a lecture class with many students but the professor seemed to get frustrated with attendance and how some people were performing on the standard quizzes and he seemed to put the consequences on everyone. When I submitted my extra credit assignment, I went into the specifics of the revised syllabus for next semester and mentioned many great constructive points but happened to mention one incorrect statement. He responded saying I did not read the new syllabus at all, neglecting all my other helpful comments. This is an example of how the professor was not always receptive and kind, showing in the light turn out of office hours.
- Student 11
 - **Reason(s):** Interest in the course material
 - **Effort:** i came to class ready to take copious notes each day, i completed every assignment on time and attempted to prepare for each standards quiz beforehand, even when they werent announced.
 - **Understanding & Appreciation:** I didn't find the material all that interesting or helpful, but people say it will be.
 - **Intellectual Growth:** I was challenged to teach myself frequently because I felt that professor Cipolli could not do so in a way that i truly understood. I would get lost frequently and feel afraid to speak up because he was sometimes condescending in class.
 - **Quality:** He seemed like he cared but was unfriendly in office hours and in person. He made me feel bad about myself and my level of learning for not getting some things. He encouraged students to ask questions and handled them well when they did. his teaching was somewhat unclear
- Student 12
 - **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put a LOT of effort into this course and did all of the HW and practice problems.
 - **Understanding & Appreciation:** It made me interested in the applications of statistics.
 - **Intellectual Growth:** Made me get outside my comfort zone and learn R Studio.
 - **Quality:** I think the quality of teaching was half-decent. I feel as though I could have looked at the power points online from my bed because there was not a whole lot of explanation from the

professor, up until the end of the semester. I think some aspects need to be revisited of this course, such as the weekly quizzes. Although it forces us to keep on top of the standards, it is simply a lot of material to always have to review before the quizzes because we don't know what they could be on. I could understand weekly quizzes with topics we had just learned, but getting retested on a super old standard, only to do worse than you did before, is aggravating and disheartening. I understand that statistics is a cumulative subject, which is why I think that as the semester progresses, the quizzes should only be of what we learned because it incorporates previous skills and knowledge.

○ Student 13

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I have always been good at math and I assumed that through hard work, I would enjoy Statistics as well. However, I was wrong. First of all, Statistics is not math. It just isn't. There is very little quantitative problem solving until much later in the semester. Second, I worked so hard in this course purely based on the fact that I don't like to feel like i'm in the dark and when i'm confused, it just makes me work harder.
- **Understanding & Appreciation:** I still feel like I have absolutely no idea what I'm doing, all of the time. And i promise, I went to tutoring hours, office hours, and had my peers help me.
- **Intellectual Growth:** I guess you could say it taught me how to not have mental breakdowns every time I did poorly since it was happening frequently. There was little to no help provided and the little help there was did nothing. So, it was a very independent semester.
- **Quality:** Cipolli is a funny guy. However, he is not a very compassionate teacher. I would feel like I couldn't go into his office hours and be totally confused because he would get frustrated with me. That shouldn't be the case. He also should work on being so passive aggressive. In a class of 150+ students, many people will not feel comfortable talking. That's unfortunately just how it is.

○ Student 14

- **Reason(s):** Major or minor requirement
- **Effort:** I did most of the practice problems before quizzes, but usually studied the night before. This wasn't my top priority class, but I still think I gave it a decent amount of my time.
- **Understanding & Appreciation:** The class did show some interesting things that you can do with stats. I especially noticed this in the writing assignment, where we got to play with data ourselves.
- **Intellectual Growth:** I think this class has taught me to take statistics reported in the news and elsewhere with a grain of salt, and to be skeptical when someone reports general numbers like that.
- **Quality:** I think the professor genuinely did care about how the students did in this class. He really seemed invested in what we were learning. However, I think his expectations for the amount of work that we could put into one class were very inaccurate. His grading procedures, while clearly

explained, did not seem to make much sense. I get that retesting is supposed to keep you improving throughout the semester, but it's difficult to appreciate when I've made four errors on quizzes all year and my grade drops a whole letter grade. I don't understand why answering 95% of questions correctly gives a score of an 85. Additionally, incorporating R Studio and coding into a mandatory writing assignment was very frustrating, and I found myself focusing more on the software than the statistics. The time necessary to get every single question correct all year and learn how to manipulate a coding software felt unreasonable with three other courses. I simply didn't have enough time in the day to live up to the professor's expectations of me.

○ Student 15

- **Reason(s):** Major or minor requirement; I have never skipped class, or even had the desire to, before this class.
- **Effort:** I put in considerable effort outside of class, because it was required to teach myself the material. I did not learn in class very often, as his teaching was more lecture style than working through the mathematical processes.
- **Understanding & Appreciation:** I'm glad I learned the few skills I learned, I feel as though they will be useful and have real world application, but I will also never take a math class again. This is very irritating because I know how valuable these skills are. I wish I had taken this class with a professor that didn't talk down to the students so much.
- **Intellectual Growth:** I was able to use the skills I acquired on my own in other classes – but that is all. That, and all the skills were skills I learned because I put in the effort to teach myself – I did not learn a great deal from prof. Cipolli.
- **Quality:** Putting aside how condescending he was, and how distracting that was from the actual content of the course, he did change his style a bit at towards the end of the semester, making it more geared toward problem solving. However, at that point in the course, I had stopped caring entirely. Maybe this is his first time teaching a class this large, and he wasn't prepared.

○ Student 16

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I did all the homework and asked questions. I would have went to office hours, but as the semester progressed, I felt less comfortable doing because the professor became condescending. By the end of the semester I had no desire to put any effort into this class.
- **Understanding & Appreciation:** It didn't.
- **Intellectual Growth:** It didn't.
- **Quality:** I'm very disappointed in the quality of teaching. When going through problems together on the board, the professor would explain things as if we were all statisticians. He rarely ever did

problems with the class that were from class worksheets, instead he would go online and find an article and make up a random problem. That would have been an interesting way to present course material if we did that at the end of a unit. He would do that the first day we started a new unit and then never go over how to solve worksheet problems. Then he'd randomly have days where we'd work on a worksheet on our own and he'd "float around to answer questions." That was a horrible idea because we have almost 150 students in the class...I never had a question answered. He was also often very insulting and condescending and fostered an environment that I did not feel comfortable in. I'm so glad this semester is over.

○ Student 17

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** Until about halfway through the year, we had 1-2 pop quizzes a week on any information from the entire year so I would have to review all of the material we had learned. Now our quizzes are announced but we still do not know what topics are going to be on them. We also had online homework, optional practice problems (essential to do well on quizzes), a writing assignment, and a midterm/final exam.
- **Understanding & Appreciation:** I enjoyed learning about how statistics is applicable in real life in our everyday actions. It helped me to appreciate the subject as more than just math, which I usually find to be time-consuming and rather boring.
- **Intellectual Growth:** It helped me to look at everyday statistics in the news/media/etc. with a more critical eye. I think these techniques will help me in real-life scenarios when I have to gather and summarize data, whether it be for a class paper or a job assignment.
- **Quality:** This class took a long time to get on track; from the beginning there was a disconnect between what the professor expected and what students were doing. The unannounced pop quizzes added chaos and stress to the class, yet the professor was extremely reluctant to hear us out or make any changes that we proposed until second semester after spring break. When he posted solutions online, there were so many typos that I could not understand how to correctly do the problems. Additionally, he has expected us how to use R Coding Software without giving us any explanation on how to use it. When going to his office hours to ask for help on this, he was rather condescending and unwilling to help. Overall, I think the class has gotten better throughout the semester but he has been extremely reluctant to make positive changes.

○ Student 18

- **Reason(s):** Other requirement; Interest in the course material; Need stats for grad school
- **Effort:** I reviewed my notes for at least 10 mins before each class, read from Naked Statistics, did the practice problems, and completed the Pearson homework.

- **Understanding & Appreciation:** I thought the examples that were used were really interesting and engaging.
- **Quality:** I personally really enjoyed the class. I am not very math inclined and I was able to do well in this class by putting in the effort. While I did not have a problem with Prof Cipolli's humor, I do know that other students found it to be insensitive and mean. I enjoyed the teaching style. I thought all the assignments were productive to our learning and thought it was great that the WA were based in other subjects so we could choose what interested us. In the surveys that we completed in class, I was surprised by some student responses that this class required too much work as most of us do not want to be statisticians. I would just like to respond that as a Junior here who has taken multiple intro level courses, this class asked nothing extreme. The standards quizzes were extremely fair and I don't think it is unfair to ask students to review their notes for these quizzes (I read over for 10 mins each time and I got 4s on all of them). I thought the idea of standards quizzes was great even though slightly terrifying at first. I can honestly say that I have a great understanding of what we learned in this course and I don't think this would be the case without these standards quizzes.
- o Student 19
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** In the beginning I did not try very hard until I realized that I would need to teach myself some of the material and do practice problems in order to understand anything and actually do well in the course. After that I started to put more effort into understanding the material. I also spend a considerable amount of time on the homework because it takes so long to get through all of the questions, especially because some of the homework questions include material that is never taught in class.
 - **Understanding & Appreciation:** This course did help me to understand probabilities better, and I do appreciate it more so because I have realized that statistics is harder than I first believed it to be. Overall though I did not enjoy this class.
 - **Intellectual Growth:** This course showed me how to teach myself and actually do practice problems in order to do well, which will help me later in school. Overall I do not feel that it furthered my education much because we did not do much actual analysis of real world problems where we could learn to use statistics in our everyday lives.
 - **Quality:** Professor Cipolli did not teach the material in a way that made it easier to understand and even over-taught sometimes, making the material more confusing than it needed to be. He should have spent more time on certain chapters and done more practice problems in class because I feel that was the best way for the class to learn. Much of his lectures taught me nothing.

- Student 20
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This course was extremely difficult for an intro level statistics course. I put in time studying before each class as there were often pop quizzes. Despite changing this to announced quizzes I am still required to study just as much if not more to prepare for each class.
 - **Understanding & Appreciation:** I honestly will never enjoy math but I can understand on a conceptual level that statistics is pertinent to almost every academic discourse and therefore extremely important.
 - **Intellectual Growth:** This course required that I relearn how to study for a formula based math course as it has been years since I have taken such a class.
 - **Quality:** Professor Cipolli was figuring this class out as he went. He is extremely approachable and easy to talk to, provided many resources in order to succeed. However, the workload was unrealistic if his goal was mastery. This was a consistent frustration for me as well as many other students in the course.
- Student 21
 - **Reason(s):** Elective outside major or minor
 - **Effort:** I worked really hard for this course and reviewed all course material before almost every class. I spent around 12 hours on the writing assignment.
 - **Understanding & Appreciation:** I now have a better understanding of statistics.
 - **Intellectual Growth:** Prior to this class, I hadn't taken a math class for a really long time, so this course helped me use skills that I hadn't used in a long time. I am also now more critical of the statistics that I read about in the news.
 - **Quality:** Prof Cipolli is intelligent about the subject matter. However, he is very condescending. One time when I went to his office hours, I realized I had an additional question that I wanted to ask. It took me about 20 seconds to formulate my question and in that time he thought it was appropriate to put his head down on the table, without explaining why he was doing so. While I understand that people get tired and/or have headaches, it is incredible rude to put your head down without explaining why you are doing so while a student is with you in office hours. PLEASE OMIT THIS PART WHEN IT IS PASSED ON TO PROF. CIPOLLI AS IT IDENTIFIES WHO I AM: I emailed Prof Cipolli asking questions about a writing assignment after I had asked him questions over email and in person during office hours. I emailed him because I was still having trouble understanding what he was saying. In response he said, "It is important that you read through the instructions – you are missing pieces that are explicitly offered through the prompt. Review the notes that I wrote out on your hard copy – I practically wrote the code for the uniform case, I'm

having trouble seeing how you wrote what you did with what I gave you yesterday." (direct quote from his email). For this writing assignment, it was my first time using the statistics software R, and I was having a lot of trouble understanding what to do. I spent several hours trying to figure things out on my own, but was having trouble understanding it. I don't think it is ever appropriate to give a student attitude for not understanding something, especially after I tried really hard to figure it out by myself. This is just one example of how he is condescending. In class he openly berated a student, without saying their name, for simplifying a fraction incorrectly. The student had done so on a test that they forgot to put their name on. After saying the student was stupid in front of the whole class, he asked if the student could come forward to pick up the test. Who on earth would want to admit it was them who made that mistake after their professor spent forever saying the student was stupid?!

○ Student 22

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I was really interested in the subject matter.
- **Effort:** I put a lot of effort into this course.
- **Understanding & Appreciation:** I like how he incorporated real-world relevance
- **Intellectual Growth:** it taught me to think critically.
- **Quality:** I liked his teaching style. The only thing I disagreed with was his grading of the standards.

○ Student 23

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a great deal of effort into this course.
- **Understanding & Appreciation:** It did not contribute to my understanding or appreciation for the course. It made me strongly dislike statistics.
- **Intellectual Growth:** It did not.
- **Quality:** Very condescending and arrogant in lectures. Cipolli did not make himself available to students. Not good at explaining material clearly or concisely. Uses convoluted and long-winded sentences in person and over email- as evident by the ridiculous amount long emails we would receive in succession (these emails were often passive aggressive in tone). Doesn't think students want to be challenged (he's said this more than once in response to expressed frustrations with the course). They do. They just want to feel that they are being challenged for the right reasons- that information is being given clearly, that the schedule is kept, that professors are making themselves available, and that jokes aren't being made at their expense. Even when I attended scheduled office hours I felt like I was seen as a nuisance and was given a hard time for being there more than once. One time Cipolli even groaned at me as I walked in the door. Guess what? I have things I'd rather

be doing too. Also, I would have fewer questions if his materials didn't have so many typos! I'm a pretty competent person and most of the learning that took place in the course was me teaching myself the material only to get confused by his wrong answer keys. The extra credit assignment, just as every survey he provided was just a tool for him to man-splain why he thought his way was right. This was made clear by the fact that minutes after sending my extra credit assignment critiquing next year's syllabus, before he could have had time to read it fully, I received one of his long-winded messages that appeared to be pre-written defending his decisions. He didn't actually take any of the criticism we gave to heart. I hope set forms are received differently. Professor Cipolli, I think you'll find Colgate students like to be challenged, but what they don't like is to be treated as lesser than. Respect us, make yourself available, answer questions- don't complain about office hours or make jokes at our expense. Also, know who you are teaching- you say the course is designed for students with varying experience but this was not my experience at all. It felt like you were weeding out non-math people.

○ Student 24

- **Reason(s):** Elective outside major or minor
- **Effort:** There were quizzes once a week, so it was my job to have an understanding of the material before I came to class everyday. Additionally, doing the extra practice problems he posted helped and the homework assignments that were do every couple weeks were very beneficial.
- **Understanding & Appreciation:** I thought this course did a great job giving me an understanding and appreciation for stats. Stats is extremely relevant in our world around us so to be able to apply some basic knowledge and formulas was extremely important.
- **Intellectual Growth:** I learned to value time management as well as asking for help when I needed it. R was a program he introduced to our class that I was not familiar with and found extremely challenging. Therefore, it was imperative I swallow my pride and make time to see him regularly to ask questions and learn how to use him as a resource/ for help. I also learned time management skills because I had to make sure to put some time aside each night to study the material instead of waiting until the last minute until it all piled up.
- **Quality:** I really enjoyed this Professor, I thought he did a great job entertaining his students and making this course very applicable to our lives. Two thumbs up

○ Student 25

- **Reason(s):** Major or minor requirement
- **Effort:** I spent a good amount of time and effort reviewing powerpoint slides and looking over worksheets before every standards quiz that effectively helped my grade.
- **Understanding & Appreciation:** I now have a basic understanding of how to analyze statistics

and how some statistics are used in my everyday life.

- **Intellectual Growth:** The standards quizzes helped me stay prepared for class regularly prompting me to review my material before other classes as well.
- **Quality:** I felt that I learned a lot from this course and discovered a new way of learning through the standards quizzes. All the required material I felt was well explained and easy to understand under these teaching methods.

○ Student 26

- **Reason(s):** Interest in the course material
- **Effort:** I put my best effort into learning the material as best I can in order to achieve the best grade I can.
- **Understanding & Appreciation:** This course gave me a solid base of understanding to the bottom layer of statistics.
- **Intellectual Growth:** This course taught me how to learn material in a way that lasts a long time. Instead of cramming the night before, and forgetting the material ten minutes after the assessment, I actually learned the material and gained a knowledge for statistics, thanks to Professor Cipolli.
- **Quality:** Professor Cipolli had a lot on his hands this semester with a 150 student classroom. He did a great job making a large lecture feel like a small class. He was able to get student participation, and was constantly available for office hours. I had a great experience with Professor Cipolli.

○ Student 27

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put in a nightly effort into this course. Whether I was studying for a quiz or completing a homework assignment I was always working on statistics.
- **Understanding & Appreciation:** I have a greater appreciation for statistics from taking the course. I have a much stronger understanding of statistics and it is interesting to see how often statistics are used in everyday life.
- **Intellectual Growth:** The course allowed me to think about things from a statistical standpoint. As a sports fan it is very interesting to see how statistics has such an impact on the sports world.
- **Quality:** I enjoyed Professor Cipolli's class. He is a good Professor who is a fair grader and despite the large amount of students in the class he always got our assignments graded as soon as he could. I think he connects with his students very well and is open for suggestion which I like.

○ Student 28

- **Reason(s):** Elective within major or minor
- **Effort:** I put a lot of effort into this course. As it is part of my Economics major, I tried with my best effort.

- **Understanding & Appreciation:** This course helped me make inferences regarding statistics. What was cool about this course was that it was real-world applicable.
 - **Intellectual Growth:** I will be able to use what I learned in this class in the real world.
 - **Quality:** The initial grading system of Professor Cipolli was extremely difficult. His "Standards" quizzes were near impossible to keep up with the course and not fair at all for the students.
- o Student 29
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I put a decent amount of effort into this course, while I certainly spend time completing homework and practice problems, the amount of work was never overwhelming.
 - **Understanding & Appreciation:** As it is an introduction class, I had no prior learning of statistics before taking this class, therefore this class did give me new understanding in the course subject. However, some of the material was somewhat dry and therefore didn't really lead me to appreciate the subject.
 - **Intellectual Growth:** Being in a lecture-style class, I was required to listen in class and often also attempt to understand new concepts outside of class. I think this contributed to my own overall intellectual growth.
 - **Quality:** I thought Professor Cipolli was a good professor, especially since teaching such a large lecture must be difficult and at times frustrating. I thought the concept of standards to be somewhat confusing, and preferred the way in which he gave us once-a-week quizzes towards the end of the semester. I also wish he had either stuck to teaching through power points or simply on the blackboard, as the combination of the two led me to sometimes be confused when reading the powerpoints individually.
 - o Student 30
 - **Reason(s):** Major or minor requirement
 - **Effort:** Above average
 - **Understanding & Appreciation:** Math skills got better
 - **Intellectual Growth:** Realized some teachers grade unfairly
 - **Quality:** Decent teaching. Grading style is out of whack though
 - o Student 31
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put so much effort into this class! I was constantly looking over my notes and going back through power points. I always did the hw and practice sheets. I had to basically teach myself EVERYTHING because his lectures were so confusing and unhelpful. I had to put in way more effort than I needed to because he was such a bad teacher. I went to office hours a lot to ask him

questions and to go over questions I got wrong. I always got the impression that I was bothering him when I asked him questions because he always rushed me and made me feel small.

- **Understanding & Appreciation:** I feel as though the course itself didn't help me at all because I did most of my learning on my own time. I learned more about stat concepts that I will actually need to use in my research methods class for psych. Overall, a lot of unnecessary stress for a class that wasn't that helpful.
- **Intellectual Growth:** This class was absolutely infuriating because unless you are some wizard who never makes mistakes you can not do well. Also, if you aren't one of his favorites he will not respect you. This course contributed to my intellectual growth in that it had made me really cynical regarding the motivations of my professors and had really butchered my confidence.
- **Quality:** I hate professor Cipolli. I think he is cocky and condescending. He always claims that he has our best interest in mind, but then does nothing to show it. He is SO unwilling to listen to us and would always make us feel bad for being stressed out. He belittled us CONSTANTLY and then blamed us for feeling belittled. I think he is a very smart guy who know a lot about stats, which is great, but he taught us as if we were supposed to know everything already. He often made really demeaning jokes to our class and would taunt us for feeling uncomfortable speaking up. He told us to email him about concerns or to talk about how things could be different in the class, but he would then put these responses on the board so that he could rip them apart in front of everybody. When things like this were brought to his attention he had tons of excuses prepared. He is filled with excuses and claims that he knows better than all of us. I think it is really telling when an entire 150 class is stressed and are encouraged to talk to their professor about it but are then very harshly shut down. I don't feel respected by this man and I don't feel like he wanted me to succeed. I acknowledge that he gave us extra credit, believes his standards system works, answered questions in class, and even gave us surveys to comment on his teaching. All of these things were great! It's his responses to all of these things that made me feel so uncomfortable in class. He felt as though since he did all of these things that we should be kissing his feet for being so generous. I never felt good about the "nice" things he did for us because they were followed by him mocking us and making us feel guilty for being overwhelmed. Based on his syllabus for next year it is clear to me that he knows he was unorganized and unfair yet he would NEVER admit that in class because apparently everything is our fault. I would absolutely never recommend that anyone take a class with him. I think he is a mean person who is totally unwilling to accept the opinions of other people. I talked to my therapist about him constantly. A student should never have to feel this way about a professor.

o Student 32

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** At the beginning of the semester Professor Cipolli gave pop quizzes frequently, so I spent a half hour a day reviewing the course material. After Professor Cipolli promised to only give quizzes on Wednesdays, I stopped studying every night and focused only on studying a few days before the quiz. I actually started improving my quiz grades and understood the material better because I wasn't anxious about the possibility of a pop quiz.
 - **Understanding & Appreciation:** Professor Cipolli pulled all of our statistic problems from real world situations, so it was easy to see how statistics applies in the real world. However, even after taking this course I don't know how often I'll use the knowledge I now have in my everyday life. I was expecting this class to help me get more from reading scientific articles/essays, but it hasn't.
 - **Intellectual Growth:** The writing assignments Professor Cipolli assigns made me appreciate statistics more than anything else in the course. I really enjoyed writing about superiority illusion, and I'm glad I now have the skillset to write a paper in a scientific format.
 - **Quality:** Professor Cipolli is really great at explaining questions on the board and replying to students questions in class and via email. He could improve at handling criticism. He sends out surveys throughout the semester to check in on students and see how they're learning and how the class can improve. He made significant changes to the course for the benefit of students, i.e. quizzes are weekly rather than spontaneous. However, if someone sent an email he disagreed with, he would mock said email in class (omitting the students name of course). I'm sure he received a lot of obnoxious emails, but it's never appropriate to caustically deal with a student's legitimate concerns in front of others.
- o Student 33
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I attended office hours and tutoring consistently. I also used outside resources like Khan Academy for further assistance in helping understand the material being learned and for extra practice.
 - **Understanding & Appreciation:** I have never taken a statistics class before this one, neither in middle or high school. This class was definitely a challenge but it helped me appreciate solving real world problems using statistics. I, at first disliked the class, it seemed too difficult for me. I felt way behind compared to other students, but attending office hours and tutoring helped greatly.
 - **Intellectual Growth:** I learned how to statistically analyze data and how to solve problems I thought were too difficult for me to solve.
 - **Quality:** Weaknesses were not getting the class to participate much or show up. There was one instance where groups were made to work on a standard, which is when we were learning about

probability. Besides that, no one really participated besides just 3-5 people. In regards to students not showing up, I believe there could have been a way to ensure everyone attended class. On days there were not any quizzes a good amount of students did not even bother showing up to class – which is problematic because they the ones who are falling behind with the material and result in tons of people showing up to one office hours meeting.

○ Student 34

- **Reason(s):** Major or minor requirement
- **Effort:** Did a pretty decent amount of studying
- **Understanding & Appreciation:** Learned a good amount about statistics
- **Intellectual Growth:** Lots of real world statistics problems that I found interesting
- **Quality:** Really good overall, satisfied

○ Student 35

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** A good amount
- **Understanding & Appreciation:** It did not, I hated math before I hate it still now
- **Intellectual Growth:** N/A
- **Quality:** He is a great guy and tries his best to create the best course for the students at Colgate. It is difficult when dealing with students who hate math and aren't good at it to make a course they would like (like me). But he is a great guy and was always available through email and extensive office hours.

○ Student 36

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course. However, Professor's availability and ability to explain concepts well allowed my efforts to show great results.
- **Understanding & Appreciation:** I have gained a much better understanding of the world of statistics and I have come to appreciate how helpful it can be.
- **Intellectual Growth:** I learned that statistics are everywhere and understanding these statistics can lead to a better understanding of many different topics.
- **Quality:** I think there was a very high quality of teaching in this course. Professor Cipolli would go out of his way to make sure that students understood topics and constantly encouraged participation. He was very accessible as he held office hours much more frequently than what was required of him and he was always reachable by email. He sincerely cared about the performance and happiness of his students and I would be happy to take another one of his classes.

○ Student 37

- **Reason(s):** Exploration of possible major or minor
 - **Effort:** I had previously taking the class in high school, so not too much
 - **Understanding & Appreciation:** I gained a deeper understanding of statistics, and how to analyze stats in the real world
 - **Intellectual Growth:** I was able to manage my time wisely when it came to the homework, and the writing assignment was helpful for conducting a scientific experiment.
 - **Quality:** Cipolli was a good professor, there were some confusing aspects of the grading system, but other than that I found the course to be very straightforward and informative.
- Student 38
- **Reason(s):** Other requirement
 - **Effort:** A good amount of effort on the problem sets and studying on a weekly basis.
 - **Understanding & Appreciation:** It helped my develop knowledge in statistic and be able to better understand how to interpret statistics.
 - **Intellectual Growth:** Well this course has helped teach me to always continually study, because things are cumulative, and you never know when you will need to know something you previously learned.
 - **Quality:** The professor is very knowledgable and made class as interesting as he could given the subject, but he needs to work on his one on one skills. I went to his office for help and he was very rude and condescending when I didn't understand one thing. The whole point in me going to his office hours was to learn the thing I didn't know, but he made that difficult and made me feel like an idiot.
- Student 39
- **Reason(s):** Major or minor requirement
 - **Effort:** I didn't put in a lot of effort in the beginning and really struggled. Now that I got my act together I am doing much better.
 - **Understanding & Appreciation:** I appreciate the practical applications of statistics in society. Professor Cipolli placed an emphasis on practicality and it helped me enjoy the class much more.
 - **Intellectual Growth:** It made me realize that I needed to focus on each little intricate step of my learning and not take any days off. I appreciate statistics as a form of math and think it is going to be a big area of study for what is to come in this world.
 - **Quality:** Professor Cipolli made an effort that was above and beyond to reach out to his students, coming from a student that slacked off for the most part and wishes he could have been more diligent with his work. He is a great teacher and challenges you to be better every day.
- Student 40

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Online homework, quizzes, and practice sheets
 - **Understanding & Appreciation:** I did not learn much about the topic of statistics from this course.
 - **Intellectual Growth:** It showed me how to think critically about the certain topics that included probability and stats?
 - **Quality:** This instructor seemed completely unphased and brought up no concern for the welfare of students after the incident of Sunday, April 30 that portrayed complete racial profiling and biases from the university. No extensions or thoughts were given in support of the very few students of color in this large stats class of 150.
- Student 41
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this course. In the beginning of the semester when we had pop quizzes, you always had to be on top of the material every day. Towards the end, when we did bigger cumulative quizzes every week, I had to put a lot of time and effort into studying all the material. It took a lot of time because you had to make sure you understood all of the material.
 - **Understanding & Appreciation:** This course didn't really contribute to my appreciation of the course subject. I took this course because it is a requirement for Economics major. Obviously, I am grateful that I took this course because I know that I will need a basic understanding of Stats in the future.
 - **Intellectual Growth:** I think that along the way, I will have to use Statistics in future classes or careers. Stats gives you a base of the mathematical aspect of business and allows me to be a more dynamic student.
 - **Quality:** I think that, for the class size, Professor Cipolii did a good job. I think that maybe in the future, Colgate should consider making Intro to Stats a smaller sized class, for it is really hard to have math classes be lectures. I don't think Professor Cipolli is to blame, but I think class was often hard to pay attention in because math problems were presented through power point slides. I think this hinders learning because we weren't really able to work through / fully understand concepts. I also think the standards situation, specifically not taking the students best score, is kind of absurd. It shows that Professor Cipolli doesn't really truly care about the success of his students, for if he did he would allow students to take the best score. I understand the reasoning behind not, but maybe at the end of the course he should take the best score (so don't tell students you are taking the best score until after all the standards).
 - Student 42

- **Reason(s):** Major or minor requirement
 - **Effort:** I finished homework and practice problems in time and utilized them as reviewing materials. I reached out to the instructor when I needed help.
- Student 43
- **Reason(s):** Interest in the course material
 - **Effort:** I would think this class was the most challenging class that I took for this semester.
 - **Understanding & Appreciation:** I learned about many concepts such as the Central Limit Theorem.
 - **Intellectual Growth:** I was able to take a math course even though I was busy with other assignments and commitments.
 - **Quality:** As a student I felt that I could connect with this professor more than others. He is younger and understands where many students are coming from which is important.
- Student 44
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** Did homework, came to class, took the quizzes and studied for the tests. I put an above amount of effort into the course considering it is a 100 level.
 - **Understanding & Appreciation:** I know more about stats and its applications in the real world.
 - **Intellectual Growth:** I know how stats is applied in the real world, for example in election polling data.
 - **Quality:** He was ok. Professor Cipolli clearly cares about the students and definitely cares a lot about statistics. I think he came on a little too strong in the beginning of the semester, he can be sarcastic as well. Towards the end of the semester he got better at teaching/communicating in general. I do not think the class was all that bad, but the tone at the beginning of the semester, specifically in terms of the standards and confusion surrounding their grading, caused panic and a lot of disgruntlement among the students. Also for a lot of the subjects I had to go into tutoring or have one of my statistically inclined friends explain the topic to me because the powerpoints were overly complicated for such simple topics. With that being said, I definitely know more about statistics now than I did in the beginning of the semester. Also, the syllabus for next semester is much improved and more clear. I think next semester will go a lot more smoothly in terms of students liking the course and learning the material.
- Student 45
- **Reason(s):** Major or minor requirement
 - **Effort:** I put a great deal of effort into this course, including everything from the homework to the practice problems. I think the professor did a great job in giving us materials to work with that

allowed you to do well in class, as long as you put the effort in.

- **Understanding & Appreciation:** This course fav me a thorough introduction to statistics and it was all taught in a way that was easy to understand and hence made it even easier to get a good grasp of the subject
- **Intellectual Growth:** I think this course helped me to think more critically in classes such as these and make me understand that you have to put effort in to do well.
- **Quality:** I believe that this professor was one of the most admirable that I have ever had. It is not easy to teach a class of 150 students, and I believe this professor did it in a way that was effective, meaningful, and truly showed his desire for us to learn. I believe he did an amazing job when it came to giving us material to prepare for upcoming assignments, as well as making sure that he was available and accessible when we needed him. I understand that his course may be very different than some others, but he truly encouraged me to put effort into this class and work towards learning, rather than just a grade. Honestly, I would not have changed one thing about how he taught each topic in this class, and although many other students may have felt this class had unfair grading procedures and whatever else, I believe that this professor really helped everyone learn.

o Student 46

- **Reason(s):** Exploration of possible major or minor; Core or Areas of Inquiry (distribution) requirement
- **Effort:** I had to put a lot of effort into this course, more so than my other classes this semester, just to fulfill a prerequisite. I had to be prepared to study for a pop quiz for every single class period on any part of the material in the course.
- **Understanding & Appreciation:** This course did not really contribute to my appreciation of the course subject as I only took it in order to fulfill requirements. I did not enjoy taking this course. My understanding has increased as I do believe I learned. However, I believe that the way in which we were graded (pop quizzes once or twice per week) did not help my understanding in the long run. I felt that I had to just memorize material in a certain amount of time for a potential graded exam, rather than gain a real understanding of material.
- **Intellectual Growth:** This course helped me in terms of time management and planning out a workload over a broad amount of time. It was my first every experience in a course larger than 30-40 students, so it helped me in terms of really learning the material on my own.
- **Quality:** The professor often was often careless in a lot of instructions on exams or assignments, with many issues in explaining what he wanted. I felt that the vast majority of the material was left for me to learn on my own outside of class (not in a good way). I did not feel like I got very much out of the lectures. This course really needs to be taught in smaller sections, rather than

one 150+ student lecture. The professor's guidelines for grading were never clear throughout the entire semester, as students were still asking him about how he graded the standard quizzes even in the last week of classes. The professor was much more effective in conveying material in a smaller setting (i.e. office hours) than in the large lecture.

○ Student 47

- **Reason(s):** Major or minor requirement
- **Effort:** I put a considerable amount of effort into this course. I reviewed class material frequently and completed practice problems before quizzes and the midterm. I also spent one week working on our writing assignment. In addition, I went to office hours about 4 or 5 times throughout the semester if I had questions that I felt couldn't be answered by my peers.
- **Understanding & Appreciation:** I needed to take stat as a pre-req for another class. I'm disappointed because I felt like we spent a lot of time on probability and definitions of different types of experiments. While spending extra time on these subjects was helpful at the time, I feel like I might be unprepared for the other courses I want to take. We did not learn chi squared tests and we skipped another chapter. While I appreciate spending extra time on probability because it was something I struggled with, I wish we had spent less time on experimental design and definitions.
- **Intellectual Growth:** I think statistics are useful in almost every subject. I do think that the concepts I learned in this class will help me in other academic areas as well as increase my understanding of current events.
- **Quality:** I think Professor Cipolli puts a lot of effort into this course. We did not like taking quizzes with i-clickers so now we get to take hand-written quizzes. While this is easier for students, it makes grading more time consuming for the professor. I do think this change was beneficial though. He also tries to make class interesting with the examples he uses. My biggest issue with class, and I feel many other students will voice the same opinion, was standards. In the beginning, standards were pop quizzes that could be on any subject matter we had learned in the semester. I think pop quizzes just do not work in a class this size. It's difficult to know where students actually are at with the concepts we learn in class. Homework grades are not indicative of our understanding, as a lot of the homework problems were multiple choice and I will admit I guessed on a lot of them when I was too lazy to learn the material. He changed them to announced quizzes where we still would not know what material would be on them. My biggest problem with standards (which prof Cipolli has already heard) is that he would take our most recent grade rather than our best grade. I found it unfair that a short quiz could change your grade so dramatically if you made a silly mistake (grade drops from 100 to 89 if you get one standard below 100). He claims we did not need to review all material ever night, but there really is not other way to guarantee yourself a 4 on every

standard unless you do this.

- Student 48
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a great deal of effort into this course as I studied before every class in case of possible pop quizzes. I made sure to complete the assigned homework problems as well.
 - **Understanding & Appreciation:** I have gained great understanding from constantly studying and reviewing which you are forced to do because of the pop quiz system.
 - **Intellectual Growth:** This course has taught me the value of consistently learning rather than cramming.
 - **Quality:** I feel like the teaching is of a very high quality and that good grades in the course are achievable if you put in the work.
- Student 49
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put significant effort into this class by reviewing class notes and doing practice problems before class (usually in preparation for standard quizzes).
 - **Understanding & Appreciation:** Not only did I learn the material, but from the first day Professor Cipolli made a clear effort to relate the material to relevant issues. As an International Relations major this course has been helpful in my other classes, particularly political science classes that often use statistics and polls in elections and public opinion.
 - **Intellectual Growth:** I have pretty much all avoided math classes in my 3 years here. Statistics is a particularly useful topic, but overall I think it was a beneficial course in that I had to think differently than my other courses.
 - **Quality:** Professor Cipolli has put more energy and effort into ensuring that his course can be the best version for his students than probably any professor I've had at Colgate. He holds office hours pretty much all the time, constantly asks for feedback to improve his current and future course, and responds to student emails constantly. Large lectures such as this are uncommon at Colgate and I think they can be difficult; I know that I tend to learn better in smaller classes. I can imagine Professor Cipolli is particularly good at teaching in smaller classes. That being said his lectures were great and he always included funny and relevant examples. From what I've heard and expected prior to taking the course, students tend to take statistics as an easy A. Professor Cipolli really wants his students to understand the material and does not want this class to be an easy A, but rather makes students put in the work. I can imagine some students were frustrated by this, but I rarely learn a lot from my easy A classes.
- Student 50

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I made sure to attend class as well as do the homework assignments on time as well as the worksheets for each chapter.
 - **Understanding & Appreciation:** This course made me have to use my math skills more conceptually than I have in the past.
 - **Intellectual Growth:** This course caused me to take more time out of my schedule to sit down and do practice problems.
 - **Quality:** Although I do believe that Professor Cipolli has the best interest of the student one thing that I was frustrating was his many lack of errors and careless mistakes on worksheet packets as well as his powerpoints.
- o Student 51
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** There was homework for every chapter that I had to learn to do, and a quiz every week that could be on literally anything we had learned, so I had to go back and study things that were covered months before.
 - **Understanding & Appreciation:** I understand how to use several formulas, but I do not know their context.
 - **Intellectual Growth:** I can understand how statistics are used in the news and advertising.
 - **Quality:** Professor Cipolli was not very effective at teaching in class. In order to study for a quiz or do homework, I had to go back to his powerpoints and teach myself the material. Some of his policies disincentivized students from attending class at sometimes, and once he announced which days the quizzes would be, many students I know decided that it was not worth coming to class at all because they would have to learn it later anyway. He asked us to use R for some assignments, and no one in the class had any idea what it was, much less how to use it. He was willing to adapt and learn, but often that only meant making the class easier rather than more clear and understandable.
 - o Student 52
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I am a senior and thought I had completed my NASC/MATH requirements because had already taken three natural sciences, but did not know that they couldn't be in the same discipline. So, one didn't count, and I needed to make up for it with a math class.
 - **Effort:** I showed up to almost every class period and completed all homework. I studied for over an hour for each quiz.
 - **Understanding & Appreciation:** I had never taken a statistics class before, so I now can appreciate the way it applies to so many societal issues.

- **Intellectual Growth:** I learned the ways that statistics applies to other subjects, and the course certainly helped improve my analytical skills.
- **Quality:** Professor Cipolli was very available to answer questions over email. He also was open to all questions in class. Where Professor Cipolli could stand to improve is during his general tone towards his students. Where Professor Cipolli could stand to improve is during his general tone towards his students. For example, announcing how poorly everyone did on a recent "standard quiz," followed by "I don't know what is going on; up until now this has literally only been low high school level math" is not helpful or productive, in fact, it is rather condescending (whether intentional or not). Furthermore, though I can appreciate that the concept behind the "Standards Quiz" system is to force cumulative learning, I found it quite unfair that if you did worse on a standard later in the semester that you did well on earlier, your better score gets replaced by your worse one. I understand the logic, but I didn't find it effective. Additionally, the fact that each Standard Quiz was technically cumulative made it feel like you had to study all the material from the entire course before each one. Perhaps for someone more naturally mathematical with a very good memory, this wasn't a problem. For me, it was. In general, I found the grading system very confusing. I tried so hard in this class and had a terrible average on "pearson" the entire time- yet I had multiple friends who had grades 10/20/30 points higher than me who literally missed multiple quizzes and barely attended class. I did not understand the grading system at all. I am a senior, and felt like I was on the cusp of failing and therefore not graduating because of it the entire semester, despite working extremely hard in this course.
- o Student 53
 - **Reason(s):** Major or minor requirement
 - **Effort:** Throughout this course, I completed all recommended readings even in cases where they were not essential to our comprehension of the subject matter. All homework was done with dedication, accuracy and to the best of my ability overall. When studying for exams, I contributed a great deal of time and effort into my understanding, worked with classmates and ensured that I had a firm grasp of all required concepts. Office hours were not all that frequent for me, primarily in cases when I picked up papers and quizzes or had a very specific question.
 - **Understanding & Appreciation:** I enjoyed any real world applications that Professor Cipolli was able to bring to the table, and in these cases was able to earn a greater appreciation for the impact statistics has on factors in the economy, politics and other social complexities in areas across the United States.
 - **Intellectual Growth:** Given the intensified course load for the end of the semester, I can reflect on this class as a means for me to amplify my learning on topics that I had known little about prior to taking statistics – such as coding. Whereas this wasn't relevant in many cases throughout the

semester, I found that it can be a great resource and contributes to my learning in other avenues outside of the class.

- **Quality:** I am a big fan of Professor Cipolli, as he has a highly prepared, enjoyable and well-humored way of going about his teaching of this course. Each step of the way we were engaged by methods of connecting topics to the real world and using examples to explain dense material. Unfortunately we spent a great deal of time attempting to communicate standards for grading in the course, but I believe in the syllabus Professor Cipolli has created for next semester that he has corrected the issues originally voiced by the students.

○ Student 54

- **Reason(s):** Exploration of possible major or minor
- **Effort:** I took AP stats last year so I felt as though I would feel somewhat prepared for the new material, however I found this class to be challenging and I had to put a lot more effort in than I thought I would. Even though this is not a bad thing, I found it difficult to do well even though I already had previous knowledge of the material.
- **Understanding & Appreciation:** My appreciation for statistics somewhat decreased as it was fairly high in high school, but the way we went about learning the material was confusing and frustrating
- **Intellectual Growth:** My intellectual growth was stimulated and this challenging course improved my work ethic because I had to work hard and keep up with the material on a daily basis
- **Quality:** I think considering the class size and since Cipolli was new to teaching, he did a fairly good job trying to figure out how to best serve the class. I think students were frustrated because this course required them to really pay attention and come to class every day, which they should be doing so it's not fair to blame this on the professor. One weakness I think was the confusion I felt during class when learning when I came to every class and tried to pay attention. I felt lost numerous times. I was able to do well but it was because I had to teach myself a lot of the material on my own. Strengths come in the fact that Cipolli was extremely funny, nice and the effort he put into this class was evident

○ Student 55

- **Reason(s):** Other requirement
- **Effort:** Several hours a week spent studying for standards or doing homework
- **Understanding & Appreciation:** I now have a much better understanding of statistical calculations and methods
- **Intellectual Growth:** This course will help me in understanding polling and sampling in many of my other science courses

- **Quality:** The professor was always available to help and had very clear standards for class
- Student 56
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I have put a lot of effort into this class. I work a lot on long homework assignments, I go to his office hours when confused, and I study a lot for regular (often pop) quizzes we have had in this class.
 - **Understanding & Appreciation:** I am definitely a math person so this course has enhanced my appreciation for math in general and more specifically, statistics.
 - **Intellectual Growth:** I think i have grown as a student in my independence and perseverance in trying to get through tricky academic situations on my own. I have been forced to step out of my comfort zone, specifically by using computer programming (R studio).
 - **Quality:** I think my opinion for the teaching of this course varies from day to day. Some days, Professor is extremely helpful and approachable, and other days not as much. I enjoy his humor but I can see how some people begin to take it personally. I do not think of him as a bad professor and I have enjoyed this course, but some of his syllabus decisions are confusing and often your questions are dismissed.
- Student 57
 - **Reason(s):** Major or minor requirement
 - **Effort:** Due to the nature of the course (ie. timely homework assignments), I had to expend little effort in preparation for quizzes/exams because I found material to be highly cumulative.
 - **Understanding & Appreciation:** I have a solid basis knowledge regarding statistical concepts that I have already begun to see implemented in my Microeconomics course.
 - **Intellectual Growth:** Professor Cipolli based a majority of the class around real-life polls and data, allowing for me to see the true reasoning behind why we were learning a topic.
 - **Quality:** Professor Cipolli is one of the most genuine professors I have met at Colgate, and I feel this reflects in his course structure. He allows ample opportunities to recover from less than stellar grades and is always available to help despite having 150+ students in the class. He was constantly polling the class regarding preferences on quiz formatting, office hours, and many other components so that he could tailor the class to suit the overall class's needs in the most efficient way possible. I truly enjoyed my experience in his class, and would enroll in another taught by him.
- Student 58
 - **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a decent amount of effort in. I found that tests and quizzes had me studying quite a lot.

- **Understanding & Appreciation:** I gained an appreciation for the course subject due to its practicality in the real world.
 - **Intellectual Growth:** It increased my critical thinking.
 - **Quality:** I think that the professor was extremely accessible and open to contribution from the class on a lot of aspects such as quiz dates and practice problem assistance, which was great.
- Student 59
- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This class required a lot of effort in terms of everyday preparation. Initially, the class was structured through giving pop quizzes twice a week. What that meant was that we constantly had to be reviewing out material for the possibility of a quiz. This turned out to be frustrating because of the amount of time necessary that had to also be used towards other classes. Homeworks were manageable, and a switch to tests every Wednesday helped plan out studying, but overall the class was very time consuming and unpredictable.
 - **Understanding & Appreciation:** I had never taken a Stats class before, therefore, I was able to learn about the importance and prevalence of stats in every day life.
 - **Intellectual Growth:** Stats is extremely important to learn about biases within different polls and charts and data provided by the media for example. It makes me think critically about the actual source of information and particular motives they have about presenting data.
 - **Quality:** Professor Cipolli did what he could for a class of over 150 students which has to be difficult, especially since students at Colgate are used to small classes and direct engagement with their teachers. His power points and practice problems were useful, but I found myself teaching the material to myself outside of class. So I had the resources, but didn't feel adequately taught in class. He, however, did set it up for success I believe as long as we put in the effort.
- Student 60
- **Reason(s):** Other requirement; Pre-med/ graduate school requirement
 - **Effort:** I have put some effort into this course and have enjoyed some of the material I think the beginning of the semester was very rough for my understanding of the material
 - **Understanding & Appreciation:** I think stats is interesting when we are actually analyzing real data. I hate the probability unit and still don't understand it.
 - **Intellectual Growth:** I think it has helped me in some other classes that use statistics to understand where formulas are coming from.
 - **Quality:** I think Professor Cipolli is a good professor and he genuinely wants students to learn, but he does seem to put students down sometimes when he is frustrated and doesn't seem to see that the majority of this class are students that are not going to be math majors or are even good at

math.

○ Student 61

- **Reason(s):** Major or minor requirement
- **Effort:** I put in the necessary effort to do well in this class. I would pay attention in class, do the homework, and study well for the tests.
- **Understanding & Appreciation:** I have a better understanding of the basic ideas behind statistics. I am able to better appreciate how much stats is a part of day to day life.
- **Intellectual Growth:** I had to learn to study and look over my notes consistently because of the constant chance for a pop quiz. Since this was such a big class I learned to be more independent with my studies and make sure to reach out for help, either from the teacher or classmates, when needed.
- **Quality:** I think the professor is clearly very smart and knows a lot about what he was teaching us. He was always open to critique from the students on how he did his teaching. His standards for the class were confusing at the beginning of the semester but it got easier to understand what he wanted from us once the semester went on.

○ Student 62

- **Reason(s):** Major or minor requirement
- **Effort:** I did the homeworks and took the tests.
- **Understanding & Appreciation:** It didn't.
- **Intellectual Growth:** It wasn't.
- **Quality:** Made me pay \$105 for an online homework subscription then \$50 for an iclicker that was barely used and a textbook that was never needed. Seemed like a good guy who is organized and motivated, but grading was unclear and made the course much harder and more confusing than it had to be. I wouldn't be as upset if I still had the over \$150 in my pocket, and there were no standards quizzes or quizzes with better grading.

○ Student 63

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I worked to complete the homework assignments and be prepared for the quizzes.
- **Understanding & Appreciation:** Statistics is an important discipline, but this course really did not make me feel that way. The course really did not help me to appreciate the subject matter.
- **Intellectual Growth:** The instructor was good at relating statistics concepts to the outside world.
- **Quality:** The quality of teaching was fine, though it seemed class members were frustrated with the instructor during every class. I don't think we accomplished as much as we could have, and a lot of the work was tedious, but he certainly cares about his students and tries for us, so that is

noted.

- Student 64
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** decent
 - **Understanding & Appreciation:** it made me think in a way that i wasn't used to.
 - **Intellectual Growth:** numbers tell a lot more about society than i previously thought.
 - **Quality:** quality of teaching was good.
- Student 65
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a good amount of effort into this course, with weekly or daily quizzes and really long hw assignments it took up a lot of my academics.
 - **Understanding & Appreciation:** I am not a very big math person so it did not make me appreciate stats. However, it was sometimes cool to read some of the statistics out there and know how to get those answers.
 - **Intellectual Growth:** This course challenged me to learn stuff outside the classroom and teach myself skills. A lecture hall of 150 students does not play to my strengths and I was not able to learn well during class.
 - **Quality:** Professor Cipolli was an interesting teacher, Occasionally very unfair and rude to his students but also listened to criticism well and tried to change that. He taught a 150 person class which must be hard but he went very fast sometimes and it was hard to understand.
- Student 66
 - **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** 6/10. Slightly more effort than the average collegiate course
 - **Understanding & Appreciation:** In all honestly I barney even gained the least bit of statistical knowlandge. We mostly worked off common sense
 - **Intellectual Growth:** It added some aspect of critical thinking, but nothing I could not have gotten from a different mathematics class.
 - **Quality:** Poor!! I like Cipolli as a person, he seems like a really nice guy. I really hated the way this class was taught though. From the power points to the clicker questions to th Pearson homework i HATED this class. probably my least favorite class i've taken, definitely the worst class I have taken for my major. I would give this class an honest 2.9/10.
- Student 67
 - **Reason(s):** Major or minor requirement; Interest in the course material

- **Effort:** Outside of class I put a good amount of effort into learning the course material. I learn better in smaller classroom settings, and because this class was so large, I felt it hard to focus and thus would reteach myself material after class.
 - **Understanding & Appreciation:** Professor Cipolli did a good job explaining the material and was very organized. I think questions and examples are one of the best ways to learn this specific subject material, but again, in such a large group such as this class, most students did not feel comfortable asking questions, and I think that may have hindered everyone's learning.
 - **Intellectual Growth:** This course has taught me how to teach myself things out of the classroom, and also how to be a more organized and driven student.
 - **Quality:** Professor Cipolli has very good intentions and is very organized and detail oriented. He gave us "standard" quizzes which were random pop quizzes on the subject matter which most students complained about, but I thought these were effective because they forced students to be keeping up with course material. Sometimes he can be unclear as to what he wants, such as when he assigned writing assignments in which the rubric was very vague and thus most people got a bad grade because no one knew exactly what he wanted. He also made us use the program R, which is a coding program used to generate statistics and graphs. I think this is a useful tool for the course, however, we never got any direct instruction from Professor Cipolli on how to use it, and he would get very fed up when people would come to office hours asking him to explain R. I think if he wants to use this program, he needs to dedicate at least 2 classes to learning how to do it because although it is not coding and computer science directly, it is very close and is something many students just have no idea how to go about. He posted a sheet on R with explanations, but I have read that over multiple times and was still very confused.
- o Student 68
 - **Reason(s):** Other requirement
 - **Effort:** I went to office hours where I had to wait 20 minutes to ask a question and then felt patronized once I actually got to speak to the professor. I always completed the homework assignments on time with the formula sheets, using "view an example" and my class notes. I would work on the worksheets he would hand out in class and review the solutions of the past standards. My own effort is the only reason I was able to pass this course. This was a class where everyone had to go home and reteach themselves.
 - **Understanding & Appreciation:** It didn't.
 - **Intellectual Growth:** It showed me how important reviewing and relearning material is in a math class. Nothing beyond that!
 - **Quality:** I am so disappointed with the way this professor thinks he can treat students. He's young

so I guess he compares us to how he remembers himself just a few years ago, but it is completely uncalled for. He thinks he is being funny, but he is always just condescending and rude. His emails are insensitive and I often heard people complain about how uncomfortable they were with him as a professor. I did not appreciate the quality of teaching at all and would never recommend taking a course with this professor to any other student on this campus.

○ Student 69

- **Reason(s):** Elective outside major or minor; Interest in the course material
- **Effort:** I put more effort into the course than I was expecting. However, my expectations were that this would be something I could just skate through, and it wasn't that at all. The effort required to do well was no more than for many other courses. I expect many of the negative reviews that come in concerning this course are due to the lack of effort students put into the course, which confused them and has caused them to have a far more negative experience of the course than what Professor Cipolli provided for those students who actually put in the requisite effort.
- **Understanding & Appreciation:** I know a lot more about statistics, methodological applications, and interpreting results of statistical analyses when coming across them
- **Intellectual Growth:** Very little, but this is to be expected from a 100 level course with over 150 students in it. However, there were clear attempts by Prof. Cipolli to connect the course material and our problems to events throughout the contemporary world, which was quite beneficial in being able to visualize statistics within the broader complex world we all live in today.
- **Quality:** The teaching was on the whole, in my opinion, very good. Professor Cipolli tried to present a relaxed attitude towards the course that I could imagine coming across as aloofness. However, on the balance of things, he was approachable in office hours (which were offered far more frequently than what the university expects) and very much did care for his students. The difference between preconceived expectations and our actual experience in the course I believe has muddied the experiences of many of my peers—however, Professor Cipolli was clear with his expectations, gave plenty of time to ask questions in a number of different forums, allowed adequate time for homework while providing extra practice problems for students, and spent many lectures going over the material until students demonstrated a base level of mastery. Though I don't quite understand the grading schema at this point entirely, I do think that it has been quite fair and accurately reflects the effort and time students were willing to put into the course. It is not harsh at all, and if a student has drive to do well, then Professor Cipolli allows students to get there. Unfortunately, for one reason or another Intro to Statistics has gained a reputation among the student body that attracts students who have no drive for this particular material and are looking to just skate by, which has likely clouded their experiences in the course.

- Student 70
 - **Reason(s):** Other requirement
 - **Effort:** I put a tremendous amount of time and effort into this course. I went to office hours, tutoring hours, and devoted ample time to homework and quiz preparation.
 - **Understanding & Appreciation:** I realized statistics is very practical in everyday life.
 - **Intellectual Growth:** I learned how to handle difficult subject matters by asking for outside help.
 - **Quality:** The structure of the course did not allow me to benefit from learning stats. The class was heavily focused on clicker quizzes the first half of the semester that caused tremendous anxiety for myself and many classmates, as they constituted a large part of our grade. Additionally, the size of the class allowed Professor Cipolli to only use power points as a guide, which often is not the best way of learning for many students. Professor Cipolli answered questions well if asked but other times would be sarcastic in his responses, making some students hesitant to ask questions in class. I think Professor Cipolli is a good professor and really does want his students to learn; however, I think many students are not accustomed to this type of class and course structure in which complex material is quizzed regularly when concepts may not be fully understood. I know Professor Cipolli hopes to make change for next semester and I am confident these changes will benefit future students.
- Student 71
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I would argue that I put a high amount of effort into this course, including attending every class, paying attention in class, going to office hours frequently, doing all the homework ahead of time, doing all the practice problems, and studying the material outside of class.
 - **Understanding & Appreciation:** I had vowed never to take another math course after honors calc in high school, but I am really glad I took stats. It showed me a much more useful and fun side of mathematics., and gave me a very useful knowledge of the subject.
 - **Intellectual Growth:** It really helped me to think more precisely and numerically about data, science, and society, especially since I tend to think more generally and abstractly. Looking ahead, I am confident that stats will help me in my research and career.
 - **Quality:** While some students may be disgruntled with Professor Cipolli's pedagogy and personality, I believe that there is abundant evidence (with 99% confidence) which indicates the highlights of Professor Cipolli's teaching and character. Professor Cipolli was remarkably humorous, friendly, and knowledgeable. All of his lectures were easy to understand, if you put in sufficient effort. He was also extremely receptive to feedback, asking 4-5 times throughout the semester for students to fill out a survey about the course and about his teaching. He was very open to questions inside of class,

and made the class fun and interactive with the clicker and other online resources. The moodle page was meticulously maintained, and he made a stellar effort to ensure we were prepared for tests and projects. During office hours, he was generally helpful, but the R code was very confusing. Since there were 158 students in the class, the time spent in office hours was typically short, but he made a genuine effort to offer more hours to demanding students (even offering review hours on this coming Saturday the 6th). I can't imagine how many emails he must have sent to students in the course for problem help or for general questions, but he was always very responsive to me, and would let me know if he couldn't respond for a time. I only wish I could have gotten to know Professor Cipolli better during this semester. But with all professor's pedagogy, there were some weaknesses with Cipolli's pedagogy and the course in general. Towards the beginning of the semester, his humor and authenticity were slightly overpowering, often making funny, yet minorly degrading jokes about student's participation, writing skills, and math skills. While some found this funny, others did not, but I personally didn't mind it. I think it served to really tell students that they need to step up their game. Paying 100+ dollars for homework and an online textbook weren't totally worth it, but the practice problems were helpful. The iclicker idea, for \$80 per clicker, also failed. One thing that I would consider unprofessional were the amount of errors in the homework, practice problems, and even in class that Professor Cipollo made, which did not help to adequately prepare students or build trust. It was clear that Cipolli was a green professor, but through continually checking in, it was remarkable to see how quickly he adjusted his style. I think this is strongly indicative of his potential as a professor in the future. Thus, with a balanced understanding of both praise and critique, it is my hope that I will Professor Cipolli will continue to share his humor, authenticity, care, and knowledge with the Colgate Community for many years to come. Thank you for a deeply enjoyable semester, Professor!

- Student 72
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put conscious effort into this class. There were assigned homeworks due every week or so that required effort and time, there was a writing assignment that required a lot of effort and independent thinking, and I had to study before every quiz, which was every week. Required effort but if you pay attention in class the class is super doable and not too demanding.
 - **Understanding & Appreciation:** I enjoyed real life examples the professor gave-it was interesting to see stats related to outside of class life, like politics and economics and such. Overall was an interesting class and made me like and understand stats more.
 - **Intellectual Growth:** We had a writing assignment that required us to use R and do outside research. I thought it was difficult but really interesting!! We had to use the R statistics program

on our computer which I think was helpful to learn how to use because I really don't understand technology much so it was nice to learn other skills. Also the assignment required us to analyze statistical data in a science context which I thought was interesting. We learned about stats in the real world.

- **Quality:** The professor was organized, gave good examples, and overall was very clear if one pays attention in class. I didn't really have any issues not understanding topics. However, his grading scale was kind of confusing-I'm not quite sure how all the sectors of class go towards my final grade and he hasn't made it that clear. Other than that it was a good class, pretty interesting, and difficult but not too difficult.

○ Student 73

- **Reason(s):** Major or minor requirement; Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I put in a lot of effort.
- **Understanding & Appreciation:** This course showed me that statistics is much bigger than I thought.
- **Intellectual Growth:** I am not really sure it did?
- **Quality:** I think the teaching was good. The professor used good examples and taught well, in a class of 150 when people don't speak up when they are confused it's easy to go fast if you have no reason not to. I don't agree with some of his grading procedures and believe they are unfair but that is how he decides to run his class.

○ Student 74

- **Reason(s):** Major or minor requirement
- **Effort:** homework, studying for standards, going to class
- **Understanding & Appreciation:** The course gave me a deeper understanding for statistics.
- **Intellectual Growth:** It helped me understand other forms of math.
- **Quality:** Sometimes the class went too fast or I was confused when we did problems.

○ Student 75

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Interest in the course material
- **Effort:** I put in a lot of effort. Since this course requires you to build on material you already learned, missing a day / assignment would greatly impact your score.
- **Understanding & Appreciation:** I had a very minimal stats background, and taking this course expanded that.
- **Intellectual Growth:** Naked Statistics, a book that we were required to read, presented many

interesting ways in which stats affect our lives.

- **Quality:** I recommend the professor to be a little less harsh with grading. Especially with standards, one mistake on material you clearly know could heavily impact your grade.

○ Student 76

- **Reason(s):** Other requirement
- **Effort:** I put significant effort into this course through completing all homework assignments, studying often for the standards, and attending tutoring hours as often as possible in an attempt to better understand the material.
- **Understanding & Appreciation:** This course made me realize how widespread the use of statistics are.
- **Intellectual Growth:** This course contributed to my intellectual growth by forcing me to learn how to learn the subjects on my own as well as outside from class time. I feel as though my understanding of the topics came largely from my time spent at tutoring hours, or collaborating with other students.
- **Quality:** I think that the style of teaching employed in this course would serve the students better if it were in a smaller class. I feel as though Professor Cipolli had too many students to ensure that all of his students were keeping up with their understanding of the material.

○ Student 77

- **Reason(s):** Other requirement; Statistics is an important, relevant knowledge to have no matter what career path one is on.
- **Effort:** I put a great deal of effort into this course.
- **Understanding & Appreciation:** I appreciate and understand statistics greatly, and this is my first experience taking a statistics class.
- **Intellectual Growth:** It definitely contributed to my intellectual growth and education, as it provided me with the skill to understand numbers and data in a way I was never able to before.
- **Quality:** The quality of teaching was outstanding. Professor Cipolli got a lot of unnecessary, unfair critiques from students for his constant pop quizzes, but I believe these were in our best interest. They forced students to review every night. They required an engagement and commitment to the course material that is fair considering this is a college course at a highly ranked institution. He also cares about his students so so so deeply. When the sexual assaults came to light on campus, Professor Cipolli took the time to write us a letter expressing his sadness, and his wish to be there for us in anyway possible. He took any opportunity he could to remind us that he was on our side, and more than just a Professor. Colgate needs more Professors like this, Professors that are empathetic and compassionate and recognize that the classroom is not separate from life, and life

is not separate from the classroom.

- Student 78
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
 - **Effort:** I would spend many nights working on the homework and practice problems with study groups.
 - **Understanding & Appreciation:** It has made me dislike the material.
 - **Intellectual Growth:** It did not.
 - **Quality:** Professor was very unclear when it came to his syllabus and communicating the grading policy. Also I have heard that he has been condescending to my peers in office hours.
- Student 79
 - **Reason(s):** Major or minor requirement
 - **Effort:** Doing the homework assignments, reviewing material before each class, learning how to use R to do the writing assignment
 - **Understanding & Appreciation:** I now know how to do certain statistical analyses
 - **Intellectual Growth:** I am not typically a math student, so this course gave me a wider range of knowledge and understanding beyond the fields in which I feel most comfortable.
 - **Quality:** Professor Cipolli tries really hard to be the best he can be, but he is a work in progress. He held a lot of office hours and posted helpful things on Moodle, but he would get really frustrated with us in class, have a mini freak-out, and apologize a little bit later. He would also frequently send us very long messages (either over email or attached to our tests) explaining himself. This seemed like it was more for him than for us. Regardless, he puts in a genuine effort to help us succeed in this class.
- Student 80
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put in a decent amount of effort in this course.
 - **Understanding & Appreciation:** The examples used caught my attention and helped me learn better.
 - **Intellectual Growth:** It increased my knowledge of this course which will help me down the road towards my major.
 - **Quality:** Good teaching but sometimes forgets its such a large class.
- Student 81
 - **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Interest in the course material; Need it for economics major
 - **Effort:** I did all of the homework and showed up to class most of the time.

- **Understanding & Appreciation:** Stats can be cool and I see how it fits with economics.
 - **Intellectual Growth:** The course has enriched my understanding of statistics.
 - **Quality:** Cipolli isn't a great teacher unfortunately and I think his role as instructor for our class took away from the course's potential. The standards quizzes are in awful idea which are more punitive than anything else. His class is usually boring and he seems like he doesn't really know what he's doing. His practice problems are litter with errors, to the point where I start to question if he's qualified at all. However he does seem like a cool guy who'd be great to chill out and have a beer or two with.
- Student 82
- **Reason(s):** Other requirement; Statistics is highly recommended for graduate school programs that I am interest in.
 - **Effort:** I did not put a large amount of effort in the course. Prior to quizzes and tests I would review my notes and online answer keys and that seemed to be sufficient.
 - **Understanding & Appreciation:** This is my favorite subject within in math and therefore I did enjoy learning it, especially with my past experience taking calculus.
 - **Intellectual Growth:** I think this course issues applicable yo life outside of the classroom and I have used the subject matter countless times in conducting research here at Colgate and within various upper level courses within my major that require statistics, such as epidemiology.
 - **Quality:** I think that Professor Cipolli genuinely cares about his students and wants them to succeed as long as they are willing to put in the effort. In theory this is very good and it was definitely conveyed multiple times within his course, but I think his biggest downfall was implanting this idea within the class structure and grading policies. I understand professors frustration when people are only concerned with getting an A and I do agree that they should be reserved for mastering the subject matter at hand, but reducing the grading system to 0-4 scale of subjects puts a lot of pressure on students and can unfairly hurt them. I found myself worried and in a difficult position where one rounding error or calculation malfunction, that would normally be the cause of a minuscule point loss within a course, resulted in my quiz grade (a grade worth 40% of my final grade) being reduced 11 percentage points. I kept hearing multiple times from the professor that he makes mistakes all the time, especially in such a big class like this, whether it be a typo on the answer key or a miscalculation of grades and this is only to be expected from professors. But mistakes were addressed as a natural phenomenon for everyone yet when it came to student mistakes or small errors his grading policies were not conducive to dealing with them. Grading policies were established as a range meaning that the obtaining of an A should not be reserved for only those who can get everything right 100% of the time. Besides his grading policies which, I did not suffer

greatly from, although I know others that did and felt like they put an additional stress on me this semester, I think that Professor Cipolli is doing a great job teaching. He is always engaged and wants his students to be as well.

○ Student 83

- **Reason(s):** Exploration of possible major or minor
- **Effort:** I worked very hard
- **Understanding & Appreciation:** I had to learn all of the course material quite thoroughly, mainly as a result of the standards. In terms of appreciation, I feel like my frustration at the standards made me more focused on obtaining better grades rather than learning, but that is likely due to the emphasis I place on my grades. It's hard to find a balance between making the course challenging and fostering appreciation for the course material within students, especially when they are all very focused on obtaining grades rather than actually learning. I think Professor Cipolli really manages to make the course challenging and tries to guide us to appreciate the material better, and he does this to a fairly successful standard.
- **Intellectual Growth:** Oddly enough I learned more about myself in terms of how I deal with tests, challenges, and frustration. The fact vs feeling issue really comes up in this class and makes you wonder about whether you came here to learn or get good grades.
- **Quality:** The professor was very accessible. The standards were very frustrating but from a macro point of view, they were actually pretty fair, especially considering the extra credit. He also takes our feedback into consideration. In terms of weaknesses, I think we could have more practice and go through these practice questions on the board. This is already covered to some extent but more practice is never a bad thing.

○ Student 84

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I always made sure that I completed the homework before it was due because he usually gave us a while to complete it. Also, for most of the semester we had pop quizzes, so I was constantly going over my notes and doing practice problems just in case we were going to be quizzed that day.
- **Understanding & Appreciation:** I can now see how statistics can be used in any part of daily life. Statistics are everywhere and even if they are not correct statistics, they are still important to note.
- **Intellectual Growth:** Because we had pop quizzes so often, I learned how to always be prepared to be tested on the material and know it really well.
- **Quality:** This class was much more boring than I thought it would be. For most of the semester, professor Cipolli would just read off of his power points and lecture us on math topics. Once we

started actually doing examples on the board, I was able to understand the material a little better. However, I think I learned more from just reading the power point slides myself and doing practice problems than I did from any class this entire semester. I do not think Professor Cipolli understands that this is Colgate University and students have an insane amount of work and other activities and do not have time to spend 2 hours a day studying for potential pop quizzes. This was not my only class. Also, I received one of the rudest emails I have ever gotten from Professor Cipolli regarding my writing assignment for the class. I did not find him to be very helpful or sincere.

○ Student 85

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material
- **Effort:** I would say that I put a good amount of effort into this class. I definitely did not spend time everyday doing problems for stats as I probably should have to get a better grade, but overall I didn't find myself slacking in any way. I think that after I didn't do great at the beginning of the semester that I focused more and tried to do everything I could in order to get a better grade. I am sad that it took me not doing well to study more, but it served as my motivation.
- **Understanding & Appreciation:** This class made me realize that stats isn't as easy as I assumed it to be. I thought it would be very straightforward in nature, but in reality there is more than meets the eye. I think it is easy to follow along with the equations, but understanding what it means serves as the difficult part.
- **Intellectual Growth:** I learned how much time and effort it takes into performing surveys and taking into account individual's responses on polls, etc. Stats made me realize that we cannot always rely on it for it to be valid so doing more testing will represent more confidence.
- **Quality:** I think that a lot of people didn't like Cipolli because of his grading system. I can see where it can be beneficial because it pushes students to study consistently if they want to get a good grade. I just think a lot of people are lazy and are not willing to put in all of the effort necessary in order to get the grade they are looking for.

○ Student 86

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I did the necessary work Such as homeworks, moderate studying and getting help when I need it
- **Understanding & Appreciation:** I am now more confused about statistics then when I started this course because I am not a math person and statistics is so confusing and ambiguous. Like there's not a right answer even because you can use a different confidence interval and you can never trust a sample
- **Intellectual Growth:** I know I don't want to go into a math related field and always to have a

statistician on hand for when someone needs to calculate this stuff

- **Quality:** He really cares about the students learning and tries to make himself accessible. Overall he's a little intimidating and he goes fast for us slow learners

○ Student 87

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course in doing the homework, studying for the standards, and in doing the writing assignment.
- **Understanding & Appreciation:** I had already taken AP Stat and received a 5, but I wanted to review for it because I am going to take Econometrics in two semesters. Overall, I thought this course was very helpful for learning about Stat, and Professor Cipolli made stat very interesting.
- **Intellectual Growth:** I learned how to use Statistics in areas that are not just related to statistics, but in every possible subject.
- **Quality:** Professor Cipolli is a very good professor and is very good at conveying the information. I thought that he made the course interesting, and was one of the most helpful professors I have ever had. The only weakness I believed was I wish we could have gone faster and covered more material as often I was not challenged, but doing so was made impossible by the many students in the class who had never taken Stat.

○ Student 88

- **Reason(s):** Interest in the course material
- **Effort:** I put a significant amount of effort into this course. I studied and reviewed the material every night before class, in preparation for the standards testing. I worked on the homework throughout the week so that I would not have to do it all in one night.
- **Understanding & Appreciation:** I didn't have any background in Statistics before this course so this gave me a good base of understanding which made me more interested in the subject.
- **Intellectual Growth:** This course showed the various applications of statistics in the real world, and showed how important it is to have a knowledge of statistics in any job.
- **Quality:** Sometimes it seemed like grading was a little harsh, but the professor was still very clear about the ways he would grade things. As talked about in depth throughout the semester, the standards testing put a lot of stress on the students and it seems like there could be a different way to test the standards than how they were tested. But the professor did try to be as helpful as possible in class, sometimes devoting a whole class period to only answering people's questions.

○ Student 89

- **Reason(s):** Elective outside major or minor
- **Effort:** I could have taken a much easier course second semester of senior year but I wanted to learn

statistics, I have tried to give this class the old college try as they say. I have done all the assignments and studied for every assessment. In retrospect I could have done more practice problems but I just did not have the time.

- **Understanding & Appreciation:** I learned stats but also gained an understanding of all the discussions in the news that refer to stats. Very valuable.
- **Intellectual Growth:** As I said, basic understanding of stats is an everyday useful skill
- **Quality:** He was okay, I think this class is too big, I don't think he should be teaching to a huge lecture hall.

○ Student 90

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I attended every class, did the homework assignments and studied for the standard quizzes. Math is a challenging subject for me so I put in effort to do well.
- **Understanding & Appreciation:** I don't like math and only took this course because Colgate forces us to take math/science courses. While my understanding grew, my appreciation for the subject stayed about the same.
- **Intellectual Growth:** I am potentially interested in going into Foreign Service and statistics is a course they suggest to take.
- **Quality:** Professor Cipolli does not do well teaching an introduction course that is mostly made up of underclassmen. He is condensending and judgemental when students ask questions, to the point that I do not enjoy going to his office hours for clarifications on assignments. His office hours, up until 2 weeks ago when he changed them, were incredibly inconvenient because I was always in class. He seems passionate about the subject he teaches but he needs to recognize that many people in the room haven't been exposed to math in several years (upperclassmen who take the course to fulfill a requirement) or underclassmen who are still getting accustomed to Colgate. His expectations were very high, which can be a positive thing if the professor is encouraging, but he has not been particularly encouraging.

○ Student 91

- **Reason(s):** Interest in the course material
- **Effort:** I would say I put a good deal of effort into this course, almost always reviewing material before class in the case that there was a quiz. In terms of the writing assignment, I think I put an extreme amount of effort into this, which may have been excessive considering it was only worth 10 points. However, the prompt seemed convoluted and the R code was extremely difficult to manipulate, as we had never been required to use it or had learned much about how exactly to use it.

- **Understanding & Appreciation:** This course caused me to gain appreciation for the subject of statistics.
- **Intellectual Growth:** This course helped me to understand and question the polling that occurs and is published so often in popular media.
- **Quality:** Although I realize there is not much you can do as a professor of such a large lecture, but I do think the class could benefit from different styles of teaching. Towards the end of the semester, I thought it was much better that you did problems on the board rather than flipping through powerpoints. I also liked the few days that we did practice problems with others in the class. I think a combination of these three class styles would be best for the future, as it would not only make class more interesting, but also teach the material better. In terms of weaknesses, as I mentioned above, I think the requirement to complete R code was unfair, as we never truly have used it before. I have heard from many people the frustration they felt when they went into office hours and received little to no help even though they had attempted to do it on their own multiple times. If someone is coming in for office hours, it clearly means they are struggling. They don't want to be sent away at the door and accused that they "did not try it". It is a huge double standard to make such a big point of promoting office hours only to not help the students who actually show up.
- o Student 92
 - **Effort:** I put a lot of effort in trying to stay on top of the homework and studying for quizzes.
 - **Understanding & Appreciation:** I was able to learn a lot about how useful statistics can be and how once you can understand it, it's not that bad.
 - **Intellectual Growth:** I was able to realize how valuable stats can be in the real world and how it can also be very misleading.
 - **Quality:** He was very good at allowing for questions in class at any time throughout the lecture. It was hard to learn anything from the lectures alone.
- o Student 93
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I put a good amount of effort into this course.
 - **Understanding & Appreciation:** I gained a new appreciation for Statistics after taking this course, not only did it motivate my interest in the subject matter, but it was also very interesting—very different from my AP stats class in high school.
 - **Intellectual Growth:** It taught me to be critical of all information, and to do research to check its validity.
 - **Quality:** I thought Professor Cipolli was an excellent professor.

- Student 94
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I would always re-read the notes and write my own notes based off them. Before the quizzes, I would solve practice problems as well as complete the homework to prepare me for the quizzes.
 - **Understanding & Appreciation:** This course allowed me to see and visualize the beauty of statistics as it contains the possibility of calculating almost any possibility, which is a powerful tool.
 - **Intellectual Growth:** Basic probability has allowed me to make more logical and rational decisions. As a result, I have become a better person. In addition, I believe that I had to teach myself a lot of the course given I wouldn't gain much from class lectures; thus, I feel better about myself knowing that I was able to navigate myself through the abyss of statistics.
 - **Quality:** Personally, I did not like the professor or the way the class was set up. I thought it had too high of standards for an introduction class which, for most people, is only taken to complete a requirement that most have no desire of taking. As a result, I don't believe that he should have pop quizzes twice a week and require us to code math as that is egregious and silly to require students to do so when most of them don't even share the desire to take the course. This course could've been managed a lot better. I do think he brought a lot of enthusiasm and passion to the course but that wasn't enough to create a beneficiary learning environment.
- Student 95
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 - **Reason(s):** Other requirement; I supposedly need this class for the MCAT
 - **Effort:** Regular Homework and practice problems and constant studying and stress for daily pop quizzes
 - **Understanding & Appreciation:** I did not.
 - **Intellectual Growth:** It did not.
 - **Quality:** The instructor has designed the grading procedures in such a way that it maximizes stress on the students. When your entire grade is based on your most recent performance on pop-quizzes, and the only way to get an A in this section is to have a perfect score, students become overwhelmed. The instructor also seems to think that this class should be equal, in terms of time and effort, with our major classes. This is a little ridiculous. The instructor felt the need to make homework problems and the writing assignments almost impossible to do without R-studios. This wouldn't be that bad if the class focused on how to use R-studios, but the only time that is done is at office hours. This is a stats class not a comp-sci class, leave that to CORE. In all I think the instructor has unrealistic expectations and grading standards.
- Student 96

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** This class required a lot of effort outside of the classroom. Being a large lecture style class it was mostly note taking during the actual class and we would go through a lot of topics very quickly. I found that I usually had to reteach myself everything that we had learned again on my own time because it was not necessarily taught thoroughly in class. We also had a ton of pop quizzes that required us to always be studying everything that we had learned.
 - **Understanding & Appreciation:** Being an introduction level course I had never had any exposure to statistics, so it definitely gave me an overview of the topics. I definitely have more knowledge than I did going in to this class, but the constantly worrying about a pop quiz and some of the other assignments prevented me from actually appreciating the material.
 - **Intellectual Growth:** This class definitely taught me how to be an independent thinker. I had to spend a ton of time outside of the class teaching myself material from the beginning again and doing the homework/studying for tests and quizzes on my own.
 - **Quality:** I think that teaching an intro level class to 150 college students is a difficult task to do and I acknowledge and appreciate that. However, I think that it could have been handled in a better way and he could have been more receptive to students critiques. One thing that the majority of students asked to change was taking the higher standard grade as opposed to the most recent because we thought his policy was greatly unfair yet he did not doing anything to change it. I think that there were a lot of things that could have been covered more thoroughly/clarified in class so the students wouldn't have had to spend as many extra hours as they did relearning everything then completing the assignments.
- Student 97
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I took this course because Colgate is the epitome of white male supremacy and I am/was quite eager to graduate
 - **Effort:** A lot. I went to tutoring often and used outside resources
 - **Understanding & Appreciation:** It showed me the importance of looking further into how information and data are gathered and to be critical of information presented to you
 - **Intellectual Growth:** N/A
 - **Quality:** Prof. Cipolli was really dope and always dresses like it's Easter. He tried to engage students in multiple ways. He also cared about the humanity of his students
 - Student 98
 - **Reason(s):** Other requirement
 - **Effort:** I put in a lot of effort into this course; quizzes were given nearly every class so studying was important and the material in class was very unclear so I generally had to go back through the

powerpoint slides on my own and teach myself.

- **Understanding & Appreciation:** Statistics is wicked hard. I can certainly appreciate its utility but my interest in it has not really increased.
 - **Intellectual Growth:** The frequent quizzes and my lack of understanding in class helped me grow intellectually in the sense that I had to put in the work outside of class and manage my work responsibly in order to succeed
 - **Quality:** Professor is very eager and willing to help his students. Super cool and wants them to succeed but is often unclear in lectures, thinking that students understand his thought processes as he writes them out on the board but without fully explaining them. In his defense the course is cumulative so if you don't understand something there's a snowball effect and the size of the class isn't really all that conducive to learning in this manner anyway but the style of teaching that does not specify what we will need to know makes it confusing as we have no clue what to study for or review on any given day.
- Student 99
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a great amount of effort into this course on every assignment.
 - **Understanding & Appreciation:** Not one bit
 - **Intellectual Growth:** In no ways.
 - **Quality:** Cipolli is a smart guy, but is not fit to be a professor at all. He looks down on his students, has extremely unclear grading methods, and expects far too much of his introductory students.
 - Student 100
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** not enough apparently.
 - **Understanding & Appreciation:** Not much. Honestly, we moved so fast through the course that it's hard to even pick up an incident where I actually "understood" what we learned in class.
 - **Intellectual Growth:** Not much. I am not great at mathematics, this course really just showed me that this is not where I should put my emphasis academically. Stats is just not for me.
 - **Quality:** Well. The professor's teaching style was not (in my opinion) the best. Since this was a bigger class, I feel like he could have had a different approach in explaining the material. we had a lot to cover and it was all very important, but we were moving so fast through the material that somewhere in the middle of the semester I realized I was lost and was unable to follow after that. I ended up spending the rest of my semester learning from YouTube since I clearly was not understanding what was taught in class. I don't think that should be the case considering the amount of money I was required to spend on this course, and the amount of money my parents

pour into my education. I expected better for this class. and honestly, I wish the course moved at a slower pace so that everyone would be on the same page.

○ Student 101

- **Reason(s):** Major or minor requirement
- **Understanding & Appreciation:** This course contributed to my understanding and appreciation of statistics and the value of statistics in our society today especially in areas such as scientific research. A lot of the material that I learned in this course will be applicable in my future classes and reading of scientific papers.
- **Quality:** The instructor had clear explanations of the material in lecture, and provided very helpful powerpoints. The practice questions and the homework were extremely helpful in terms of understanding the material and the standards quizzes reflected the material that was taught. The instructor did everything he possibly could to ensure that the students could succeed if they put in the effort . The only slight issue with the course was that the grading policy was not very clear and it still seems a little ridiculous that your grade can drop from an A to a B if you do not get a perfect score on all of the standards.

○ Student 102

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Other requirement; Interest in the course material

○ Student 103

- **Reason(s):** Other requirement
- **Effort:** I put in countless hours each day to go over practice problems in case there was a pop quiz. I also reviewed the powerpoint notes for at least 2 hours every night. I went over many things that I did not understand with a friend almost every night.
- **Understanding & Appreciation:** This course did not contribute to my appreciation of the course subject. Rather, I have grown to not like statistics after the course.
- **Intellectual Growth:** This course really pushed me to learn many of the materials on my own outside of class. On a different note, I believe the course contributed to my intellectual growth in a way that now I think I would be able to analyze data.
- **Quality:** Professor Cipolli was very organized and was willing to go over questions instead of rushing students to move onto a new chapter. However, his sarcasm often sounded condescending, preventing me to feel like I was capable of knowing what was being taught in class. Professor also encouraged many students to visit him at office hours, however, whenever I was by his office, he was never there. Not only was his office hours schedule was confusing because he had written his schedule by saying "the probability that I will be in my office", he was not in his office even

when the "probability that he would be in his office" was high. He also was eager to get feedback from students, yet, whenever we made complaints or voiced our concerns (specifically on standards quizzes), he dismissed our concerns and had not really changed anything to the course until 3 weeks left of classes. With so much material given to us in such a short time, professor expected us to be prepared to be tested on things that we may have already known but forgot due to the fact that there were so many other things that we had to know. Students did not know what to expect on those standard quizzes and to have standards be worth the majority of our overall grade, I felt as though professor was trying to fail us. He never listened to our concerns, he never explained the materials well enough for me to leave class feeling comfortable. Coming to such an elite liberal arts college, I understand that I have to be responsible for how much I get out of during my time here. However, I also believe that professors should take into account that their teaching affects how we learn. Unfortunately, I don't think I received the education that I deserved from professor Cipolli.

○ Student 104

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I dedicated the most energy to this class this semester. I often times would place the work for this class above the work for others such that I would not fall behind.
- **Understanding & Appreciation:** I love stats, but hated this course.
- **Intellectual Growth:** I learned a lot, and developed new tools to think critically.
- **Quality:** The structure of this class is insane and is not rewarding by any means. It just does not make sense.

○ Student 105

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** Review topics daily to stay on top of all standards and spend multiple hours on homework going through each step of every question
- **Understanding & Appreciation:** Course made me appreciate and understand the subject of statistics significantly more
- **Intellectual Growth:** Course contributed positively to my intellectual growth
- **Quality:** Quality of teaching is good, but Cipolli often speeds through various topics, so I have to often learn some of the material on my own. Also, I feel that he could use the chalkboard in his room to go through problems step-by-step, rather than just have the question and answer on a slide in a powerpoint. Otherwise, Cipolli is a great professor.

○ Student 106

- **Reason(s):** Major or minor requirement
- **Effort:** I put the amount of effort that was required for this course, which included homeworks and

studying for standards.

- **Understanding & Appreciation:** This course taught me the basics of statistics that will be helpful in the future.
- **Quality:** Professor Cipolli is a good guy who cares about his students and wants everyone to do well. However the structure of his class was sometimes questionable and confusing. I could tell he really works hard to make the class as productive as it could be, which i appreciate. But some things we did and his grading system is definitely different from most.

○ Student 107

- **Reason(s):** Elective outside major or minor; Interest in the course material
- **Effort:** Weekly homeworks and studying for standards quizzes
- **Understanding & Appreciation:** I took AP stats in high school but I definitely feel like I understand the subject matter more now than before
- **Intellectual Growth:** Statistical analysis knowledge is useful in many other classes. Also thinking in a statistical way is good for problem solving
- **Quality:** A major strength of Professor Cipolli is his willingness to learn and improve as a professor

○ Student 108

- **Reason(s):** Major or minor requirement
- **Effort:** Studied really hard for about 3 hours every tuesday night.
- **Understanding & Appreciation:** He gave use a quiz that was almost equivalent to a final every wednesday which forced me to learn.
- **Intellectual Growth:** It didnt
- **Quality:** Prof Cipolli is a fine instructor who clearly is clearly very intelligent. His grading standards are unfair and incomprehensible to the student. 40% of our grade is based on quizzes. His grading of these quizzes, and the percent score we receive is left to his discretion. The student has little idea of how his grade is calculated. Prof Cipolli also may be the most pretentious instructor that I have encountered since all my time as a student. It often seems as if he looks down on his students and claims that our poor performances are a result of a poor work ethic. In all, I have learned a lot from him, but I leave this class with much distain.

○ Student 109

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a lot of effort into this course, considering I am not naturally great in mathematics or confident in my math abilities and had to study every day, take notes on my homework, and try to follow along in class just so I would have a basic understanding of what was happening.
- **Understanding & Appreciation:** This course contributed to my understanding and appreciation

of the course subject because it was taught in a very cumulative manner; thus, all of the topics are connected and built off of one another which gives me a more solid understanding of statistics rather than trying to memorize various different formulas or functions.

- **Intellectual Growth:** This course contributed to my intellectual growth beyond my understanding of the course subject because statistics was something I was extremely uncomfortable with and only took to fill my core requirements; however, I really challenged myself and am pleased with how far that I have come and proud of the work I have done.
- **Quality:** Professor Cipolli is a very intelligent mathematician, which is great and the quality of his teaching was very high; however, sometimes I got confused trying to follow along with the speed of his teaching. I think in order to aid this dilemma, he could assign the powerpoint notes as readings, so we walk into class with some form of understanding of what we are going to be learning. A strength that he has is his ability to take questions and answer them and completely cater the class to all of our learning needs. He is funny, personable, and accessible and many of the times asks for student's input when making a decision for scheduling or what have you.

o Student 110

- **Reason(s):** Interest in the course material
- **Effort:** I would do all homework assignments and came to class prepared to learn. I also put in time to do all practice problem worksheets and tried to really teach myself the material.
- **Understanding & Appreciation:** This course taught me how to do confidence intervals and how to do reject a null hypothesis. I've heard of these terms before but never understand what they were or how you determined it. Thus, this course taught me how to do calculations I didn't know how to do.
- **Intellectual Growth:** This course taught me how to teach myself material if I had no idea what was going on. Often times I found myself learning the material on my own and realizing that going to class wasn't very helpful. However, I still went to every single class.
- **Quality:** Honestly, I've never been so disappointed in a Professor here at Colgate. I went to office hours multiple times and was told to come back later because Professor Cipolli was too busy with other work. When visibly frustrated with the R software, the Professor told me he'd send me the codes to help to solve my problems. Even after doing this I was still having a difficult time. I wish that I could've been taken more seriously about my questions during office hours but I simply wasn't. Furthermore, I'm grateful for all the material that was posted on moodle because through all that material I was able to teach myself and do fairly decent in the class.

o Student 111

- **Reason(s):** Major or minor requirement

- **Effort:** I had previously taken AP Stats in high school, sophomore year, so I was familiar with the material but did not feel comfortable using AP credit. Since I had taken this class four years ago I needed some refreshers and went to office hours a few time but did not require what I believe to be too much effort
- **Understanding & Appreciation:** Professor Cipolli's quizzes/midterm all used real life studies/experiments which I found to be incredibly interesting. As a result I have picked up tidbits of knowledge I was previously unaware of all the while learning statistics.
- **Intellectual Growth:** I had never used R before and I'm sure many students will complain about that on here. We were given pretty much everything we needed to copy and paste and if we hadn't used R we would have had to use Excel or do things by hand. I'm sure students dont have that in depth knowledge of Excel either and R is much easier to use. I appreciated what R was able to do in terms of writing the writing assignment and checking my work
- o Student 112
 - **Quality:** Professor Cipolli did an incredible job teaching this class to 150+ students. Students constantly doubted his approach to the "standards", myself included initially, that it was impossible to earn an A. Plot twist, it is possible and honestly not too hard. He dealt with constant questions incredibly well and was incredibly helpful in office hours. Assignments were returned graded faster than any of my other classes, which says a lot considering the size of this course. He holds well beyond the required number of office hours and if you stop by outside of those he is more than willing to answer questions. He is also incredibly receptive to feedback on his teaching, sending out several surveys throughout the semester to get feedback. I appreciated that he took the feedback and made small changes but still remained committed to his overall method of teaching. My little sister, a freshman at Colgate, is in CORE Stats and I was almost jealous she was going to be taking this class in a smaller setting, but I was truly surprised and impressed with how Professor Cipolli taught this course- in a good way.
- o Student 113
 - **Reason(s):** Core or Areas of Inquiry (distribution) requirement
 - **Effort:** I practically studied for this course every day. He gave us quizzes almost every class in the beginning of the year and it was really frustrating because no matter how much I studied it seemed like I could not get the grade I wanted. I would meet up in the library with my friends most nights before class and have a group study session and that helped towards the end of the year but it is ridiculous that we had that many quizzes.
 - **Understanding & Appreciation:** I not only don't appreciate the course subject but I hate it now because of my professor. He was just incredibly unfair and he had unbelievably high standards for

the class. It was like I was taking a 300 level course but we are in a 100 level. This is INTRO to stats not statistics 400. I should not have more work in this class than I do for my 200 and 300 level classes.

- **Intellectual Growth:** Did not contribute at all. It made me want to stay away from the math department all together at Colgate. In fact I can say not that I will never take another math class at Colgate.
- **Quality:** I think he was a really bad teacher. His grading is unfair because for the quizzes I should have around an 86 percent and yet he gave me an 84 because he uses his discretion. What does that even mean? He does not like me as a student because math is not my favorite subject, so you are going to take two points off of my grade just because you feel like it. It just makes no sense to me. He also gave no partial credit on the midterm and he just expects a ridiculous amount from his students for a 100 level course. I would also email him for help and his response was always, "read the syllabus." I have read the syllabus 40000 times but I still do not understand and he just would not bother helping.

o Student 114

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Understanding & Appreciation:** I appreciate all of the different sides to statistics and how applicable it is to our lives when I used to think it wasn't at all.
- **Intellectual Growth:** I realized it is a lot more useful than I thought it was and very useful in many situations and I could use it one day or maybe do something with it in the future.
- **Quality:** I thought he could be rude/condescending at times. The extra credit assignment was to give him constructive criticism and the way he responded sounded like he didn't want it, so I didn't really see the point of that. He basically was fighting what I said when I was just giving suggestions from my personal experience.

o Student 115

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; I needed to take this course for my math/science credit.
- **Effort:** I put a great deal of effort into this course and felt very dismayed at the lack of respect that I received from the professor. I worked very hard and still did not do great in the class due to his weird and ineffective grading standards.
- **Understanding & Appreciation:** This course gave me a basic understanding of the material, but the professor often did not explain things fully to the class when he was doing problems on the board. If you did not understand something he made you feel as if you were dumb and told us multiple times that "it's a freshmen level class, high school even and you all should be understanding this.

It's not that hard..." Comments like these made me insecure to ask questions because I felt as if he was judging me every time I did not understand something.

- **Intellectual Growth:** It did not.
- **Quality:** I was very put off by the disrespectful treatment that I received from the professor. His office hours were inaccessible, due to the limited time and how they were always during other classes and I once emailed him a question and he told me to come to office hours, when the purpose of me emailing him was that I couldn't make it to his office hours. I did once go to his office during scheduled office hours and he physically blocked me from going into his office by poking his head out of the door and after 30 seconds of me asking a quick question, he said "now you understand? ok good." and proceeded to slam the door in my face. This treatment made me not want to seek out help for this course and thus, when I didn't understand something I did not know where to go to get help as I was not comfortable asking the Professor. Time and time again he insinuated that our class is spoiled, coddled, and does not have the desire to learn new material, which was insulting as everyone at Colgate is driven, passionate, and dedicated to academics. I was also extremely confused by his weird and arbitrary grading style. If you got one 3 on a standard then you automatically were dropped down to an 89, which shouldn't make any sense and quite frankly I do not understand why and how the University lets him grade this way. Also, it was not necessary to spend over \$100 on an online platform to submit homework on. We do not use the platform in class and it was a waste of money.

o Student 116

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement
- **Effort:** I put a significant amount of effort into this course. However, I often put off studying until the last minute, rather than putting in consistent effort throughout the semester. I worked hard on all of the homework assignments and studied a lot for the midterm and standards quizzes. I went to office hours all of the time, tutoring hours a good amount of the time, and worked with another professor for outside help.
- **Understanding & Appreciation:** I honestly only took this course to fulfill a requirement so that I can graduate. I do not really enjoy math. However, I do think I improved and gained some limited appreciation of the topic. It was helpful that the professor used relevant topics to engage with us.
- **Intellectual Growth:** It required a different type of thinking than the majority of my Colgate coursework. I had to work extremely hard to study and attempt to understand the material, whereas I usually take courses that focus on mostly writing assignments. It was very challenging for me.
- **Quality:** I thought this course was taught well. My main problems with it stemmed from the huge class size, not the teaching style for the professor. I think that Professor Cipolli would be able to

teach a very strong course if he was given a smaller class size. He was extremely accessible in office hours and always available to answer questions. To be honest, this is the only math class I have taken at Colgate, so I don't really have anything to compare it to. I did find that the constant quizzes caused a feeling of never-ending evaluation and anxiety. However, it did help me stay up to date with the material throughout the semester, so that I did not have to cram at the last second for the final or the midterm. I hope that this balance can be struck in the future. It was very straightforward in that the quizzes were almost identical to the practice problems, so I think that some students did not really have a right to complain as much as they did about the quizzes.

○ Student 117

- **Reason(s):** Major or minor requirement; Prereq for econometrics
- **Effort:** Way more studying than had to be done
- **Understanding & Appreciation:** None
- **Intellectual Growth:** None
- **Quality:** This course was made harder than it had to be, concepts (especially t values, hypothesis testing, and probability) were explained terribly, or never even fully explained, everything was made to seem harder than it actually was, and the overall attitude of the professor is not conducive to a positive environment.

○ Student 118

- **Reason(s):** Other requirement; I took this course as a math class for medical school, and because I heard the work was very manageable.
- **Effort:** I had to put a lot more effort into learning this course than expected. But I feel as though I spent a lot of time just teaching myself the material rather than studying and doing practice problem sets, because this course never really had a consistent method of teaching.
- **Understanding & Appreciation:** I liked statistics before this course. I was really good at it in high school, and scored a 4 on the AP statistics exam. Now I feel like if I had to take that test again I would fail it. I always saw statistics as a helpful subject in math that allowed for us to really understand phenomena we see in the real world, but this class made me never want to perform statistical analysis again.
- **Intellectual Growth:** If nothing else, I learned how to teach myself material that was difficult and had nothing to do with the course being taught. Using a computer program that I will never use again for a writing assignment that was a lot more work than it was worth taught me to work with friends to problem solve and take the time to teach myself the material.
- **Quality:** Prof. Cipolli was definitely one of my least favorite professors I've had here at Colgate. While he did hold plenty of office hours, I was always afraid to go because of how he talks to

us at times in class. He can be rude and condescending, as he asks for our feedback and then gets defensive about the feedback given. He made passive aggressive comments, and once even accidentally antagonized a prospective student. One day, he taught calculus 3 because he wanted people to take his other classes. And he made us use a computer program that we weren't allowed to use on tests and seems completely pointless for real life applications of statistics. In short: he wasn't very kind to students and he barely taught statistics.

○ Student 119

- **Reason(s):** Core or Areas of Inquiry (distribution) requirement; Interest in the course material; I think an understanding of statistics is crucial in today's world and wanted to gain more understanding.
- **Effort:** I didn't put in an extraordinary effort into this class
- **Understanding & Appreciation:** I am learning how much statistics impact our daily lives. I have also learned to always look behind to statistics to see where the data came from.
- **Intellectual Growth:** I think this course forced me to be frustrated and work through it which is very beneficial.
- **Quality:** I think it is obvious that the professor is a skilled statistician, but forgets that we are not. Sometimes he looks through problems jumped from step to step with no clear explanation on how he got there.

○ Student 120

- **Reason(s):** Major or minor requirement
- **Effort:** I complete all the assignments on time and studied before every class due to the prevalence of cumulative pop quizzes.
- **Understanding & Appreciation:** I now have a decent understanding of the course but the class was not very interesting. Professor Cipolli tried his best to give interesting examples and to take contributions from students but it is hard to make statistics very appealing to someone who does not that a desire to learn it. Nonetheless, Professor Cipolli emphasizes learning the material thoroughly and not just memorizing
- **Intellectual Growth:** I learned a basic understanding of statistics which is important for the economics major and generally for everyday life
- **Quality:** Professor Cipolli had very peculiar and at times unfair grading standards. Quiz grades were 40% of your grade where any rounding error or improper notation on any problem throughout the year would result in a 100 dropped down to a 89 which is frankly illogical. Additionally, Professor Cipolli consistently changed and strayed away from the syllabus which made my obligations and grading standards unclear. Additionally, the class required a sophisticated knowledge of computer

science which few students actually possessed. Due to this Professor Cipolli would become angry and be mostly unhelpful. He did seem overwhelmed by the amount of students he needed to account for but after I had heard he was angrily sending away students from his office hours I no longer sought inperson assistance when it could have been useful. In saying this, Professor Cipolli did convey the majority of the material well and was dedicated to making himself as accessible to all his students as possible. He tried his best to be cortious and thourough but at times was bisibally overwhelmed and frustrated with the class.

○ Student 121

- **Reason(s):** Major or minor requirement
- **Effort:** This course, because it was so large, required a lot of personally motivated work, like going to tutoring for questions. All the notes were provided on line so it was easy to go back and learn what you missed.
- **Understanding & Appreciation:** This course helped me understand that we can't believe all the stats that are put out there in media. We have to pay attention to the sample and determine if the sample is really representative of the whole population.
- **Intellectual Growth:** This course really helped me to break down problems and take them step by step.
- **Quality:** I enjoyed Professor Cipolli as professor this semester. Even though we were his guinea pigs and the course structure was somewhat confusing at the beginning of the year, he was fair to us at the end and always made sure we were also in favor of the changes he made. He was always answering emails and was always willing to help. I know its hard to care about all your students when there are so many in the class, but Professor Cipolli really made that effort and I appreciate it. I know some people were frustrated with him, but I think they just didn't want to put any work into this course.

○ Student 122

- **Reason(s):** Other requirement; I took this course as a premed requirement.
- **Effort:** I put an incredible amount of effort into this class because I taught myself everything. I have gotten A's and high B's on everything no thanks to the professor or his TA. I spent countless hours simply trying to interpret his notes and how to use R with several of my classmates.
- **Understanding & Appreciation:** This course did not contribute to my understanding or appreciation for this course because I taught myself everything.
- **Intellectual Growth:** Truthfully, I learned how to take my education into my own hands and not to rely on a professor for help.
- **Quality:** -Cipolli was incredibly condescending when we would ask for help -When I sent him an

email of what he could improve (after him asking us to do so), he sent me an essay defending himself and did not take my suggestions seriously -His TA graded my test and gave me an 85, when I had actually gotten a 95. I went in and told him this and he scolded me for rushing him (but then realized I still had a 85 in the gradebook and told me "well I guess its a good thing you came in". -He told us how he was grading the standards but then completely changed it last minute. Nobody knew how he was grading us because he would be rude if anyone asked. -We never learned how to use R and I spent days trying to teach myself how to code. -His office hours were a chart of the "probability that he would be there" (including graphs). He was never there (even at a probability of .9). -I pay a lot of money to go here, and while I realize that my education is my problem, I expect to at least get something close to the education I am paying for. (i.e someone like Professor Liu). -So many grading mistakes Strength: moodle was organized nicely

○ Student 123

- **Reason(s):** Interest in the course material
- **Effort:** I unfortunately had to put FAR more effort into this course than expected of an introductory level course .
- **Understanding & Appreciation:** Important to see where stats in the news come from/not always an accurate stat depending on what the population is.
- **Intellectual Growth:** Taught us to be skeptical, and check the facts which is always important.
- **Quality:** I honestly think Cipolli is a good professor – he’s a lot of fun and really cares about his students, but this was just not appropriate for an introductory level course. As someone who studies math at Colgate, I thought this was way too difficult for Math 105. Also he told one of his 300 level students that he was going to make this course a lot harder than it had been and was going to "make us use R" (again: so unnecessary- while most of it was copy and paste, we only used R for the writing assignment). Also, the standards, while he claims help learning, I think it just discourage the students overall. What does help is homework- doing the homework online really helped prepare me for the class and while lengthy, they were do-able. My recommendation would be to have 2 quizzes (one before and after the midterm), the midterm, and the final and then more but smaller homework assignments. It seems to me that Cipolli would be an incredible professor (he really is caring, passionate, and fun) for 300 level classes, but this was far too much and far too difficult for students who are not math students and don’t necessarily have a passion for the subject.

○ Student 124

- **Reason(s):** Major or minor requirement
- **Effort:** taking notes in class and being attentive, completing online homework assignments, going into office hours, studying for quizzes and tests and making sure to stay on top of the material for

pop quizzes at the beginning of the semester, trying to figure out code for a writing assignment

- **Understanding & Appreciation:** I had never taken a stats class before besides the math involved, all the material was new for me
- **Intellectual Growth:** Since all the material was new it pushed me to pay close attention in class and study more and go into office hours. The writing assignment also taught me I need to give myself more time than I think I'll need in the future when I am working with a completely new program/code
- **Quality:** I think Professor Cipolli is a great teacher. He made classes interesting and presented the material in a clear way. He was more than happy to meet with us in office hours and help out if we didn't understand something

o Student 125

- **Reason(s):** Exploration of possible major or minor; Elective within major or minor
- **Effort:** I definitely tried for this course—i was studying for hours before possible quizzes and did numerous practice questions.
- **Understanding & Appreciation:** This course did not fully cover what i thought it would. I took AP Statistics in high school, and we were able to explore many more topics with greater understanding and conceptualized thinking
- **Intellectual Growth:** I did learn how to use R programming, and use less of my calculator.
- **Quality:** Professor Cipolli had a lot of trouble actually respecting students when they asked questions that he denoted as "stupid" and if we had just read the syllabus more in depth, we would know the answer. He honestly needs a reality check since he is dealing with college students who dont really appreciate paragraph long apology emails after class, they would just appreciate some respect in class. For the entire semester, i was generally scared to ask questions because every time someone had a question, he would basically criticize them for having that questions, and answer very rudely, and sometimes not even answering at all, just saying "Check the syllabus"

o Student 126

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- **Reason(s):** Elective within major or minor
- **Effort:** I had to put a great deal of effort into this course. I was continually studying. This was good to a certain extent but at sometimes it was too much. With quizzes twice a week sometimes I felt like I never had breathing room. I definitely spent most of my free time studying stats this semester.
- **Understanding & Appreciation:** I have learned a lot as a result of this course. I've never taken a stats course before so it was cool to take this kind of math. I really like math and this course

helped that appreciation grow even more.

- **Intellectual Growth:** This course taught me how to remain disciplined. I really had to hold myself accountable to studying continuously and learning the material.
- **Quality:** Professor Cipolli is a great guy. You can tell he really cares about what he does. He also cares a lot about his students it seems like. The only thing I wasn't a huge fan of was his grading. I know he knows best, but sometimes it felt a little harsh. I got literally one part of one little question wrong on his midterm and got a B. I know A's should be "mastery", but I was so close and really got frustrated with that. I guess it was just something I wasn't used to.

— MATH 316: Probability

— Fall 2018: Section A

o Student: 1

- **Reason(s):** Major or minor requirement; I needed a math elective to complete my minor and I had heard good things about Professor Cipolli - it had nothing to do with the course subject.
- **Effort:** I put a ton of effort into this class. I feel like I was always doing some kind of homework for the class whether it was a problem set, a group problem set, a weekly diagnostic, or studying, I was always doing something and if not I would get behind. I was not expecting to put in as much work as I had to to stay on top of the material.
- **Understanding & Appreciation:** This course definitely increased my understanding of the course subject. I had never studied probability so in-depth, so it was interesting to go deeper than most math classes normally do. I would say I appreciate the material slightly more than I did, but as the class really was a challenge, I honestly feel like I didn't really see the real life applications as much as I would have liked to.
- **Intellectual Growth:** The grading in this class was very different than many classes - with the standard system, so learning how to do the best I could on that grading scale was interesting. I think I liked it because it made me review topics and questions from past chapters for each test, which I think definitely made things easier because I could connect things, and also review them. I often feel like I work really hard studying for an exam and then forget everything the next day, so trying to not do that for this class I think contributed to my intellectual growth.
- **Quality:** I think the quality of teaching in this course was great. Professor Cipolli is one of the most genuine, helpful and organized professors I've had at Colgate. He had an extremely structured class, which is something that I always do really well with. Although there was a lot of homework, you could pretty much expect it, and the weekly diagnostics, although sometimes a hassle to fill out, kept me thinking about the class, and were routine - it was hard to forget I had one since it was

every week. Additionally, I considered dropping the course partway through the semester because I was so busy with everything else this semester and was really struggling staying on top of all my classes. Professor Cipolli talked me into staying in the course, by convincing me that I was capable and offering to work with me when I needed help, and being flexible with dates. Although staying in the course was a ton of work for me the rest of the semester, I am glad I stayed in it because he really is a great professor and I'm glad I had the chance to learn from him. Additional strengths in terms of the teaching in my opinion are giving time for us to chat with a friend about an example in class, this always gave me a chance to step back and evaluate my understanding. Also - the group hw I do think is a good idea because it gets you talking to classmates you wouldn't normally interact with.

○ Student: 2

- **Reason(s):** Elective within major or minor; Reputation of the instructor; I had heard it was a good class and that Cipolli is a good Professor.
- **Effort:** This class is very much you get out what you put it. We go over the material in class but it's up to you to work on your own to gain a deeper understanding. If you manage your time well the amount of work is very reasonable.
- **Understanding & Appreciation:** I had never taken a probability or stats class before so a lot of this material was new to me. I thought it was really interesting how this class takes the theoretical ideas we've learned in other courses and actually applies them to useful applications.
- **Intellectual Growth:** This course is a very verticals class. It builds on itself and requires you to really have a solid understanding of everything because it will draw on things we learned back in the first week of classes.
- **Quality:** Cipolli is a very sarcastic guy. I like him because I appreciate his humor but I know not everybody feels the same way. I think he has a big passion for this subject and clearly enjoys teaching it to us and wants us all to learn and succeed. I wish we moved a little slower on the examples in class sometimes. I also don't like the standards grading system because it puts a heavier weight on your second attempt of a problem. That doesn't make a ton of sense to me because I feel like you should be rewarded for getting it right the first time. Overall I have really enjoyed Cipolli and this class and feel like I've learned a lot.

○ Student: 3

- **Reason(s):** Exploration of possible major or minor; Interest in the course material; I took this course because I want to try the next level of stats, and see how it goes.
- **Effort:** I put in a lot of effort into this class, especially in the beginning when we were learning the coding in latex.

- **Understanding & Appreciation:** It helps me to understand the connection between calculus and stats, and it gives me an idea of many important concepts such as PMF, PDF, and CDF.
 - **Intellectual Growth:** This course is the most difficult course I learned this year, and it helps me to understand how to organize my due dates and how to work with my teammates in college.
 - **Quality:** The professor cares about every student and he reads our opinions (weekly diagnostic) very carefully.
- Student: 4
 - **Reason(s):** Major or minor requirement
 - **Effort:** I studied over class notes over almost every class, spent many hours completing homework assignments, went to office hours regularly to better understand the material, and studied numerous hours for exams.
 - **Understanding & Appreciation:** The course greatly contributed to my understanding and appreciation. I did not know that probability was so rooted in calculus and found this interesting.
 - **Intellectual Growth:** This course challenged my critical and analytical thinking skills mainly through challenging homework problems.
 - **Quality:** Professor Cipolli was very organized and showed a strong passion for teaching this course. He always made himself available in office hours to answer questions, as he seemed to care greatly about his students understanding the material. The only problem I had with this course was the use of the statistical program, R. Without any background in coding or computer science, I felt that the use of this program was incredibly time-consuming and challenging for me to get the hang of. I felt that some homework questions that required us to heavily use this program were very tough for me understand and at times seemed to lack education value/were not that closely related to the course material. Professor Cipolli did frequently give examples in class using the program, but I still felt lost most of the time, given my background in coding. I don't think it would be a terrible idea to make an intro Computer Science class a pre-requisite for this course.
 - Student: 5
 - **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
 - **Effort:** There are certainly times when I slacked off a little bit, but in general I put in decent amount of effort.
 - **Understanding & Appreciation:** This class takes a theoretical approach to the teaching of the subject of probability and helps build a solid foundation of understanding of it.
 - **Intellectual Growth:** Sometimes the heavy calculation questions seem tough but require less thinking (deriving CDFs, etc.), but a lot of the times the questions require a certain degree of application of the theoretical formulas to ensure better comprehension (deciding when to use which

distribution, etc.)

- **Quality:** Overall I really liked Prof. Cipolli's teaching because the class encourages independent thinking and fosters an environment where peer-learning is encouraged. One thing that can get improved on potentially is the pace of the class because sometimes we spend a little too much time on the stuff that everyone seems to have comprehended well, whereas some tough concepts are not being paid enough attention to.

○ Student: 6

- **Reason(s):** Major or minor requirement
- **Effort:** This course required substantial effort. Professor Cipolli certainly does not have easy grading standards but he is not unnecessarily difficult either. I was required to work diligently.
- **Understanding & Appreciation:** Probability is a math with real world applications and it is not abstract in any way, and so I feel that I understand an entire branch of mathematics well after taking this course.
- **Intellectual Growth:**
- **Quality:** Professor Cipolli is a very smart man and he seemed to care much about the students' learning. One critique is that he assumed that the students knew more off the bat about the basics of probability than we actually did. I would suggest that he emphasize to the students that the homework cannot be completed in a day, and the test cannot be prepared for in a day, because students do regrettably do this. I also understand the method behind the standards grading system, but I felt unprepared for chapter two's test for example, because the majority of the testing that determines the grade for chapter one is on the chapter two test, and the majority of the testing that determines the grade for chapter two is on the chapter three test, etc. I do not entirely like this grading system for this reason in addition to the fact that I felt that the professor was very tough in his grading, and if the system remains in place I think that it needs to be explained to students in class rather than just in the syllabus. Professor Cipolli is an excellent teacher, however. He knows the material extremely well and does a great job conveying the information to the students. I felt that learning from him was easy and I appreciated his enthusiasm.

○ Student: 7

- **Reason(s):** Major or minor requirement
- **Effort:** I feel like I put a significant amount of effort into this class. The homework sets take a lot of time to complete and I feel that I was in office hours a lot trying to get assistance.
- **Understanding & Appreciation:** I think the subject reflected real-life situations which helped my understanding of the course subject
- **Intellectual Growth:** I think this course has helped me be more on top of work.

- **Quality:** I think that the lack of a textbook makes this course difficult for me to understand what is happening sometimes. I feel that there should be more examples that are on the notes that we look at outside of class. I think this teaching is hard because I feel that sometimes the homework is unnecessarily difficult and few people in the class understand what is going on. Also, I think that the tests do not always cover the bulk of what is being covered in class. I would like it if the practice problems were less like the homework and more like the test. That being said, Cipolli is super responsive to his emails, extremely understanding and accessible. I think he is a good professor.
- Student: 8
 - **Reason(s):** Elective within major or minor
 - **Effort:** This course took a lot of time, the most time intensive part was probably the coding aspect. The math itself though was fun and challenging.
 - **Understanding & Appreciation:** I had never taken a statistics class and it greatly expanded my view of what is probability and how complex it actually is.
 - **Intellectual Growth:** The group work was a huge part of my growth in this class. Definitely not my favorite part but I feel like it made me better in group work scenarios.
 - **Quality:** Loved Professor Cipolli, very charismatic teacher that is always very enthused about what he is teaching, really made this course what it was. Also I really liked his grading style, very very clear.
- Student: 9
 - **Reason(s):** Elective within major or minor; Interest in the course material
 - **Effort:** I went to office hours occasionally and put in a lot of time doing the homeworks. Roughly 10 hours per homework. Studied a few days before tests.
 - **Understanding & Appreciation:** I grew to like this class more and more as the semester progressed. I feel as though I've gained a good understanding of the material.
 - **Intellectual Growth:** The class involves a little theory that is always useful to understand for general problem solving. It helped me with comprehension and problem solving.
 - **Quality:** Professor Cipolli was always available for help and responded quickly to messages. From class the examples and theorems really helped me prepare for tests and finish the homeworks. Overall I think the class was taught well and I learned a lot.
- Student: 10
 - **Reason(s):** Major or minor requirement
 - **Effort:** I went to nearly every class, with exception of probably 2 (one for extenuating circumstances) and paid attention during those times, even though it was very hard at 8:30 in the morning for 1 hour and 15 minutes. I completed the homework to the best of my ability and studied probably far

too much for the exams a few days in advance.

- **Understanding & Appreciation:** I learned how much more complex probability really was as a subject. Over the course of this semester, I have learned how difficult a statisticians job is and how many different distributions and moderations of those distributions there are.
- **Intellectual Growth:** Probability gave me a lot of knowledge of LaTeX, which will be beneficial for me next semester. Additionally, I thought that it was awesome to see a professor care so much about their student's opinions and feedback. Lastly, I thought that this course encouraged participation - even in small ways - through the use of notecards in class. Through that, I realized how important participation truly is in order for one to understand the course material.
- **Quality:** One thing I really appreciated about this course was that Professor Cipolli was extremely understanding and helpful when you had questions. Also, it was really nice to see the course grow throughout the semester to fit our class' needs rather than sticking by the lesson he already had planned. This shows that he has an extreme interest in students and has a great ability to adapt because not all lesson plans work for every class. I think he did a good job explaining things in class, but I did wish at times that we were following along with the notes directly on a powerpoint of some sort. Also, I wished there were weekly HW assignments rather than longer due assignments because I always found myself (and many others) to be completing it last minute. It would be nice to finish the HW assignments while the information is fresh in your mind, with the due date to force you to do so.

o Student: 11

- **Reason(s):** Elective within major or minor; Ultimately decided on taking this Math elective over any others because of Cipolli. One of my favorite professors at this school. This class is quite difficult but I do not have any regrets about taking it.
- **Effort:** There's no "nightly" homework, however the homework that are due about once every 3 weeks take about 10 hours or more to complete.
- **Understanding & Appreciation:** The homework was extremely challenging and forced the students to have a deeper understanding of the subject matter.
- **Intellectual Growth:** Working that long on some homework changes a man.
- **Quality:** I very much enjoy Cipolli's teaching style and his grading procedures.

o Student: 12

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor
- **Effort:** I put a good deal of effort into this course. Because of the weekly diagnostics and the problem sets that took up a good amount of time to complete.
- **Understanding & Appreciation:** I feel like I understand the concepts of probability better now

that I have taken this course. I also appreciate this area of mathematics better as well.

- **Intellectual Growth:** I feel like this course has also helped me with other courses such as the ones in physics as I see some of the counting methods and other probability functions in some of my physics classes.
- **Quality:** Prof. Cipolli was a very fun professor to have. He was very organized for each class and he made the class interactive in a way that such that it wasn't always lecture. I don't see any notable weaknesses.

○ Student: 13

- **Reason(s):** Major or minor requirement

○ Student: 14

- **Reason(s):** Interest in the course material
- **Effort:** I put a great amount of effort into this course, often times so much so that I felt my effort in other classes had to be compromised. I spent a significant amount of time on each homework, over 30 hours for most homeworks, which seems slightly unreasonable. Other than that, I've really enjoyed this class and it has allowed me to work tirelessly on something and become an avid problem solver.
- **Understanding & Appreciation:** As a result of this course, I have grown in my appreciation of the subject of probability and I've been able to see its relevance and every day applicability to the real world. It is such a vital subject that should be required for any math study.
- **Intellectual Growth:** Overall I have been able to better come to terms with and embody the idea of productive failure that Prof. Cipolli so openly hopes that we buy into. As a result of this course I have become a better problem solver and not afraid to make mistakes. This class has also enhanced my work ethic, collaboration with peers, and openness to asking questions.
- **Quality:** I really enjoyed Prof. Cipolli and his lectures and teaching style. The one critique I have is that they've become slightly monotonous and as a result I feel like students' attention and participation start to waver. These could be improved by varying how he portrays material and incorporating more small group activities or tutorial-like sessions. Thank you for a great semester, Prof. Cipolli! I truly have learned a lot— this is one of the most challenging but best math courses I've taken at Colgate and I am so happy I was in your course!

○ Student: 15

- **Reason(s):** Elective within major or minor
- **Effort:** I did the homeworks and studied for the tests but did not ever read the notes ahead of class.
- **Understanding & Appreciation:** I have learned a ton about probability specifically I have learned

a great deal about different distributions and how to use distributions to gain information.

- **Intellectual Growth:** I have learned how to apply concepts to problems that do not look like ones we have seen in class before, so this class has helped me learn how to completely understand concepts so that I can use them in multiple ways.
- **Quality:** Cipolli is an excellent teacher in class and is very engaging with the students. He does his best to increase class participation in a class where class participation would not be as high as other classes. His grading methods are fair and he is effective, give him tenure.

○ Student: 16

- **Reason(s):** Elective within major or minor
- **Effort:** I completed the homework in a timely fashion and was prepared for class each day.
- **Understanding & Appreciation:** I knew nothing about probability before this course. I did not know what the content would consist of before enroll. Now I have a solid understanding.
- **Intellectual Growth:** It challenged me to approach problems differently.
- **Quality:** Professor Cipolli is a good teacher. I had no complaints about the quality of teaching.

○ Student: 17

- **Reason(s):** Elective within major or minor; Useful for grad school.
- **Effort:** A lot of!
- **Understanding & Appreciation:** We started from scratch and went into useful theories and distributions. Great course!
- **Intellectual Growth:** Interaction really matters.
- **Quality:** Great course!

○ Student: 18

- **Reason(s):** Elective within major or minor
- **Effort:** This course required a lot of effort when it came to completing the homeworks and studying for the tests. The homework assignments took me many hours to type and figure out how to use R, in addition to asking questions in office hours. The tests also required adapting to new studying techniques, as I had to re study for old topics, which was a new and unique concept.
- **Understanding & Appreciation:** I really enjoyed this class and the topic we learned.
- **Intellectual Growth:** I think it was very helpful for real world applications to learn to use R. As I have been applying for internships for next summer, recruiters are often excited to hear about students who can use R.
- **Quality:** I thought Professor Cipolli was a great teacher. He was always available for questions, whether it be in office hours, outside of office hours, or on the moodle discussion board. It is clear that he really wants his students to do well and is willing to help them achieve their goals, no matter

what it takes.

○ Student: 19

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** This class required minor effort most of the time and extreme effort on a few occasions. Usually it is just come to class and listen enough to fill out the notes, but close to when the homeworks are due it is all I have time for. Obviously I could start assignments earlier but I don't.
- **Understanding & Appreciation:** I really didn't know any probability before this class and I now feel much more comfortable with the general concepts and feel like I could apply them to new situations but I am not actually sure what I know in the grand scheme of probability.
- **Intellectual Growth:** This class taught me coding skills I did not have before which will be useful in the real world.
- **Quality:** Cipolli is a good professor. He obviously tries to encourage involvement even in an 8:30 which is hard to do. For me the note packets are hard because they make it really easy to zone out instead of really pay attention, but I think he is engaging when he speaks and does a good mix of proofs and examples to make sure we really understand what to do.

○ Student: 20

- **Reason(s):** Major or minor requirement
- **Effort:** I put significant effort into succeeding in this course. After each chapter, I would make a study guide of the topics we had covered. I would also take a great deal of time to do the homework and double-check my work for correctness. I also studied well for tests until I felt I was very well prepared.
- **Understanding & Appreciation:** I gained some interest through the course, as many of the topics we covered were of intrinsic interest to me. However, I do not think I owe this credit to the professor, as in many instances the way that the course subject was introduced to us was in a manner that I felt wasted my time rather than facilitated learning.
- **Intellectual Growth:** I honestly do not think the course contributed to my intellectual growth beyond my understanding of the subject material.
- **Quality:** Overall, I was dissatisfied with the quality of the teaching. Firstly, the inclusion of the computer program, R, into the course I thought was ridiculous given that computer science was not a prerequisite to taking the course. I lost points on many homework assignments due to that fact that I had minimal experience coding (even though I have taken intro to computer science here at Colgate). I do not think it is right or fair to be tested on and lose points for something that was not taught in the course. Additionally, the problem sets would take a tremendous amount of time since we had to type up all of our work into this program. Without having to do this, the problem

sets would have taken a fraction of the time. While complaining about the time they took may not seem like a valid argument, typing the work up in R had no educational value and was just busy work. Additionally, the grading seemed to always be very subjective, as the professor would give you a letter grade on each problem depending on how well he thought you understood the problem. I definitely would have preferred a more objective, points driven method to grading rather than adding the possibility of subjectivity.

○ Student: 21

- **Reason(s):** Major or minor requirement
- **Effort:** I completed three homework assignments and group homework he assigned us, each had taken me over 15 hours to complete through R studio. I studied hard for the exams and did extra problems aside from the class.
- **Understanding & Appreciation:** I think my interest in those topics faded as his instructions sometimes confused me and he overcomplicated some simple materials in class which made me spend more time outside of the class studying the course.
- **Intellectual Growth:** This class trained me to get used to using Latex.
- **Quality:** I like the professor for how much effort he made to get the whole class involved in his class and his willingness to improve through feedbacks of students' in weekly diagnostics. However, I think my overall experience with this class was disappointing. The professor's grading standard for the coursework especially for the homework was extremely unclear. I didn't know what work he expected us from the homework. I also found it that the homework he assigned did a poor job consolidating the topics I learned in class through doing the homework because the homework contained merely complicated calculations and heavy coding work. Thus, I often felt like I learned nothing from this course. The professor also frustrated me by suspecting that I used online calculators instead of finishing the work on my own when the fact was I did type and code every digit on my own with the homework.

○ Student: 22

- **Reason(s):** Major or minor requirement
- **Effort:** The homework sets were distributed weeks before its due date and I have plenty of time to work on it. The lecture notes helped me prepare well for the exams.
- **Understanding & Appreciation:** It introduces me to the probability distributions and the applications of the distributions.
- **Intellectual Growth:** It introduces me to some coding that are going to be useful in my life.
- **Quality:** The professor has always been responsible and patient.

○ Student: 23

- **Reason(s):** Major or minor requirement
- **Effort:** 8 hour each week
- **Understanding & Appreciation:**
- **Intellectual Growth:** Almost nothing but learning how to use latex and R
- **Quality:** Strength: really good at facilitating class discussions Weakness: requires students to show unnecessary procedures and proofs, really time consuming and tedious. Harsh grader and sometimes raise ambiguous questions.

— Fall 2017: Section A

o Student 1

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** I spent about 20 hours on each homework, including working on my own and going to office hours. I spent a couple hours preparing for each exam.
- **Understanding & Appreciation:** The questions in homework and examples in class are interesting, not too abstract. I also saw the connections between probability and calculus, and other areas in math.
- **Intellectual Growth:** I am now able to think about many probability scenarios in life in ways that I had not been able to.
- **Quality:** Quality: I can tell that Prof. Cipolli tried hard to make the course interesting and be accessible to students. Yet I think the success is limited in certain aspects, for many reasons. He made TOO MANY MISTAKES instructing in class and drafting questions for homework, to the extent that class time was always wasted on us pointing out his mistakes, and homework time was always wasted on us struggling with unsolvable problems and then going to his office hours to correct them. He was not always helpful during office hours because he would not look at his solution sheets when he forgot how to do certain problems, and we, for many times, wasted a ton of time on one or two not very complicated problems. His office hours are scheduled in a way that students who take class in a certain period would never be able to attend. He scheduled all his exams for all his classes during the same weeks, so it was extremely difficult to find time to talk with him around those times. He used google calendar for appointment scheduling, which was not effective because a couple times two of us booked the same times! What he did was to let one student use up the entire time slot and the other just sit there waiting (from 8:30-9:00 in the morning!!) Even though he apologized in the end, it was very frustrating and unfair. He spent months getting back to me about one homework problem that I had a different solution than his own. He could have managed his time a lot better, because "being busy" is an excuse – everyone is busy!!

○ Student 2

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** Too much. This class and its tendency to give 24hr long assignments in a single week took away time I needed for other classes.
- **Understanding & Appreciation:** I thought all I really needed to know went by in the first chapter but from then on, nothing seemed integral or of any applicable interest to a non-statistician.
- **Intellectual Growth:** It made me realize that at times its necessary to stop pouring all focus on an exam or homework and spread out my attention to other assignments whether or not the ones for this class were done.
- **Quality:** The teaching is alright. The style of teaching is difficult for me to learn from and so I just take notes and read them on my own. The professor seems to care for his students but it seems to be lost in translation when he interacts with them in seemingly condescending ways.

○ Student 3

- **Reason(s):** Major or minor requirement
- **Effort:** I put a great deal of effort into this course. I went to office hours/scheduled appointments pretty much every week and made sure that I started my Homeworks far enough in advance to be able to ask questions on problems that I was stuck on. I also worked with my classmates on problems to understand material more clearly.
- **Understanding & Appreciation:** Going into this course I thought it was going to be similar to intro to statistics, but it was very different. I appreciate how the material builds on itself so that you need to use things you learned from the beginning of the semester, but this also made the class difficult because you had to remember material from weeks prior.
- **Intellectual Growth:** This course, as most math courses do for me, made me be proactive in my work and studying. I had to actively plan to meet with the professor to ask questions and get help. I wanted to do well and I knew that would be challenging since the material doesn't come easy to me.
- **Quality:** At first, I was a little discouraged with how the course was ran because the material seemed very confusing and the lectures weren't helpful because the material was so theoretical. It's unfortunate that the course has to start with the most difficult chapter because it is not encouraging to students. As time went on, we were able to do more examples in class which really helped. I think the homework questions deviated too much from the examples we did in class. I felt that I had to learn completely knew things to do the homeworks which made them frustrating because I was nervous that for the tests I wouldn't understand how to do the questions either. The grading method used sometimes seemed helpful, but I also didn't love that a few errors still made you get a

3 on a question vs a 4 because that seemed to drop the grade significantly. The professor was very available to meet and made time in his schedule for appointments. Later in the semester, he was more flexible with taking opinions from the class about homeworks and test formats. Overall, I think it would be better if the course didn't start off so strong so that students don't get overwhelmed.

○ Student 4

- **Reason(s):** Elective within major or minor
- **Effort:** Read notes and do the homework
- **Understanding & Appreciation:** Understand the probability: CDF PDF PMF, complex counting.
- **Intellectual Growth:** I learned myself this class.
- **Quality:** He's notes are the same as what he taught in class, which is unnecessary.

○ Student 5

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor; As a prerequisite for econometrics
- **Effort:** The course was very challenging, and this added many new skills to me. I learned a markup language and was exposed to R coding. I'm happy that I acquired these skills. There were long and hard homeworks.
- **Understanding & Appreciation:** I realized that I really like statistics and mathematic after this course, so I registered for two more math courses. I'm considering majoring in math because of this course. This course made me understand math is a very important tool which has applications in a very wide range.
- **Intellectual Growth:** In addition to statistics, the course gave also some insight into proving. I liked this aspect
- **Quality:** Th professor was very organized and flexibile at the same time. I believe this was the most important strength. We always knew what to learn and study, and he managed the time conflicts well. I also liked that he supplied notes. I don't know if I would learn as much had I taken the course with another professor.

○ Student 6

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** I did all of the homeworks, came to almost every class, and participated in almost every lecture
- **Understanding & Appreciation:** I feel like I have a very good understanding of probability distributions and the beginnings of statistics
- **Intellectual Growth:** Math always helps in developing critical thinking skills, so it helped me with

that.

- **Quality:** Professor Cipolli is great, but sometimes he overexplains things instead of just moving on, leaving me and surely others more confused. Otherwise, the class was perfect in almost every way.

○ Student 7

- **Reason(s):** Major or minor requirement
- **Effort:** I have put forth a great deal of effort into every assignment given (no less than 10 hours per assignment and over 20 on some). Having a 20 hour+ assignment during midterms week with 1.5 weeks to complete it in order to get the answer key before a test in this course 2 days later was beyond absurd and greatly hurt me in this class.
- **Understanding & Appreciation:** This course has worsened my appreciation for mathematics immensely.
- **Intellectual Growth:** I have been forced to learn how to teach myself in a number of different fields of probability and calculus after this course, as even though the professor knew some of us were 4 years out of calculus he offered no refresher courses, which even economic classes offer.
- **Quality:** The in class lectures were poorly structured, hard to follow and incoherent at times. The homework assignments were obnoxious as we later learned we were expected to have to look up answers and figure out how to get to them to solve it correctly (on the first homework two problems with entire wikipedia articles outlining how complex they are were given). The grading scheme is obnoxious, as completing the entire problem correctly and forgetting to add a minor detail bumps one down an entire letter grade. This is the first non-positive review I have ever written for a professor on sets forms since I feel so strongly that this class was so mismanaged. Also, I have received lower grades in other courses and written positive reviews so this is not a complaint due to my grade.

○ Student 8

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** The effort needed for this class was by a large margin the most effort, in terms of time, I have ever needed to put into any class at Colgate. The expectations for the amount of work to be completed outside of class was more than my other 3 classes combined this semester. Most importantly, I did not find the work to be helpful to understanding the material.
- **Understanding & Appreciation:** This class is not at all what I expected it to be when enrolling. It was far more theoretical than I anticipated. I feel as though if asked about probability in a job interview, I would struggle to answer the question, which is unfortunate.
- **Intellectual Growth:** I needed to play my time very well to complete this course because the HW

assignments were extremely long and took up a significant amount of my time, which detracted from the time I had to complete assignments for other classes.

- **Quality:** Professor Cipolli clearly is passionate about the subject and prepares thoroughly for class. However, I have not had a good experience in this course. As mentioned above the sheer amount of work was overwhelming at times and I did not feel it was necessarily helpful for understanding the course material. The grading standards were very confusing and hard to understand how/why certain grades were achieved. I found the lectures to occasionally be confusing with a lack of concrete examples to reinforce the theory being taught.

○ Student 9

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** I put in the number of hours expected; roughly 6.5h every week. I try to spend most of my time understanding the concepts and doing the homework.
- **Understanding & Appreciation:** Appreciation: I really really enjoyed this course. It helped me synthesize everything I have been learning in the mathematics major so far. It has been my favorite course this semester. I have a better understanding of calculus as a direct result of this course.
- **Intellectual Growth:** I found the examples very engaging and interesting. It has also meshed well with the other courses I am taking this semester.
- **Quality:** Fantastic. Prof. Cipolli is on time with everything he says he's going to do. He's accessible with good office hours and many appointment slots. He's also willing to (and does) answer questions on the Moodle forum. His goal is to make the course "challenging but doable" and he succeeds admirably in that goal. In class, he is sociable but focused, and welcomes questions, which means that the classroom environment is a pleasure to be in. He welcomes and solicits feedback which means that I feel heard as a student. He also does not give us the answer when we ask a question, which means that I don't need to worry when going into office hours about whether the problem will be ruined for me. I would 110% take a class with him again and hope to see him at Colgate for many years in the future.

○ Student 10

- **Reason(s):** Major or minor requirement
- **Effort:** heavy workload but I like it
- **Understanding & Appreciation:** Great
- **Intellectual Growth:** As a pure math student there are many applied cases in this course which are interesting
- **Quality:** He is really great and chill, I love the notes, work load is heavy but I like it

○ Student 11

- **Reason(s):** Elective within major or minor; Interest in the course material; I'm a mathematical economics major, so this is technically an elective within my major, but it's highly recommended that we choose this course as one of our electives.
- **Effort:** I always take very careful notes during class. The problem sets are where I do the majority of my learning, since there we get to practice using the concepts that we've learned in class. Generally, I would say each problem set takes about 15-20 hours total, and I spread it out over several days. I always work with partners on the problem sets but we write up our own solutions. Before tests, I generally spend about 5 hours reviewing all my notes, going over the examples we did in class, and going over the solutions to the problem sets.
- **Understanding & Appreciation:** I came into this course knowing very little about probability, since the last time I had studied it was sophomore year of high school and I found it very confusing then. Cipolli's teaching methods and fun personality in class helped interest me in the subject and make sure that I had a much higher understanding of the course material.
- **Intellectual Growth:** I think that this course has been good practice in how to work really hard to understand something, work well with other people in the class, and ask for help from the professor when I need it.
- **Quality:** I think that he does a great job of making a lecture class of more than 30 people actually fun to be in, because he's always making funny jokes and he actually knows all of us pretty well. Also, he feels really accessible, and he's super understanding if you need an extension on something. He definitely cares the most about making sure you learn the material and not killing you with work when you have too much going on in life.

○ Student 12

- **Reason(s):** Elective within major or minor. Interest in the course material.
- **Effort:** This class required more work than any other class I have taken at Colgate. The amount of time spent studying and completing assignments was simply unreasonable. At various points throughout the semester we were assigned 16-24 hours of homework during weeks we also had an exam in this class.
- **Understanding & Appreciation:** This course was excellent at contributing to my understanding of probability and math as a whole.
- **Intellectual Growth:** I have become much better at not sleeping as a result of this course. Hopefully this helps in a potential future investment banking job.
- **Quality:** The quality of lectures was good, but it was hard to review material effectively outside of lecture because we did not have a textbook for this class.

- Student 13
 - **Reason(s):** Major or minor requirement
 - **Effort:** I completed all the homework, showed up to every class, and prepared for the tests.
 - **Understanding & Appreciation:** Before this class, I didn't really like probability because I had never been taught it appropriately. Taking this class made me confront my dislike for the course material and I now have an appreciation for the complexity of the subject.
 - **Intellectual Growth:** Probability is applicable in many different disciplines. As my second major is neuroscience, I was able to use the concepts talked about in this class to better understand neuroscientific problems.
 - **Quality:** Professor Cipolli is definitely interested in the material that he is teaching and was flexible with the due dates and test dates so they better fit the schedule of the class. However, instead of using his passion for probability to inspire the class, his great interest in the material sometimes came across as arrogance.
- Student 14
 - **Reason(s):** Interest in the course material
- Student 15
 - **Reason(s):** Major or minor requirement
 - **Effort:** Interest in the course material
 - **Understanding & Appreciation:** I put in a lot of time on homework, and studied extensively before all exams.
 - **Quality:** Professor cipolli provides a high quality of teaching. He is dedicated to helping students learn, and he really knows the material well. One thing that would have made the class easier for me is if we were given complete notes instead of partial ones (I'm bad at taking notes and paying attention in class) and also if only tests were graded, not problem sets. This has little to do with Professor cipolli himself though. He is great and I would recommend him to future students.
- Student 16
 - **Reason(s):** Elective within major or minor; Interest in the course material
 - **Effort:** Substantial, to the point where I became worried about time for this class cutting well into my other classes, including seminars.
 - **Understanding & Appreciation:** I understand certain aspects of probability, but not nearly as well as I would have hoped going into this class. I am a math major yet am very unsure when and where the subject material is applicable, or how to apply it.
 - **Intellectual Growth:** I learned how to deal with someone in a position of authority who is condescending and refuses to acknowledge that he or she could ever possibly be wrong about anything

or make any sort of mistake without at least partially blaming it on someone else or other circumstances. While this may serve me well in the future, it is not an ideal lesson to be learning in probability.

- **Quality:** Strengths: Legitimately seems to care about the subject material. Weaknesses: Classroom attitude and mannerisms were condescending and boorish. Grading standards were peculiar at best and egregiously inconsistent at worst. Often made mistakes on the board, then when corrected, would blame a student for saying the wrong thing, which entirely defeats the purpose of being a professor, who should be able to see that error before the rest of the class. The material was written in a way that leaves me wildly confused about the relevance and potential purposes.

o Student 17

- **Reason(s):** Major or minor requirement; Elective within major or minor; Reputation of the instructor
- **Effort:** I put a lot of effort into this course. Not only did I attend every class, except for one that I missed for an interview, I came to class, was attentive and asked questions often. I started each homework ahead of time, according to the syllabus we were to be given a weeks notice once we had finished the chapter to complete the homework, and for each homework assignment I planned to start and did start well before the chapter was finished. Professor Cipolli did not always give us sufficient notice for the deadlines of these assignments, as he noted in the syllabus.
- **Understanding & Appreciation:** I feel that I have a good understanding of the basic probability concepts, even though we have not finished the course material.
- **Intellectual Growth:** In this class problems were assigned in which I felt were more like brain teasers than actual math exercises, so I did not feel that they contributed to my understanding, however, I do feel that some problems did help me learn skills that will help me beyond the scope of this course.
- **Quality:** I think that Professor Cipolli was a little over-ambitious in what he wanted to accomplish in teaching this course, and what he wanted us to accomplish. This happens from time to time in other classes I have taken, but I felt very often that I was rushed going in to exams or handing in assignments because it was not explicitly clear from the syllabus, or far enough in advance to know when they would be or when they would be due. I personally was taking a heavy course load this semester, and have a lot of extra curricular commitments that I juggle by managing my time, which I do not have a problem with my courses doing, but I felt that these assignments/exams threw me off. Professor Cipolli is very helpful in office hours and also over email/moodle and answers questions clearly and in a timely manner, so I wish that he would have more office hours! Maybe once he has taught this course enough to figure out the correct timing of exams/assignments it

would be better, but I felt that deadlines and assignments were not clear at the beginning of the semester, and that made this course very difficult for me.

○ Student 18

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** It took me 10 hour for each homework approximately. And I take an hour to review the stuff I learned every two days.
- **Understanding & Appreciation:** Probability is fun but troublesome. It needs tons of calculations.
- **Quality:** Professor Cipolli's lectures are clear and organized, and he is an easygoing person. However, he makes mistakes frequently. In class, he makes algebraic mistakes and typos in every class perhaps. In homework, we were often offered with wrong formulas and every homework assignment has tons to typos (at least 5 in each). His grading method in homework and exams is horribly bad. Making 2 tiny mistakes (such as an unimportant typo) decreases about 10% in the overall grade. Unreasonable.

○ Student 19

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** I usually left all the work until the last minute
- **Understanding & Appreciation:** While I did enjoy the topic, I found it to be too theoretical and we spent a lot of time getting bogged down in calculus which made it much less interesting.
- **Intellectual Growth:** Probability has applications in everyday life, and the models you learn can be used in the decisions you make
- **Quality:** Prof Cipolli has clear guidelines and is pretty flexible. He does explain the material well. This course does require a lot of time, and a lot of the work done comes down to calculus and algebra and the concepts in probability sometimes take a back seat when you do so much of it.

○ Student 20

- **Reason(s):** Major or minor requirement
- **Effort:** This course required a great deal of effort. The homework assignments were long and challenging, so I had to spend several days to complete each one. The tests were fair, but challenging, and required a significant amount of time devoted to studying and preparation. This course probably required the most out of class time to complete homeworks and prepare for class and exams.
- **Understanding & Appreciation:** Appreciation: I feel that I have a solid grasp on the basic ideas and methods of probability. This course is a great review and application of calculus methods in real world scenarios.

- **Intellectual Growth:** This course has helped me improve my time management skills greatly. At the beginning of the semester, I struggled mightily with the homework assignments because I did not give myself enough time to complete them, but I have done much better since then, which was reflected in my improving grade throughout the course.
 - **Quality:** Professor Cipolli always comes to class engaged and teaches the material in an interesting way. He is very helpful in office hours or through email, and though the workload in this course was very high, especially when taking other courses, the assigned problems were rarely unmanageable.
- Student 21
- **Reason(s):** Elective within major or minor
 - **Effort:** I put a decent amount of effort into this course, enough to get a passing grade. I felt that sometimes it was hard to learn some of the topics.
 - **Understanding & Appreciation:** I appreciate math more coming out of this class. I understand the course fairly well but sometimes I wish we did more real world examples and discuss what we calculate and what it actually means.
 - **Intellectual Growth:** I think that I learned how to connect different units in the course pretty well. Also, I have learned to work through harder problems and have endurance.
 - **Quality:** The quality of teaching is one of the best I've had here at Colgate. The professor is intriguing, smart, respectful, and also approachable. He answers every question perfectly but also allows room to joke around. He is lively and engaging which makes me look forward to coming to class.
- Student 22
- **Reason(s):** Major or minor requirement
 - **Effort:** I feel like I put a lot of effort into this course. I would start homeworks as soon as they were assigned in order to not be overwhelmed. The one part I did slack on is studying for tests. I definitely should have spent more time reviewing the material.
 - **Understanding & Appreciation:** I had never learned about probability before. After this course, the material began to pop into many of the other courses I was taking this semester and it allowed me to greatly appreciate learning this course.
 - **Intellectual Growth:** The biggest part of this course for me was learning how to use LaTeX. I never would have done that and it has been amazing. I love it and I am using it to write my thesis.
 - **Quality:** I thought the homeworks and tests were written in a perfect way to test our knowledge in a situations we had already been in before as well as in new problems to deepen our knowledge of the subject. I am not sure how helpful I found the notes posted on moodle since I wrote the notes in my notebook anyway.

- Student 23
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put an enormous amount of effort into this class. Each homework assignment required approximately 25 hours of my time to complete. Additionally, I coded homeworks into a nicer format which took additional time.
 - **Understanding & Appreciation:** I thought I would really like the course material, but after taking this class, I realize manipulating distributions is probably not what I want to do with the rest of my life.
 - **Intellectual Growth:** I think this course challenged me to think through incredibly difficult problems. It forced me to ask for help and utilize all of the resources accessible to me.
 - **Quality:** Professor Cipolli is an absolutely amazing professor. He cares about his students and is passionate about the class he teaches. He is always willing to help and is very accessible.
- Student 24
 - **Reason(s):** Elective within major or minor
 - **Reason(s):** Interest in the course material
 - **Effort:** This course definitely challenged me more than I expected it to, but not necessarily in a bad way. The homework assignments were time consuming and required a lot of thought.
 - **Understanding & Appreciation:** This made me realize how applicable probability is to a wide range of settings and made me confident in my abilities for the future.
 - **Intellectual Growth:** It taught me time management skills because the homework assignments took so long.
 - **Quality:** Professor Cipolli is a really good professor and knows a lot about statistics. However, I found some of his material to be unnecessarily difficult, expecting us to know things we could not possibly know. Also, his grading procedures were really weird and didn't really make sense to me.
- Student 25
 - **Reason(s):** Major or minor requirement

Fall 2016: Section A

- Student 1
 - **Reason(s):** Elective outside major or minor
 - **Effort:** I studied for all the tests and worked hard for all the homework but could have gone to office hours more
 - **Understanding & Appreciation:** The subject is extremely interesting to me, because I am interested in Data science and it is really relevant to that

- **Intellectual Growth:** I will likely be using information from this course in my research next semester so it is really relevant
- **Quality:** He worked extremely hard for this course. Everything was graded extremely fast. It felt like he spent too much time on the easier stuff at the beginning of the semester and then by the end of the semester he didn't have enough time for the more difficult topics. So I think in the future he could speed up the course in the beginning of the semester to allow for more time on the harder topics. The last HW, in particular, seems at little forced considering the notes were released 3 days before it was due and we didn't learn a lot of what's on it until 2 days before it was due. I really liked having the notes available. I would not print them out and take notes in a notebook in class. Then could review them along with the textbook after I heard it for the first time.
- Student 2
 - **Reason(s):** Elective within major or minor; Interest in the course material
 - **Effort:** I spent a bunch of time reading both his notes and the textbook, and also doing the homework and studying for the tests.
 - **Understanding & Appreciation:** Taking this course showed me what probability actually is and how is done with math and why its important.
 - **Quality:** I thought he did a great job teaching. Everything was very clear and instructive, he is the quickest grader I've ever had at this school, he was always around and willing to help and answer any questions about the material and was just a great person to have as a professor and everyone loves him.
- Student 3
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put forth genuine effort throughout the semester. I completed all homework assignments and thoroughly reviewed the notes and past examples for exams.
 - **Understanding & Appreciation:** The course helped me gain a greater appreciation for applying probability in the real world. I was able to learn the theory while still learning about real world examples.
 - **Intellectual Growth:** The course improved my organization skills given the professors high standards for homework assignments and tests. I learned to be clear in explaining my answers.
 - **Quality:** The professor is very passionate about the subject and has a strong background in the field. He is able to explain complex concepts with ease and is good at getting the students involved. The professor's method of typing up most of the notes was effective. His lengthy homework assignments helped when preparing for the exams. He was also always accessible.
- Student 4

- **Reason(s):** Elective outside major or minor
 - **Effort:** I attended every class with only a few absences. For every test and every homework assignment, I would spend hours review and re-reading the notes and textbook to understand the material.
 - **Understanding & Appreciation:** While I struggle to keep up with the course, it still has contributed greatly to my understanding of probability and statistics and how these subjects are used in real-world applications. This is most apparent in our examples or homework problems where you can see where a probability distribution is used and how you interpret that.
 - **Intellectual Growth:** Time management and actively seeking help when you need it, I would say, are the two most important skills or traits that you would learn from this course beyond the course subject.
 - **Quality:** Professor Cipolli has taken great steps to ensure that every student has the tools they need to succeed in his class. It is obvious just from attending class that he spends a great deal of thought and time planning his lectures, grading assignments, and crafting the class notes. Most of his examples are both informative and interesting and he definitely accomplishes a great deal when simplifying the Cassela-Berger textbook in his own notes. His personality is a breath of fresh air and he is remarkably accessible and easy to talk to. I wish I had made the time to go office hours more. The only weaknesses I can think of are circumstantial. By that I mean, I feel that the course moves a little too quick for comfort sometimes and escalates at bizarre intervals. One day, we might be spending our 3rd class in a row going over calculus and then the next day it feels like we've moved on 2 chapters. The tests are difficult, for me. While I know other students are doing fine, I find that the homeworks are, contrary to his reassurances, much more difficult than the homeworks. Maybe easier tests or harder homeworks would be nice? His last weakness are his jokes. (I'm kidding. They're pretty funny.)
- o Student 5
 - **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
 - **Effort:** This class required a lot of work to be put into homeworks, but these prepared me for the exams quite well, so there was less study time when it came to exams.
 - **Understanding & Appreciation:** Professor Cipolli put the problems and material we learned in real world context, so it was easy to see the applications of what we learned even in a theory based course. By doing this, it is easier to appreciate and understand the subject in a greater view.
 - **Intellectual Growth:** This course furthered my ability to approach problems analytically and systematically. It is very different from most math courses in the sense that some of the material is slightly more abstract and theory based.

- **Quality:** Great Professor, very clear, very willing to help his students succeed, and very accommodating to having extra office hours. He definitely puts a lot of effort into writing notes for us and giving back assignments incredibly quickly . I really appreciate his commitment to the course and his students.
- Student 6
 - **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** I put in twice a weekly to do assignments and additional studies for exam.
 - **Understanding & Appreciation:** Conceptual learning on the probabilistic problems
 - **Intellectual Growth:** It had me think in terms of probability more outside the context of math.
 - **Quality:** Emphasis on learning is great, but handout materials are in working progress, hence more typos than what he would want
- Student 7
 - **Reason(s):** Major or minor requirement
 - **Effort:** I spent a fair amount of time on the homework in the class. I felt like the homework did a great job preparing me for the exam so when the exams came around I only had to do minimal revision.
 - **Understanding & Appreciation:** I took this course for a major requirement.
 - **Intellectual Growth:** The course was useful in helping me with interview questions. Many interviews that I had asked questions about conditional probability and having an understanding from the course definitely helped.
 - **Quality:** Professor Cipolli was a pretty good professor. I felt like the material in the course was presented in a relatively clear manor but the frequent typos and delays on the notes was slightly annoying. The notes were, however, very helpful throughout the course. The professor was also open to questions and had plentiful office hours. Overall, I have no complainants about the quality of teaching. I think Professor Cipolli did a pretty good job.
- Student 8
 - **Reason(s):** Major or minor requirement; Exploration of possible major or minor; Elective within major or minor; Interest in the course material
 - **Effort:** I didn't work that hard at the beginning, but as the material became more difficult I began to put in a good amount of effort.
 - **Understanding & Appreciation:** I already had some experience with probability and statistics, but this course has pushed me well past my previous understanding and appreciation. The professor did a good job of making this course interesting and useful to students with different backgrounds.

- **Intellectual Growth:** This course has improved my intellectual growth in general because we learned various ways that probability and statistics can be used. We discussed various fields of study in this mathematics course.
- **Quality:** Strengths – good at conveying the information in a unique and interesting way, kept me engaged with humor, the homework was often great preparation for exams, and the professor was available to help outside of class. Weaknesses – the tests varied in difficulty and it was sometimes hard to prepare for that Overall – the class was taught very well and I plan to take Math 317 with the same professor next semester
- Student 9
 - **Reason(s):** Elective within major or minor; Elective outside major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** A LOT of work. I have literally spent entire days on Professor Cipolli's problem sets, and I always took a lot of time to study before exams.
 - **Understanding & Appreciation:** Professor Cipolli explained some very complex concepts in interesting and understandable ways. I did not have much background in this area before but now I definitely do.
 - **Intellectual Growth:** This course contributed greatly to my quantitative reasoning skills. Also forced me to brush up on calculus (to mixed degrees of success). Will be helpful for future work in mathematical economics.
 - **Quality:** Professor Cipolli is a wonderful human being. I've heard peers (and myself) variously describing him as a genius with a cool-high-school-math-teacher vibe, a force of nature, a well-oiled German machinery, and a runway model. He made a very intimidating topic very approachable, thanks to his effective methods in lectures and in office hours, and thank god for his notes. He is also super efficient and organised, and it was a wonder if he did not have assignments or exams fully graded by the following class. His fun personality and quirky sense of humor also made classes a joy. The online discussion requirement was kind of a pain, but that's probably the only gripe. Please give this guy tenure.
- Student 10
 - **Reason(s):** Elective within major or minor
- Student 11
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a decent amount of effort in my home works, reviewing notes and our class discussion forum as I went along and making sure that I understood what I was doing. This was enough too prepare me to prepare me for the tests for the most part.

- **Understanding & Appreciation:** Probability is definitely more theoretical than I thought before taking the course. I can definitely see its use cases though, and the few examples in class really helped me realize the potential of all the theory we were learning.
 - **Intellectual Growth:** It taught me to learn from my peers.
 - **Quality:** Professor Cipolli is an amazing teacher, dedicated to making sure that students learn. He is definitely enthusiastic about the subject matter and genuinely finds it interesting. This really helps when covering boring sections, where he'll try to keep the class interested by talking about he he found it relevant in real life or by just keeping the class lighthearted. He is also extremely helpful in office hours and is definitely one of the more accessible professors here. All in all 10/10, I think he nailed it.
- Student 12
 - **Reason(s):** Major or minor requirement; Elective within major or minor
 - **Effort:** The homework is always harder than the exams which will take me lots of time.
 - **Understanding & Appreciation:** Since this class is more conceptual, it gave me some basic concepts and ideas of probability problems and distributions.
 - **Intellectual Growth:** As the preparation for MATH 317, it gave basic ideas and concepts which will be used later maybe in real life problems.
 - **Quality:** Professor really cares about students since he asked for a survey every time after an exam. The notes are well formed and are easier to understand compared to the book. Examples are extremely helpful to understand the material.
 - Student 13
 - **Reason(s):** Interest in the course material
 - **Effort:** I completed all assignments and went to office hours frequently when I didn't understand something
 - **Understanding & Appreciation:** I see economics models and other models also as relating to probability theory, as I think what I learned in this class is very applicable to other subject areas.
 - **Intellectual Growth:** I now think more critically about different problems and concepts in a way I didn't before.
 - **Quality:** I thought the Professor made class entertaining with his jokes and also welcoming all questions. However, I think the moodle posts should either be required every week or else not be graded.
 - Student 14
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put a decent amount of effort into this course. However, this course was much less

demanding/difficult than any other math course I've taken at Colgate (including 113). I think that the main issue in this class is that it was too easy.

- **Understanding & Appreciation:** I felt like I learned the material so that I could answer most questions. However, I feel like there can be more emphasis on giving an intuition about the formulas we derive.
- **Intellectual Growth:** Probability theory is one of those subjects that's applicable in tons of places outside of the class room. Helps you evaluate probabilities of things happening, and its actually been useful in my research.
- **Quality:** Professor Cipolli is a good lecturer, and I really like his style of giving class notes before hand. The class was well structured and well taught, and class was usually interesting. I really liked the theoretical aspect of the course, and actually enjoyed the examples much less than the theory. Professor Cipolli is attentive to class needs, and is good about gathering and responding to student comments/suggestions. That said, you will not get honest answers from students if you ask them about the difficulty of the course . I know from talking to other students that many people think the course is far too easy. However, no student is going to tell the professor that while they're taking the course. It is certainly the easiest math course I have ever taken at Colgate by a long shot. Mainly, the problems are repetitive and are often not particularly challenging. I would have liked more theoretical homework problems involving more proofs and derivations. Tests should also be more difficult.

o Student 15

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of time and effort into this course
- **Understanding & Appreciation:** Significantly contributed to my understanding of the material. Enjoyed this class more than any math class I have taken due to both subject matter and professor
- **Intellectual Growth:** Helped me develop my study skills further, especially since it was a difficult class
- **Quality:** Professor Cipolli was great. Helpful and extremely accessible. Lectures were very good, although they could be a little dry at times but overall the teaching was excellent

o Student 16

- **Reason(s):** Major or minor requirement
- **Effort:** This was one of my easier math courses, however, it was extremely interesting and the work load was pretty good so I definitely had to put in effort there. I also went to office hours when I was unclear on a topic. Overall I would say I put a good amount of work into this class, but being one of the more manageable work loads and easier conceptually, it often took a backseat to my other

courses.

- **Understanding & Appreciation:** I really enjoyed the course. I think the professor does a great job of inspiring interest in the subject with his effort and use of real world examples. It allows you to see how important these topics are and applicable to the real world.
 - **Intellectual Growth:** This class helped again with application of math and has helped continue my appreciation for math and reinforce my desire to work in this field.
 - **Quality:** The professor for his first semester here did a great job. He was interesting and enthusiastic and conveyed material very clearly. I really enjoyed the use of R, even though it was kind of a pain in the butt, because that is how these subjects are actually carried out in the real world, thus his knowledge of the industry side was helpful. His work load was fair as was his grading. It was a little slower than some of the other math courses, but this also may have been due to the diversity of major backgrounds among students in this course taking their first theory class. Overall, very clear and very willing to learn as a professor, kept checking in throughout the semester to see how the class was doing, so that he could adjust within the semester, not waiting until the end.
- o Student 17
 - **Reason(s):** Major or minor requirement
 - **Effort:** Attend every class, finish homework and exams.
 - **Understanding & Appreciation:** I have understood probability in a better way and it is interesting to see how to apply all these toolkits in the real life situation.
 - **Intellectual Growth:** I have also learned how to use calculus as a very useful tool to solve problem.
 - **Quality:** Prof Cipolli is a very funny person. He is also very nice and approachable.
 - o Student 18
 - **Reason(s):** Major or minor requirement; Elective within major or minor
 - **Effort:** I put in a great deal of effort. Doing the homeworks was pretty challenging and took a lot of time
 - **Understanding & Appreciation:** I feel like I have a strong grasp of probability theory
 - **Intellectual Growth:** Besides probability this class was also a strong revision of calculus
 - **Quality:** Professor Cipolli is very organized which I think is really important. The lecture notes are a good proof of that. Class is always interesting and fun. He always graded and returned our exams and homeworks as soon as possible so I was able to understand my mistakes rather than him returning them really late and me not understand what's going on. I thought he was a great professor overall
 - o Student 19
 - **Reason(s):** Interest in the course material

- **Effort:** Read the notes after class, and finish homework assignments.
 - **Understanding & Appreciation:** Knowing probability is much more complicated than calculating a probability of an event. Understanding probability in a statistician way.
 - **Quality:** Professor Cipolli always make the class fun.
- Student 20
 - **Reason(s):** Major or minor requirement
 - **Effort:** I spend about 4 hours to do every homework
 - **Understanding & Appreciation:** I understood some basic concepts of probability
 - **Intellectual Growth:** I might take more advanced level probability class in the future
 - **Quality:** I think the teaching quality is ok. The professor tried to present the material clearly and interestingly. However for some reason his lecture is a bit hard to understand.
 - Student 21
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I put in a lot of effort in the course by studying a lot, attending office hours often, and putting a lot of care into homework assignments
 - **Understanding & Appreciation:** I always thought probability was just the probability of events but it was so much more than I knew existed
 - **Intellectual Growth:** I realized I really liked applied math and statistics and it inspired me to continue studying the subject matter next semester
 - **Quality:** Professor Cipolli genuinely cares about his students and I really like how he gives us printed notes so that we can pay attention in class rather than scrambling to write everything down. I like how the homework is good preparation for tests, and how there were a lot of tests to ensure we were keeping up with the material. As for weakness, I don't like how there is a grade for posting on the Moodle discussion board, as I don't see how that indicates anything about our knowledge of Probability, and definitely lead to people posting on the forum for the sake of the grade.
 - Student 22
 - **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** Moderate – Weekly problem sets, reading discussion forum, some extra reading
 - **Understanding & Appreciation:** I had never taken an introductory stats class, so this was a rapid introduction to some of the basic concepts.
 - **Intellectual Growth:** My senior thesis is based in probability and statistics, so I was glad to have a class in the same semester
 - **Quality:** Will is extremely accessible and transparent in his teaching. He was well prepared for

lectures, and he returned assignments and exams unbelievably quickly. Having typed up lecture notes on moodle was extremely useful, and helped clarify some of the notation used in class. My only complaint would be that grades on homework were a little unclear, and that assigning 1.25 points per question makes deducting points a little more difficult. Perhaps scaling the points to 50/100 would make grading/pointing out mistakes more clear.

○ Student 23

- **Reason(s):** Major or minor requirement
- **Effort:** I attended all the classes, handed in homework, and reviewed before the exams.
- **Understanding & Appreciation:** This course gives me more understanding of applied side of mathematics, also provides me with basic concepts about statistics and data.
- **Intellectual Growth:** I was able to view data from a more critical perspective.
- **Quality:** Professor Cipolli is good, he provides very clear class notes, and reasonable tests and homework. He sometimes makes little mistakes in class, it will be great if he can check those tiny errors before presenting.

○ Student 24

-
- **Reason(s):** Major or minor requirement
- **Effort:** I spent about 5-10 hours on each homework assignment which included reading the notes and making sure I understood the topic before completing the assignment. I studied for at least that much for the exams.
- **Understanding & Appreciation:** Math is fun
- **Intellectual Growth:** It definitely helped with my problem solving and analytical skills as some of the homework questions were very challenging and not quite straight forward.
- **Quality:** Professor Cipolli is a great professor and I'm glad he is at Colgate. He is engaging and explains everything clearly. He is also very accessible for help which shows a dedication to his students. His grading was the only weakness but it wasn't terrible, just unclear. He also gives us all surveys after each exam to make sure that we are all satisfied with his pace, which is great and shows how much he cares again. Overall I've really enjoyed this semester with him and hope other students get a chance to learn from him.

Fall 2016: Section B

○ Student 1

- **Reason(s):** Major or minor requirement; Interest in the course material; Strong interest in the course material
- **Effort:** I came to nearly every class, spent HOURS on every homework, and attended office hours

on average about twice per week. I am very attentive in class and participate more than most students. I worked very hard in this class.

- **Understanding & Appreciation:** Very much so. At first I was genuinely confused by a lot of the theory in this course but once I began frequenting Professor Cipolli's office and meeting with classmates to complete Problem Sets I began to really understand what was going on. I know much more about Statistical Theory than I once did and I am excited to take 317 with Professor Cipolli next semester.
- **Intellectual Growth:** I think that by forcing myself to take a step back, and analyze theory as much as I "grinded" out problems, forced me to understand the course material in a more complete way. This has helped shape my intellectual growth here at Colgate undoubtedly.
- **Quality:** Professor Cipolli is the most organized and hard working Professor I have had at Colgate. He is well prepared and loves helping students. His notes are usually helpful and I always learn at least something from his lectures. Often times I understand everything we go over in class but it is in the nature of this course I believe that that is not always the case. Sometimes I think that Professor Cipolli doesn't truly understand our questions – on Problem Sets and/or in Office Hours. There have been a small number of occasions where I have left office hours or read an email from him that has just served to confused me further. Nonetheless I would highly recommend Professor Cipolli to anybody who asks if they should take his class.

o Student 2

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I put a great deal of effort into this course. Especially when the course began to get more theoretical, I would spend hours trying to understand the material.
- **Understanding & Appreciation:** It helped me appreciate the probability theory that underlies all of statistics. The theory is super important so that we understand what we are actually doing when moving towards more applied statistics. I really appreciated this course.
- **Intellectual Growth:** It stretched me to think in ways I have never thought before. The material was quite abstract at times, and this forces you to think through a different lens. I'm happy I got through it even though it was difficult at times.
- **Quality:** Professor Cipolli is the man. I cannot think of any weaknesses in his teaching, and I think the quality of teaching was exceptional. I'm looking forward to taking his class again, and I'd recommend a class of his to any of my peers.

o Student 3

- **Reason(s):** Exploration of possible major or minor
- **Effort:** The effort I put into this course consisted of 4-5 hours about once every two weeks, when

I would do the hw at the last minute.

- **Understanding & Appreciation:** This course contributed to my understanding of the course material in that I now know more theory behind probability than before. I would say my appreciation for the subject has decreased, as I am not too fond of the straight theory of probability, and instead am interested more on application. This is not the fault of prof Cipolli. In fact, he mentioned trying to get a data analytics class offered soon. I would love to see the department offer that class.
- **Intellectual Growth:** The course helped me realize how bad my study habits can be sometimes.
- **Quality:** I believe that Cipolli did an outstanding job teaching, especially given that it was his first year here. He cracked jokes in class constantly, trying to engage the class. Given it was an 820, most students were quiet, but he tried his best. When teaching, I would have preferred that maybe he not teach straight out of his notes. However, this method was not bad, just maybe not the best way that I learn. Cipolli was very accessible outside of class and always willing to help us.

○ Student 4

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I take notes in each class and review my notes after class. I also use online forum on a regular basis to learn from my peers and raise questions. I also spend extra time before each test reviewing and doing practice problems.
- **Understanding & Appreciation:** I learned more about statistics and probabilities due to this course, and especially how to incorporate R and other programs into a math class.
- **Intellectual Growth:** It helped me think critically and logically. I also learned to pay close attention to details, especially when writing a proof. I also get the hang of basic programming and graphing skills due to this class.
- **Quality:** Prof. Cipolli is very nice, helpful and accessible. He always tries his best to help students learn and make his lectures interesting and insightful. He is always available during office hours and via emails, and he is willing to set up extra time for students. He gives clear grading criteria and gives feedback on time, which helps students to review and improve. His lectures are organized, interesting and detailed. I really enjoyed his style and class.

○ Student 5

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I did all the homeworks; had never missed any class so far.
- **Understanding & Appreciation:** it helped me understand some theories and concepts behind probability models, and see a little bit how they are applied in real world.
- **Intellectual Growth:** The course has helped me realize how much theory work has to be done in order to model some real-life scenario.

- **Quality:** The teaching is of great quality, but it'd be better if the instructor could provide more in-depth examples on how the concepts and theories we've learned in class are applied in solving real world problems.
- Student 6
 - **Reason(s):** Interest in the course material
 - **Effort:** In addition to the extremely long and difficult assignment which usually takes 3 to 4 hours, I usually spend 30 minutes everyday, when time allow, to review the material we learned in class that day.
 - **Understanding & Appreciation:** I learned that probabilities is not as easy as stats.
 - **Intellectual Growth:** It helped prepared me for interviews I have had with companies known for asking probability questions.
 - **Quality:** Prof. Cipolli cares about his student a lot and has many office hours. However, I felt like I didn't really learn in class. Maybe he was going too fast to the point I wasn't sure what was teaching anymore. It could also be the the way he was presenting the material that didn't make sense to me.
- Student 7
 - **Reason(s):** Elective within major or minor
 - **Quality:** Professor Cipolli came up with many interesting examples both in class and in homework. He also did a very good job in incorporating R into the class, in addition to calculations by hand. However, he could improve on his style of lecturing, especially in focusing only on class content and talking less about class irrelevant things or comments. Also, he could come more prepared and give his lecture more organized than he did this semester given that this is his first semester of teaching. He did a really good job in asking for feedback: He sent out survey multiple times throughout the semester. In general, he has potentials but he could improve on his lecturing.
- Student 8
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** hours of study every week
 - **Understanding & Appreciation:** A better sense of applied math
 - **Intellectual Growth:** More practice on math logic
 - **Quality:** Fair
- Student 9
 - **Reason(s):** Major or minor requirement
 - **Effort:** I put a lot of effort into this course. I frequently studied and each homework required a fair amount of time. I Leading up to assignments being due, several hours a day had to be put aside to

complete it. There were also four tests, so we frequently were reviewing those as well.

- **Understanding & Appreciation:** I believe the course has really helped me appreciate the subject. At the beginning of the course I wasn't even quite sure what would be discussed but I came out of it hoping to continue on in the subject.
- **Intellectual Growth:** The course helped my intellectual growth for several reasons. Firstly, it was very difficult and reasoning intensive. I believe it has helped me approach problem solving more carefully, because most of the work was theoretical. So, ideas, rather than equations were taught. Also, considering I enjoyed the class, it helped my education by encouraging me to take more math courses, including Math 317.
- **Quality:** The quality of teaching was outstanding. Professor Cipolli was my favorite teacher since coming to Colgate. He made the class challenging, but rewarding. He facilitated learning in exciting ways Professor Cipolli was excited and enthusiastic every class, and it was infectious. He welcomed questions almost with vigor, which was actually really encouraging. It seemed everyone felt comfortable speaking in class with a question if they were unsure, and the positive feedback allowed for an easier learning environment. That would have to be one of Professor Cipolli's strengths: how he responds to questions. He placed a great amount of import on students' getting their questions answered. I cannot think of any weakness exactly; if there was something occurring that the students didn't feel was helpful, he would send out a survey and fixed it. That was very helpful and thoughtful.

— MATH 416: Mathematical Statistics

— Spring 2021: Section A

- o Student: 1
 - **Reason(s):** Elective within major or minor
 - **Effort:** I put a solid amount of effort into this course, in particular on homeworks and studying for exams.
 - **Understanding & Appreciation:** This course really strengthened my understanding of the course material as I had learned a lot of this information on a basic level in intro stats, but this course dove deep into the reasoning and methods behind those techniques and more complex problems
 - **Intellectual Growth:** This course allowed me to take examples and definitions from class and apply them to new situations and problems.
 - **Quality:** I think Professor Cipolli has done an excellent job teaching this course. He answers emailed questions and returns homework/exams in an impressive amount of time which really helped me to succeed in this course. He keeps classtime productive and engaging and answers questions really

well. This course has been challenging but reasonable, which is a tough balance to achieve.

○ Student: 2

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material; This course will not be offered again before I graduate
- **Effort:** Died every week but it was absolutely worth it. I took this class without taking the prereq so i had to spend a lot of time catching up on top of the workload but it never really felt like it was exhausting. The homework took a lot of time to write up but they were fun to do.
- **Understanding & Appreciation:** The class went into a lot of mathematical detail and gave rigorous explanations of concepts in statistics that were pretty hand wavey before. I'm excited to learn more about statistics thanks to this class (and data analysis).
- **Intellectual Growth:** I don't like using Rstudio to write the latex stuff so I had to configure my text editor heavily to write latex efficiently, but that has paid dividends in other academical aspects of my life.
- **Quality:** Prof Cipolli is the best professor at Colgate with zero faults

○ Student: 3

- **Reason(s):** Reputation of the instructor; Interest in the course material
- **Effort:** I went to all the classes, reread my class notes before the next classes. I started the homework early enough to be able to ask questions as needed. Sometimes went to office hours.
- **Understanding & Appreciation:** The material was very interesting and I learnt a lot throughout this course. It tied a lot of other stuff that I learnt previously in other math and CS courses plus data analysis.
- **Intellectual Growth:** The class encouraged a lot of thinking outside the box and thinking about one problem from multiple perspectives.
- **Quality:** Strengths: the instructor was very accessible and understanding with deadlines. He allowed extensions if you asked. He also encouraged discussing the subject with other people in class which was very helpful since the material was challenging. The exams were fair and the grading in general was fair. Weaknesses: sometimes I feel like the topics were coming out of nowhere and it would take me a while to connect different topics to each other. The professor is very smart and sometimes he would skip steps while explaining things to save time so I would get lost in the middle of proofs sometimes and I would have to go back to his notes later to read it.

○ Student: 4

- **Reason(s):** Interest in the course material
- **Effort:** This course required a lot of effort in the beginning, getting familiarized with LaTeX and the homework would take a decent amount of time. The exams would not require too much studying

as the homework and classwork prepared you well.

- **Understanding & Appreciation:** I am able to better understand some statistical measures that I have used in the past
- **Intellectual Growth:** Gave me practice writing up documents in LaTeX and practice problem solving in general
- **Quality:** I thought that the quality of teaching in this course was fairly good. The class went at a good pace and the professor was always willing to stop for questions. I think at times the homework was a bit much, but overall it was pretty good.

○ Student: 5

- **Reason(s):** Elective within major or minor
- **Effort:** Completed all of the homeworks, studied for a few hours before each exam.
- **Understanding & Appreciation:** This course allowed me to put what we learned in probability into use in statistics, which had always been something that I never really had understood.
- **Intellectual Growth:** This course was one of the most challenging I have taken here at Colgate and it has allowed me to figure out how to manage my time effectively, as the homeworks were very interesting to complete but far from trivial in nature.
- **Quality:** Professor Cipolli is super accessible and helpful, and returns assignments lightning quick which is great. The only thing that I would say could be improved is that he sometimes rushes through proofs drawing upon results that we had proved months ago without explanation, and while someone usually asks questions about it, a few added details the first time around could be helpful.

○ Student: 6

- **Reason(s):** Major or minor requirement
- **Effort:** I think this course requires significant amount of regular, consistent practice. The way Prof Cipolli set up the class and course schedule is highly commendable—the course was very cumulative throughout and the system of grading by standards he utilized forced students (in a good way) to retain knowledge of all that is being covered throughout the semester. The homeworks also required significant amount of time and effort, but were ideal to get good (arguably enough) practice for the exams. I also liked how most of the review process was baked into the course materials (by virtue of how Prof Cipolli had the class set up).
- **Understanding & Appreciation:** I think it has positively (and deeply) contributed to my understanding and appreciation of statistics. Having taken data analysis, I was always intrigued by the applied portion of statistics (using statistical programming languages to answer research question). However, this course allowed me to understand the intricacies of how the results are derived. A combination of probability+ math stats+ Data Analysis I is a must do for any student interested in

statistics.

- **Intellectual Growth:** I think the examples Prof Cipolli used in his homeworks benefitted from existing literature or projects he has (or has been) working on. Furthermore, the group project/homework really allowed me to interact with my classmates and learn a lot in the process! I will dearly miss this class going forward!
- **Quality:** The quality of teaching in this course is extremely high— Prof Cipolli was very accessible (willing to make appointments even outside of office hours; active and quick to answer via email); Prof Cipolli was also very well prepared and organized with his course materials; he is not only inviting toward but actively encourages questions from students (he would go back and edit his notes, adding more detail if necessary, to make sure students' questions were answered); also reasonable in accommodating course concerns and stressful deadlines! I walk away from this course with an extremely positive experiences
- o Student: 7
 - **Reason(s):** Major or minor requirement; Reputation of the instructor
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:**
- o Student: 8
 - **Reason(s):** Major or minor requirement Economics graduate school requires that I have a two semester sequence in probability/statistics.
 - **Effort:** I put in a lot of effort for the homework and I have tried my best to do all of the optionals. For exams, I try my best to prepare through the notes but they do not seem to require much effort.
 - **Understanding & Appreciation:** I found it difficult to think about why probability theory is even necessary to know statistics, or at least such a rigorous understanding of it. I also did not find statistics very interesting. However, this course provided some of the theoretical foundations for why statistics works. I really liked the careful balance between rigor and application this class has which I have not yet properly seen in my other math classes.
 - **Intellectual Growth:** It makes a lot of my other subjects make sense like "econometrics", especially understanding how parameters can be found using maximum likelihood estimators for example. I also think it will make me enjoy taking the next two years of data analysis (especially since I will know why the results work). This course also inspires me to take more higher level math classes because I am curious to see more statistics theory being done if I know measure theory or functional analysis because I feel like I will get an even better appreciation of statistics.

- **Quality:** Strengths: 1) Assignments returned really quickly with insightful comments. The solutions and inventory provide a lot of insight about how others in the class are also thinking as well as understand other approaches. 2) Questions are well handled and I don't feel scared to ask questions. 3) Stack overflow made it really easy to access the professor if I couldn't go to office hours(I have class during most office hours). 4) Homework is very thorough and challenging but the material really sticks after that. 5) The notes are meticulously designed, easy to read, and easy to understand. 6) Not too heavy, but appreciable incorporation of R into the class rather being pure theory. Weakness: 1) Since the prerequisites for this class had probability, I wonder if we could have spent one or two fewer classes on it to cover more mathematical statistics topics. 2) Exam standards, especially for the probability section, seemed very directly probability based or formula based so it didn't seem like concepts were tested and most points would seem to get cut because of doing basic arithmetic wrong. 3) Statistics of a gaussian sample was a difficult section to comprehend and was difficult to put into context with respect to the other material. Maybe doing this section after we cover all the kinds of statistics would make it better as a "case study" of some kind. Only after we learned more about statistics did that section fully make sense.

Spring 2019: Section A

o Student 1

- **Reason(s):** Major or minor requirement
- **Effort:** More than I have put into any class at this school. Homeworks would routinely take 10s of hours to complete.
- **Understanding & Appreciation:** with the amount of time you spend with the subject material, it is hard to not gain an appreciation for it, but also those who can fully grasp it.
- **Intellectual Growth:** Any class that requires this much outside work is going to help with time management skills.
- **Quality:** Cipolli is great, the demand for homework to be coded is odd and I am not sure beneficial to my style of learning, but I cannot say that it hasn't helped me in other aspects of my education. He clearly loves the topic and fully understands what he is teaching. good guy

o Student 2

- **Reason(s):** Elective within major or minor; I took this course because I liked probability so much the previous semester.
- **Effort:** This class takes a lot of effort to be successful in, the problem sets take a long time to finish because they must be written in Latex but they make studying for the tests not that bad.
- **Understanding & Appreciation:** I have learned in incredible amount about statistics and distri-

butions, way beyond what I would have expected to learn after just taking probability.

- **Intellectual Growth:** I continued to learn how to use R and write in Latex which I ended up writing in for my math research paper.
- **Quality:** I know no one reads these set forms and they typically mean nothing at all, but I have heard that Professor Cipolli is being considered for tenure so the rest of this section will be addressed directly to the head of department that is reviewing these: Dear Head of Department, You absolutely must give Professor Cipolli tenure and whatever else he asks for. He is unlike any other professor in this department and a breath of fresh air surrounded by the other geriatrics that make up this department. The math classes he teaches are by far the most applicable to real-world career paths which is what most math majors will be moving towards after graduation instead of grad school. Losing him as a professor would be a horrible mistake because his teaching style is one that actually facilitates learning and understanding and is not just about performance on a few tests. He is a new era teacher and this department is in desperate need of one of those. Do not mess this up, give this man tenure.

○ Student 3

- **Reason(s):** Elective within major or minor
- **Effort:** The Homework sets were difficult, but fair and required a significant time investment to complete successfully. Studying for the tests often required less time as the homework served as a solid review of the material that occurred a week or so before the tests.
- **Understanding & Appreciation:** The course helped me to understand this course's subject matter and additionally solidified my understanding of the material covered by the Probability course.
- **Intellectual Growth:** The work and subject matter challenged me.
- **Quality:** It was excellent. Professor Cipolli is an excellent instructor. While the material, especially during longer segments of complicated calculus was not always the most interesting, the lectures were always engaging.

○ Student 4

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material; Continue the probability-statistics sequence
- **Effort:** A good amount of effort
- **Understanding & Appreciation:** Great structure.
- **Intellectual Growth:** It really pushes me to think a lot.
- **Quality:** Great teaching style. No weakness.

○ Student 5

- **Reason(s):** Elective within major or minor

- **Effort:** The problem sets required a lot of effort and that I start far in advance. I spent a lot of time in office hours to complete the problem sets and felt like they did a good job of preparing me for the exams.
 - **Understanding & Appreciation:** I really enjoyed taking this course and its structure as a continuation of Probability. It was fun to connect back to things we learned last semester and build on them.
 - **Intellectual Growth:** I think that completing problem sets and using class examples in R really contributed to my education outside of the material because it is a very practical thing to know how to use. Over the course of this and last semester as I was interviewing for jobs, recruiters were always excited that I have some experience in R.
 - **Quality:** Professor Cipolli did a great job teaching this course. I appreciated the way he approached having a small class, as he took it as an opportunity to allow us to try to come to conclusions on our own and in small groups. He also used this as an opportunity to spark class discussion which is unique in math classes and a new way to learn from one another. He did a good job of reading the room and working with us to understand the level at which we were learning the material week-by-week.
- Student 6
- **Reason(s):** Elective within major or minor
 - **Effort:** worked hard before tests to study very hard and read all of the course notes beforehand. However, senioritis definitely has kicked in and I definitely should have taken homeworks more seriously aside from usually the two days before when I would start it. I still studied super hard for exams, per usual, and also worked hard on group homeworks.
 - **Understanding & Appreciation:** To be honest, I am extremely confused about statistics after taking this course. This was not Professor Cipolli's fault, but I just had trouble understanding some of the core concepts that were needed in order for me to succeed to a high degree in this class. I do, however, think statistics is extremely important and useful and hope I can get better at it. Also, this is not said enough, but when I was first forced to write in LaTeX last semester in probability with Cipolli, I was mortified and it took me hours to do homeworks. That being said, I am BEYOND grateful he made me stick through with it, because it is a life skill I will have forever now. It was painful at first, but now I love LaTeX and even like R a little better.
 - **Intellectual Growth:** I think what was cool in this course was that we worked a lot with real life examples which is always interesting and applicable to real life.
 - **Quality:** I think Professor Cipolli is a very great person who cares a lot about his students and I appreciate that a lot. He was always super enthusiastic in class, and wanted us to understand

everything until he would move on. The one weakness I would say is that he oftentimes would do examples without looking at his notes and then he would mess something up and we would have to redo it. Or, we would do an example so hard that we just would not finish it.

○ Student 7

- **Reason(s):** Elective within major or minor; An alumni once told me that this was the best class he took at Colgate, so I was motivated by that as well.
- **Effort:** I put an enormous amount of effort into this class. Problem sets required roughly 20 hours or so to complete, and studying for exams was almost as time consuming. While the time commitment was large, I always tried to be completely focused when doing work for this class so that I could absorb the majority of the material.
- **Understanding & Appreciation:** The course is definitely the place where you find out when you'll need all of the seemingly unimportant calculus from early math classes. It brought everything together and allowed me to think independently about how researchers choose which statistics to present and why they are a seemingly "good fit" for the data they describe.
- **Intellectual Growth:** Professor Cipolli's classes have always challenged me to grow intellectually and be patient with myself as I learn. I appreciate his grading style that allows for iterative learning so I can focus on actually learning material rather than memorizing it, dumping it on a test, and then forgetting it. This also relieves pressure for exams which helps me grow as a student and find motivation for actually learning material rather than being motivated simply to perform.
- **Quality:** Professor Cipolli is by far one of the most caring professors I've ever had. He is extremely accessible and willing to hear out students. He shows a deep respect for his students and cares about them outside of the classroom by ensuring we are not too overwhelmed. He understands that we have other obligations and makes an effort to be flexible with us in terms of due dates and class material. He is very good at explaining material and is quick to give feedback for performance. Overall, Professor Cipolli definitely teaches hard classes and has high expectations, but he is not unreasonable in what he's asking and just wants his students to succeed.

Spring 2017: Section A

○ Student 1

- **Reason(s):** Interest in the course material
- **Effort:** I attempted to do every assignment. I spent a lot of time poring over the notes and trying to understand the concepts that Professor Cipolli explained in class and apply it to the fairly challenging homeworks.
- **Understanding & Appreciation:** Statistics is hard. Much harder than you would think from an intro level stats class. Unfortunately, I was not able to master the course subject to the extent that

I would say I understand math stats in the context of layman stats. I still don't know exactly where or how the concepts we learned in class fit into how real world analysis is done.

- **Intellectual Growth:** This course showed me that sometimes trying just isn't enough. You have to really have a talent or a passion for some of the harder things in life. If you're just not good at something and you discover that you weren't interested enough in the first place, it's difficult or almost impossible to make things work out. Some people thought this class was easy and understood concepts immediately. It would take me hours and hours to ask a decent question about the material, let alone 'get it.' No hard feelings though.
- **Quality:** Professor Cipolli is a very energetic professor. He has consistently been transparent to his students and very accommodating and happy to help. He gives surveys every so often to allow students to give him anonymous feedback to aid his teaching. He has very high expectations for achievement and so does not dwell on small stuff very often. With students that are both talented and hard working, Professor Cipolli gives them the tools to succeed and cultivate their understanding of the class. As energetic as Professor Cipolli is, he is also a very busy man. As someone who struggles in class, I often found that he did not really have time to explain basic concepts to me for the second or third time (which is fine). He engaged with students on a higher level of understanding and was optimal in that regard.

Professor Cipolli's notes, while comprehensive, lacked context and exposition. I often did not know what or why I was doing something or solving a problem. It only showed how I could solve a problem but not where that problem and its solution fit in the greater context of the class, if that makes sense. Additionally, sometimes in class, his explanations and methods can border on "hand-wavey", which can be very confusing at times. This is something I think could be improved in the future. Otherwise, Professor Cipolli shows great promise in being a good fit in the Colgate math department. His enthusiasm is almost infectious.

o Student 2

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** This course required a lot of time for the homeworks to be completed, there was never really a lull in the workload in this course. The exams did not require as much work to study for as much as the homeworks since the homeworks served as prep for the exams.
- **Understanding & Appreciation:** I enjoyed the course material sometimes it was too theory laden and was had to see the actual value in learning the material with real life applications. I think Cipolli did a good job in preparing us for the exams and helping us understand what the math really meant.
- **Intellectual Growth:** I don't know that this course extended beyond the scope of the classroom, but I enjoyed the class and will maybe pursue statistics in the future in a more applied realm. I hope

Colgate's addition of the applied math major is able to accommodate this for students that wish to pursue it.

- **Quality:** Cipolli always made himself very available with office hours which I really appreciate. The balance of this class was also nice being heavy on the homeworks and lectures rather than on the exams. That being said, I think the exams are often not wholly representative of how well students know the material. Sometimes Professor Cipolli can come off as slightly arrogant and condescending about the material, but overall very helpful and a hard working professor.

○ Student 3

- **Reason(s):** Major or minor requirement

○ Student 4

- **Reason(s):** Major or minor requirement; Elective within major or minor; Reputation of the instructor; Interest in the course material
- **Effort:** A ton of effort. I spent hours on the homework and studying. This is not an easy course.
- **Understanding & Appreciation:** A ton. I really enjoy statistics, and to this point I have only learned how to apply it. It is nice to have a course exploring the theory behind it.
- **Intellectual Growth:** A ton. It helped me to think deeper about some of the applications of statistics. Also, seeing the mathematics behind it and developing statistical concepts with rigor gave me a different perspective and helped me appreciate the area more so than I already did prior to taking the course.
- **Quality:** I really like Cipolli. I wish he had more office hours though. I think him teaching the big statistics course cuts into the time he has to meet with us. Overall, great teacher, and great course.

○ Student: 5

- **Reason(s):** Major or minor requirement; Interest in the course material
- **Effort:** I came to almost every class and I completed every assignment on time. I spent a fair amount of time reviewing for each exam.
- **Understanding & Appreciation:** The course was a big step forward after taking Probability, since the material was built upon it but went much further. The course also gave me a direct sense of how real world events may be modeled, and introduced me to many theoretical aspects of the modeling process.
- **Intellectual Growth:** The course prompted me to read and understand hard materials on my own, because I couldn't understand them within the short amount of time spent in class listening to lectures. The homework problems also forced me to reflect on the concepts and proactively make a connection with real world scenarios.
- **Quality:** Strengths: graded homework really fast with detailed comments, detailed lecture notes

online, enthusiastic about the material and eloquent in class, collected feedback from students often and very willing to listen to our feedback, facilitated discussion by using an outside class forum which I think is a great idea. Weaknesses: didn't cover as much material as planned on syllabus, potentially making the topics we did cover somewhat disconnected (and I also felt that the topics themselves are too theoretical as we always had to skip proofs), assign more problems so that we forget less, and assign more book problems (some book problems are crafted in unexpectedly interesting ways to help us grasp the concepts). Suggestions: in need of a better forum where we can post formulas, like Piazza

○ Student: 6

- **Reason(s):** Major or minor requirement; Elective within major or minor
- **Effort:** I put a great deal of effort into this course, but it has been a frustrating experience
- **Understanding & Appreciation:** I have gained some level of understanding and little to no appreciation of Mathematical Statistics
- **Intellectual Growth:** Not much, the course didn't inspire me to do any thinking outside of the material
- **Quality:** Strengths – the prof worked hard to grade assignments, create class notes, etc. He was also relatively accessible as well as interesting to listen to during class. Weaknesses – the class was simply too hard or at least much harder than it needed to be. The homeworks were graded harshly, tests were too difficult, and there was no curve at all, which I find strange in an upper-level math class. If there was any kind of a curve, it would have at least been manageable. In addition, during class, we did things that were not helpful for the tests and homeworks, and it was actually difficult to even practice because, in class, we were proving things that we weren't required to prove on exams

○ Student: 7

- **Quality:** I've come around to Cipolli. I was not a big fan in the first half of the semester, but I realized in the second half, that he actually really cares about his students and making sure they learn. If he makes some changes and gets better at lecturing he may actually be a pretty good professor. Right now, his lectures aren't great. He makes a lot of mistakes on the board which is confusing at times. Also, he lectures straight from his notes so I did not feel I needed to attend many classes. I think if he were to have examples outside of the lecture notes for class that would be beneficial. The book used for the course I think is quite horrific. It was a complete waste of money and his curriculum did not follow the book in any order. The problems in the back of each section were often times irrelevant and useless to understanding the material. The book also assumed knowledge of real analysis and algebra. I have taken these courses so I was able to get through it

but I think it was meant for a graduate audience. After taking most courses in this department, I can say it does not teach you the fundamentals. Most professors here assume knowledge.

○ Student 8

- **Reason(s):** Major or minor requirement
- **Effort:** The effort I put into this course consisted of completing long and grueling problem sets about once a month . These problem sets, while long and difficult, were very helpful in preparing us for the exams.
- **Understanding & Appreciation:** As someone who might want to pursue a masters in stats after graduation, this course really opened my eyes to what that would be like. While at the moment I am looking to learn more Applied stats, it was still really cool to learn the theory behind a lot of stats, and I have no doubt that this class will be useful to me in the future.
- **Intellectual Growth:** This course helped grow my work ethic. Like I said, the problem sets were tough, and required a lot of hours grinding away. This class made me work hard.
- **Quality:** Cipolli is funny and knowledgeable and overall a very good prof. One complaint I have is that in office hours, he sometimes seemed very annoyed when students came by for help. This subject material is difficult, and I would have appreciated more of an effort to help outside of class.

○ Student 9

- **Reason(s):** Elective within major or minor

○ Student 10

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** Participated in class, completed all homework questions and prepared well for the exams.
- **Understanding & Appreciation:** This course introduced the basics of mathematical statistics to me. However, it seems a course with a lot of techniques but lacks a overall big picture and applications of those techniques covered in this course.
- **Intellectual Growth:** NA.
- **Quality:** The focus of this course seems mysterious to me. Majority of the time is spent on multi-variable transformation, different kinds of statistics and some methods of estimation. Although some of the materials do appear as premises for other theorems, I was not able to see a coherent story for all the materials covered in this semester. In other words, I have learn all those techniques but not sure why do we need to learn about them. Another major issue of the course is absence of application of the course material. Nothing applicable to real life problems or related fields, especially economics, was introduced during this semester, which was actually the reason I enrolled in this course. I assume the same feelings exist for students who entered the course from a computer science background as well. It is hard to see why the instructor did not make references to those

two subjects. Last of all, the course moves extremely slowly. I can count the topics covered the entire semester with just one hand. What could be done in one day was covered over a prolonged period of time, which seems pointless to me. If the pace of the course was faster, more materials could be introduced and the course would potentially be more meaningful.

- Student 11
 - **Reason(s):** Elective within major or minor
- Student 12
 - **Reason(s):** Elective within major or minor
 - **Quality:** The instructor should provide an outline for the lecture on that day and progress as the proposed outline. The instructor should use the time in class more efficiently than just doing out algebra and calculus. The instructor should focus more on conceptual understanding and how to apply the theory and method. The instructor should pay more attention to details and make less major and minor mistakes when writing on the boards, making notes, or making homework. The instructor is very good at giving back homework in time and asking for feedback from students. The instructor is also very available during office hours.
- Student 13
 - **Reason(s):** Elective within major or minor
 - **Effort:** Somewhat.
 - **Understanding & Appreciation:** Not too much. I'm a little disappointed that the professor did not have enough time to cover important topics in statistics like hypothesis testing, ANOVA, etc. Most of the topics covered in class have little added value in terms of both knowledge and applicability in industry.
 - **Intellectual Growth:** Not much
 - **Quality:** I find the professor to be very underprepared in class and sometimes it feels like he doesn't know the materials very well as he constantly makes mistakes on the blackboard. Also, I find the required participation in the Moodle forum to be very unnecessary and cumbersome. I prefer asking questions in-person and typing out an equation on Moodle takes much more time than just coming to office hours. I think that there should be more preparation and organization from the professor's side in planning the timeline and outline for the course.
- Student 14
 - **Reason(s):** Elective within major or minor
 - **Effort:** Sometimes the homework is really long and takes lots of time and it is fun overall.
 - **Understanding & Appreciation:** Since this course is the extension of MATH316, I gradually understand how all the materials that we have discussed before interact with each other.

- **Intellectual Growth:** It helps me strengthen my knowledge learned in probability and introduce new materials that wrap up almost everything discussed before.
 - **Quality:** I think sometimes the introductions of new materials are not sufficient. It can be really confusing for a couple of days and gradually make sense. I think maybe because professor assumes that all the students have some background of stats, but I hope he could spend more time introducing new definitions. Homework and exams are reasonable and I am glad that we only have two exams now. I also really like the r codes in homework because they help me visualize the distribution and see how the theories work. However, the required discussions on portal have increased which give me lot of pressure.
- Student 15
- **Reason(s):** Elective within major or minor
 - **Effort:** I constantly reviewed notes and spent swathes of time on the strenuous homework assignments. I put a lot of time into studying for tests and tried to consistently stay up to date with class discussion.
 - **Understanding & Appreciation:** I feel as though i gained a very solid understanding of the course material. Although it was difficult, i am leaving the class confident I learned a lot this semester.
 - **Intellectual Growth:** The class had assignments that encouraged consistent and constant work. Also the problems were designed to foster creative thinking for problem solving.
 - **Quality:** The teaching from Professor Cipolli was excellent. He clearly knows the subject well and answers questions helpfully. Strengths include his helpfulness during office hours and his willingness to listen to the class on what we want. The tests and homework were long and difficult, but excellent preparation and fairly assembled from our in class work. The course was conceptually difficult for me, but Professor Cipolli made a personal and genuine effort to help me.
- Student 16
- **Reason(s):** Elective within major or minor
 - **Effort:** I put maximum effort into this course. This course was extremely hard probably the hardest course I've taken, so I had to put maximum effort into this class to not fail.
 - **Understanding & Appreciation:** The course really confused me a lot, there were somethings that I understood and made more sense to me, but a lot of what we learned confused me more about the topic. The subject of statistics is really interesting, but this class was extremely hard and didn't further my understanding of the subject.
 - **Intellectual Growth:** This course caused me to have to really use time management, so that I could do okay in this class, while still putting effort into my other classes and not forgetting that those were important too.

- **Quality:** The professor definitely cared about the students a lot, however the class was extremely difficult and in terms of the material I always felt behind in the class even when I would be going to class. A strength of professor Cipolli would be how much he wanted the students to succeed, however a weakness would be the emphasis this class had on material from previous classes that were not Math 317. I also do not feel that I have gotten anything out of the out-of-class discussion board. It is nice to have the option to get help or help peers, however it is extremely hard to ask questions or answer questions from behind a computer screen, which makes the out-of-class discussion board not very helpful.
- Student 17
 - **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** This course was quite a bit of work. Problem sets were long and difficult but helped reinforce material and were given with plenty of time. Tests were reasonable.
 - **Understanding & Appreciation:** Its given me a nice understanding of statistics and the theory behind it to add to basic intro stat material.
 - **Intellectual Growth:** Its definitely motivated my interest in statistics and hopefully will help me pursue a career in a similar field.
 - **Quality:** Professor Cipolli is interesting and very knowledgeable on the subject. He has tons of office hours and gives out lecture notes that are extremely helpful if lectures are confusing. He is also very helpful in office hours answering questions clearly and with regards to hw, he guides us in the right direction as opposed to just giving us the answer.
- Student 18
 - **Reason(s):** Major or minor requirement; Elective within major or minor
 - **Effort:** I put a good deal of effort into the course by working hard on problem sets and going to office hours
 - **Understanding & Appreciation:** I did not know much about statistics other than the basics, so I learned a lot more as a result
 - **Quality:** Prof. Cipolli really cares about his students' learning and wants to make sure everyone understands the material. He puts a great deal of effort in the class notes and making sure he writes them on time. He should just be careful not to make some of his female students uncomfortable. I don't think he means to, but sometimes I felt as if he were hitting on me, and my friends agreed, so I felt uncomfortable going to office hours alone.
- Student 19
 - **Reason(s):** Major or minor requirement; I really enjoyed having Cipolli in 316.

- **Effort:** I put a lot of effort into this course. Homeworks took me at least 15 hours each and studying for tests was a little more. I went into office hours as much as I could.
- **Understanding & Appreciation:** I definitely know 316 material really well after taking 317.
- **Intellectual Growth:** It definitely helped with my critical thinking. I was forced to think in different ways; we set both X and θ as set in different instances and learned how to work with different kinds of equations. It was a pretty thought provoking class.
- **Quality:** Prof Cipolli is a good professor and a great fit for Colgate. This semester he was a little less accessible and sometimes grumpy because of his intro to stats class. Since I had taken him before I felt comfortable going to office hours but he definitely wasn't as eager to help or as available as last semester. His teaching in class however was great and I like his presentation style. I also think Moodle was a really helpful learning tool that made us interact and learn from our peers.

— MATH 354: Data Analysis I

— Fall 2020: Section A

- o Student: 1
 - **Reason(s):** Elective within major or minor
 - **Effort:** I put a lot of effort into doing homework and learning materials for the class
 - **Understanding & Appreciation:** The course has taught me how to conduct statistical analysis in R, when to use each analysis and the pros and cons of them. I got to deal with real data, encounter problems with assumptions of the data, and how to interpret our analysis.
 - **Intellectual Growth:** Professor Cipolli has a very high standard of grading, so it pushes me to do my own learning doing homework so besides learning various analytical tools, I also learned to do research on my own.
 - **Quality:** I like the homework in general, since it allows me to revise the material and discover some gaps in my knowledge. Professor Cipolli's note is also very thorough and clear. The grading of the class was quite tough which can put quite a lot of pressure onto the students, and the lecture sometimes was a bit unclear to me. However, his note and his homework really strengthened my understanding of the materials,
- o Student: 2
 - **Reason(s):** Interest in the course material; Major or minor requirement
 - **Effort:** I put a lot of effort into this course. I had never coded in R before and never done data analysis, so I definitely put in a lot of time to keep up. Also just the nature of the course through homework assignments and exams requires effort.
 - **Understanding & Appreciation:** I think this course contributed greatly to my understanding

of data analysis. I have already mentioned some things we have done in job interviews and feel confident going into a job where some data analysis would be present. I of course have a lot more to learn, but this has been a great start.

- **Intellectual Growth:** I think overall this course contributes to a lot of different courses and understanding overall. It uses stats, which can be applied to nearly everything, probability, etc. Overall an individual will come out of this course with intellectual growth if they participate and want to learn.
- **Quality:** I think Professor Cipolli is a great professor. I was worried after the first class that I would fall behind because I have not done a lot of coding in my time at Colgate, however I am very glad I stuck with the course. Cipolli offers his time and I can tell cares about his students, which is always a great feeling to have as a student. I had some issues with my midterm, for example, and got extremely stressed, but I was able to communicate with him and he assisted and accommodated me. Some professors would not do that, but without that accommodation I would not have been able to show what I have learned so far in the course just because of some technical issue. I am very glad I had Cipolli before I leave Colgate and thank you for a great semester.

o Student: 3

- **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
- **Effort:** This was definitely a challenging course for me. I came into the course without taking a class in probability, so the subject matter and the problems were very challenging. I, however, am very glad I work hard to get through them because I have learned and grown a lot as a data analyst and now have added a huge arsenal of statistical tools I can use to answer questions related to a dataset.
- **Understanding & Appreciation:** I have been fascinated by the subject of data analysis and statistical analysis, so this course was perfect in letting me broaden my horizons beyond the statistics/data science buzzwords and tools I had been using without properly understanding them. I now have great appreciation for each of the many, many tools and methods we surveyed/applied in the classroom and am confident in my ability to use them to my best ability.
- **Intellectual Growth:** This course changed how I looked at data and questions regarding data. I was not very familiar with hypothesis testing and point estimation methods, but learning about them and getting to use them in problem sets introduced me to a very fundamental class of knowledge I was missing as an aspiring data analyst.
- **Quality:** Professor Cipolli was an incredible instructor throughout the course. He was very clear about his expectations for the course in the beginning and always open to questions/suggestions. I really enjoyed how class was structured: we learned about a concept and promptly applied it to aid

analysis of a dataset. Professor Cipolli was incredibly understanding and open to questions when we had a hard time wrapping our brains around a topic. In terms of assignments as well, Professor Cipolli was very flexible with us and was overall a very understanding of the fact that the semester has been really hard getting back in-person.

○ Student: 4

- **Reason(s):** Interest in the course material; I'm an econ major and a lot of the regression stuff and data stuff we just blew by and I wanted to take this class to gain a better insight into them.
- **Effort:** This was the most challenging course I took at Colgate. Typing in RNW files took an extremely long amount of time, and doing just about anything took so long in this class. That being said I did try, although, I often ran out of time, and I had to submit work that I knew wasn't the best I could do.
- **Understanding & Appreciation:** Learning R was probably the most useful part of this class.
- **Intellectual Growth:** Learning R.
- **Quality:** Professor Cipolli is a great dude, very nice, flexible. I didn't really like the way he taught the class though. Firstly, typing latex, while it is a skill and important to know, is dreadfully painful to do in Rstudio. The code editor does not auto complete your code and it doesn't highlight it when an obvious syntax error is made either. I think the class would have been a lot more sensible if we were to type our analysis in an R file, and then printed out any graphs we needed and imported them into a separate latex file where we could use an actual latex editor like Overleaf. Then we would have the final report, it would look nice, and we could also submit our code file on the side, or we could attach it to the bottom of the latex file as an appendix. The material itself, honestly, was not that difficult. The pace of the class seemed very weird. I understand he didn't want to make math stats a prerequisite, but him teaching us intricate parts of distributions, and then us just using the R commands, didn't seem to make much sense. I understand intuitively like we should know how everything works, but we assumed so many things and didn't explicitly do any proofs, so it made understanding it all pretty hard. I felt like the class would have been better if he just focused more on coding. It seemed natural to have an independent project we should be working on throughout the semester too. The homeworks were a massive pain in the ass. Definitely a strange course. I'm glad I took it. Seemed excessively difficult for no apparent reason. Learning how to manipulate data in R was probably the most useful thing I learned in the class. The constant lecturing made it difficult to pay attention in class, he should have made it more interactive, write stuff on the board that we can write down in a notebook, bleh. Seemed like he should have just given us a list of things to learn about and not even had class. I liked the class though. I guess. Idk. im glad I took it. Maybe I didn't like it. He was a good dude. The people that took the class were cool. I'm

probably just being a whiner and didn't study hard enough.

○ Student: 5

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
- **Effort:** I spent a lot of time on the homework each week, possibly more than all my other courses combined. While this helped me familiarize myself with the material very well, I thought that the amount of work was a bit excessive for a 1 credit course. I feel like I would have learned just as much, and been more motivated if the grading system was catered towards how much a student understands the material instead of perfectly answering a question.
- **Understanding & Appreciation:** As someone who had little to no experience with statistics and analysis, I can confidently say that I can now work with large datasets and extract meaningful information out of it. I would say I definitely have increased appreciation for the field of statistics after this course, and understand it well.
- **Intellectual Growth:** I learned a lot of useful mathematical techniques during this course, which will definitely help me in many avenues of my educational career later on.
- **Quality:** I thought that the teaching was great, and the notes were really helpful and detailed. I do wish that the notes were uploaded earlier so that one had more time to understand the material before the homework. I liked how the class focused on understanding the material and concepts rather than being bogged down by equations. I also enjoyed the use of R and think that it is a very helpful tool. The main weakness for this class does not lie with the teaching, but with how the grading functions. I would say that the standards are too high and that can create a lot of stress when compared to any other course I have taken at Colgate, even if the material itself is relatively simple.

○ Student: 6

- **Reason(s):** Major or minor requirement; Elective outside major or minor; I hoped to learn more about data science because I was interested in other work I had done working with data.
- **Effort:** I put a lot of effort into the class, through completing homework assignments, reading/reviewing course notes, and working through analyses for our midterm.
- **Understanding & Appreciation:** This class helped give me an overview of a lot of methods to be used in data analysis, and how/where to look for additional resources. It gave familiarity with a lot of topics with examples in real data.
- **Intellectual Growth:** This class helped me to figure out how to balance working with others and asking effective questions.
- **Quality:** Professor Cipolli very obviously put a lot of care, effort, and time into the course and I

think set all of us up very well to succeed. He motivated the topics he discussed with examples, and fostered our abilities to ask questions, find appropriate resources, and learn from those different kinds of available resources (ie notes, google searches, code documentation...). It was a really great class, and I look forward to Data II!

o Student: 7

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
- **Effort:** I spent around 10 - 15 hours on average for every homework and the take-home portion of the midterm. Other areas requiring effort included in-class engagement, and pre-class readings.
- **Understanding & Appreciation:** I learned a great deal about some theoretical fundamentals about Statistics rather than just applications. I also became much more comfortable with R after this class, and learned a lot about how to make aesthetically pleasing plots for data visualization. I feel much more capable when it comes to making good quality Statistical reports.
- **Intellectual Growth:** I learned how to work in a team much better (from the HW and Datathon). I also gained social skills and time management skills that I would not have learned from any other classroom setting.
- **Quality:** Strengths: 1. Professor Cipolli is extremely caring, thoughtful, considerate, helpful, and accessible. He goes above and beyond in terms of making sure students are comfortable and heard, and he is very flexible and understanding when students are overwhelmed and need support, guidance, or extra time. 2. Professor Cipolli puts a lot of effort into this course. He prepares detailed (and amazingly helpful) notes, and he spends lots of times on preparing homeworks and exams that are thought-provoking. 3. Professor Cipolli grades very quickly, and gives lots of detailed comments/feedback, which really helped me grow as a student in his class. 4. Professor Cipolli incorporates some social content into his teaching, helping us be well-rounded students. 5. Professor Cipolli is very fair in terms of extensions, and also in group-assignments.

Rooms for growth: 1. Professor Cipolli's grading can be a bit harsh. I completely understand having high standards for grading, but the homeworks take so much time and effort, that it can be disheartening to get a low score. 2. In class, it is important to moderate discussion. Sometimes, some students would take up much of the class's time, and often interrupted the Professor and his flow. This greatly impacted my learning, and I feel that it slightly deviated the class from the lecture and the material. 3. The grading rubric provided by Professor Cipolli is very detailed and helpful, but often times, I think it takes a homework or two to really grasp exactly how he wants you to approach the homework. This is perfectly fine, but I thought I would still mention it! 4. I think the example based learning in class was very helpful! Often times, abstract mathematical notation

can confuse students, but seeing an example with an actual data set is much more conducive to learning.

Overall, I sincerely like and respect Professor Cipolli, and I believe that Colgate is lucky to have him. There are only a few things in terms of the difficulty of the class (and the stress associated with it) that demands a bit of attention.

- Student: 8
 - **Reason(s):** Elective within major or minor
 - **Effort:** There were extensive homework assignments assigned every few weeks, as well as a midterm and final that I reviewed for. The homework assignments took a lot of time and effort.
 - **Understanding & Appreciation:** I have not been a huge fan of statistics in the past, but this class really opened my eyes to the field and I really enjoyed it. I liked the examples we did because they tied the course topics into other fields.
 - **Intellectual Growth:** The assignments took a lot of time and effort. It forced me to stay on top of my work and start the assignments early, which was good for my overall education.
 - **Quality:** Professor Cipolli is one of the best professors I have ever had. This course took a ton of effort but somehow he managed to make it very interesting and enjoyable. He is approachable and incredible knowledgeable, and I think he taught the course in a way that really prepares students well for future work or careers. I cannot recommend him and this course enough.
- Student: 9
 - **Reason(s):** Elective within major or minor
 - **Effort:** 4 big homeworks, a midterm and a final.
 - **Understanding & Appreciation:** I learned to work with research data to test hypotheses.
 - **Intellectual Growth:** I am more careful and somewhat more skeptical with studies making sweeping claims about their findings; now I have the tool to check their work if need be
 - **Quality:** The quality of teaching in lectures is a B+, office hour and homework help is a A+

Fall 2020: Section A

- Student: 1
 - **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
 - **Effort:** I put a lot of effort into this course, it was a pretty challenging class and something that I want to go into in the professional field so it was very useful for me
 - **Understanding & Appreciation:** I really enjoyed this class, I learned a lot and really got a deeper understanding of data analysis. I feel much more confident in the material than I did before we started class, and I know that I can apply this knowledge to a job in the future
 - **Intellectual Growth:** I learned how to be creative when it comes to solving problems, that there are

always multiple ways to solve a problem, and that understanding the broad sense of how something works is much more important than knowing every single detail.

- **Quality:** Professor Cipolli was an amazing professor in this course! He understood the challenges of the semester and was very accommodating when it came to work load and taking breaks. He was very accessible and really inspired my interest in the course. I really appreciate everything he did for us this semester, he is the best!

○ Student: 2

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** Quite a lot! The homework are very time-consuming and I always try to get a head start on them.
- **Understanding & Appreciation:** I learned a lot of techniques as well as a good understanding of why we do certain things the way we do.
- **Intellectual Growth:** In general it definitely encouraged me to think independently on my own more.
- **Quality:** The quality of teaching is very good. Prof. Cipolli is very thoughtful with the course syllabus and always care about the wellbeing of the students to accommodate to the pandemic environment.

○ Student: 3

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material; Research advisor recommended the class.
- **Effort:** Watched videos every week, sometimes rewatched them. Read the course textbook. Did homeworks that took around a week to two weeks or around 8-10 hours. Filled out weekly diagnostics and weekly recitations.
- **Understanding & Appreciation:**
- **Intellectual Growth:** It made me formalize my vague understanding of data analysis techniques and made me realise the importance of a rigorous understanding of the subject as well as the misuse of statistics and mathematics in general. It also cemented the field I want to specialize in in mathematics.
- **Quality:** A+. AMAZING. 10/10. Best class I've taken at Colgate. Professor Cipolli is super knowledgeable about statistics and explains all of the stuff in the course extremely well. Despite there being a LOT of stuff to learn there has never been a point in the class where I felt like I was behind or had a lot of stuff to catch up on because professor Cipolli is super organized and understands his students needs and expectations at an individual level, and is really flexible and understanding. In order to accomodate all of us, he sent out emails as early as the summer to

see what sort of learning method we would prefer and this teaching style suits me really really well since I struggle with lecture based classes. I also find the readings he gives really interesting since it drills in the usage/abuses of mathematics, and puts the stuff we learn in context and makes me motivated to learn the stuff.

○ Student: 4

- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
- **Effort:** I put a good deal of effort into this course, as it is one of the hardest and most time-consuming courses I have taken at Colgate, but I was not able to give my 100% into this class as I found the material to be quite interesting.
- **Understanding & Appreciation:** This course opened up my eyes to a whole new field of study that I plan to pursue after college.
- **Intellectual Growth:** This course has broadened my thinking and analytical skills. I am now able to look at data and numerical results much more analytically
- **Quality:** Professor Cipolli is one of the best professors I have ever had at Colgate. He is readily available to meet with his students, and he is ecstatic about the subjects he teaches. Additionally, professor Cipolli is able to present class material in a way that grabs the attention of the students. Professor Cipolli, has inspired me to attempt and continue my education at a graduate university.

○ Student: 5

- **Reason(s):** Elective within major or minor
- **Effort:**
- **Understanding & Appreciation:**
- **Intellectual Growth:**
- **Quality:**

○ Student: 6

- **Reason(s):** Interest in the course material
- **Effort:** This course required a great deal of effort. Most of the effort was put in through time commitment for this class, I felt like posting the videos of the lecture for us to watch out our leisure was effective in getting the material to us and then having the recitation periods once a week where we could meet in person, ask questions, go over the material, and start the homework was very productive. Sometimes I felt like the videos dragged on for a while but they did cover a lot of detail and were helpful in learning the material.
- **Understanding & Appreciation:** This course expanded greatly of what I thought Data Analysis was. Coming into the class the big topic I thought of was regression modeling and although there is

a lot that goes into regression modeling there is much more that you have to be able to understand before you get to regression modeling. In addition, this material is critical to understanding how to tell a story about the data, which is something Professor Cipolli always stressed throughout the entire semester.

- **Intellectual Growth:** Going back to this idea about "telling a story" with the data is something I hadn't heard before in any other statistics class that I had taken and took me most of the semester to fully begin to understand what it means to tell a story with the data and how it was done. However, once I did fully understand what is required I feel like this can be used in any class that you take and that it helps to show the big picture of what is going on before getting to the conclusions to explain how you got there and what steps you went through.
- **Quality:** Professor Cipolli did a great job of teaching the material and giving us many different ways to take in the material so that we were seeing it through a traditional textbook, video lectures, coding examples, in class discussions, and homework all before seeing the material on an exam. In addition, the way that Professor Cipolli presented the material by using real world examples and the homework assignments we were working with real data sets made the work that we were doing seem significant and gave it a purpose rather than just doing practice problems for the sake of it. Also, Professor Cipolli had weekly diagnostics to check in on us to see if we had any questions so even though we weren't getting the same in person experience that we normally would, he made sure to make himself accessible to us and make sure we could get all of our questions answered.
- o Student: 7
 - **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
 - **Effort:** I would view the lecture videos and attend the recitations in person when able.
 - **Understanding & Appreciation:** I was able to go through the data analysis process in in-depth pieces rather than the broad overviews I've done in previous classes. I saw a lot of examples on what to do and how to approach a dataset
 - **Intellectual Growth:** It taught me to view my materials more carefully rather than just jumping into a checklist. Being able to consider my assumptions is just as important as the actual model I create
 - **Quality:** He did an amazing job in providing in-depth notes, videos, and discussions during recitations to hammer in the material. Seeing the code being written out with detailed comments and functions made everything accessible when I consulted that material for homeworks. It's only some of the theory that I find boring but I understand that having an understanding of what an analysis is doing aids in the interpretation.
- o Student: 8

- **Reason(s):** Elective within major or minor
 - **Effort:** This was a challenging course in which we had long assignments due every 2-3 weeks. For those assignments, I would typically spend 3-4 hours per day on the last week of the assignment, and then any more time if need be approaching the due date.
 - **Understanding & Appreciation:** This course made me appreciate the subject matter because it taught me how I can apply data to learn about statistical significance, graphing, linear relationships, and much more.
 - **Intellectual Growth:** The program that we used and techniques that I used were helpful for projects in my other classes, and will remain useful for my future.
 - **Quality:** The instructor clearly made an effort to make sure we understood course material, which he effectively conveyed in office hours and through email. He responded very quickly to emails (within minutes) with helpful solutions that usually guided me on the right direction in my assignments.
- o Student: 9
- **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** This course took a tremendous amount of effort. There is definitely a steep learning curve for the first half of the course for those unfamiliar with writing code in R. Every assignment took many hours to complete. Despite all the work, however, this was an enjoyable course and I feel like I have learned a lot.
 - **Understanding & Appreciation:** My only previous experience with statistics was taking AP Statistics in high school, so my knowledge on the subject increased exponentially. Professor Cipolli incorporated many "real world" data sets in his notes, lectures, and homework sets. He also gave us articles to read throughout the semester than placed statistics in broader contexts. I learned a lot, as a result, of what using statistics looks like in the "real world"
 - **Intellectual Growth:** I am definitely leaving this course with the sense that it is okay to enter a field without being an expert. Professor Cipolli emphasized the idea that learning is an ongoing process, and that it is normal and expected to be unsure and thus ask for help or even look on Google.
 - **Quality:** Professor Cipolli clearly cares deeply about his students and their learning. He provides a copious amount of resources and avenues to seek help. At times, this was a bit overwhelming. There were homework sets, notes, lectures, a discussion board, diagnostic assignments, readings, office hours, sample code, class, and recitation slides. Sometimes I felt like I couldn't keep up. At the heart of all this, however, was Professor Cipolli trying to give us every possible resource we needed to succeed. I think a major reason it felt so overwhelming was the fact that this semester was remote (for me), so some days I spent hours staring at my computer, trying to go through all

the material and figure out what was going on. Professor Cipolli was extremely flexible as well. He was willing to extend homework due dates, meet with students at odd hours, and even give us a week off from lectures. The only change I would suggest would be to perhaps make the homework assignments a bit shorter as they tend to take a very long time.

○ Student: 10

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** At least 20 hours on each homework assignment, watching all lecture videos, going to recitations
- **Understanding & Appreciation:** I feel more confused about the course subject material now than I did before taking the class.
- **Intellectual Growth:** This course helped me learn how to apply technical material that I learn to real life examples. It also gave me a foundation to be able to teach myself much more on my own, no matter the subject.
- **Quality:** Professor Cipolli's main strength is that he makes sure we're able to apply the techniques we learn in class to real data analysis. However, it seems like he skips the step to bridge our knowledge from high-level theory into practical use, so we're left spending hours on our own trying to figure that out. He listens to feedback from students, but also has unrealistic expectations that put immense pressure on students. He's very unclear about expectations, but then praises those that go unrealistically in depth (more in depth than asked for) and makes other students feel insufficient.

○ Student: 11

- **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
- **Effort:** I put so much effort into this course. I really enjoyed the work and found myself getting lost in it whenever I was reading notes or doing homework and so I ended up putting a great deal of my time into making sure that I understood everything that was going on and doing homework as well as making sure to keep up with the assigned readings. The readings really solidified the importance of this class and how it could be applied after college which definitely motivated me to continue putting in such hard work.
- **Understanding & Appreciation:** Prior to this course, I had a very basic understanding of data science and only knew a few coding languages. However, this class has helped me to thoroughly understand R and how important a knowledge of statistics is to data analysis. I definitely have grown to appreciate the course subject much more and have even begun to look at careers post-graduation that involve data analytics.
- **Intellectual Growth:** This course probably helped my intellectual growth the most out of every course I have taken at Colgate. One of my biggest takeaways is not to be scared of not getting

something right the first time AND that there is not the same path for every question. I now understand that everything I do is going to take effort in trial and error, external research, and relying on Google for a lot of my answers. Thus the most important skill is problem solving and knowing where to look to figure a question out.

- **Quality:** Professor Cipolli did an amazing job at teaching this course especially under the conditions of COVID. I was extremely excited about the course material and it has definitely quickly become one of my favorite courses at Colgate. I loved the challenge and especially loved how it felt like something that I could truly take away from my college education and bring into the real world. I think my only suggestion for how Professor Cipolli could improve the class is to split the homework up more and have more weekly homework, but each having fewer questions and covering less material. I think this would be very helpful because I often found that homework would cover material that we hadn't talked about in weeks and it was more difficult to have to readjust to that. Also, the homework ended up taking so long because of the amount of questions and I found that there were weeks where I would be putting SO much more time into this course than others. I think it would just be a much better way to balance the course.

o Student: 12

- **Reason(s):** Elective within major or minor
- **Effort:** This course was a lot of work. There were a lot of lecture videos to watch, and understanding and engaging with the materials took a great deal of effort as well. This course took a lot of time and dedication to do, and it is one of the courses that has taken the most effort up to date, for me.
- **Understanding & Appreciation:** This course taught me how to think like a data analytic, by making sense of relationships and thinking quantitatively and logically. I learned a new programming language, as well.
- **Intellectual Growth:** This course taught me how to think in the big picture and not get bogged down by the details, which is something I am grateful for with this course. It also encouraged creative and independent thinking as well as collaboration and learning from peers
- **Quality:** Professor Cipolli's strength is his organization and dedication. it's no doubt he is one of the brightest people out there, he understands the course material deeply and is also quite good at explaining himself and his idea. he's always prepared, and dedicated to allowing each student to understand.

o Student: 13

- **Reason(s):** Elective within major or minor
- **Effort:** This course took an immense amount of effort. As a joke, I tell my friends that I'm only taking Data Analysis this semester and nothing else.

- **Understanding & Appreciation:** This course definitely helped me understand the topic.
 - **Intellectual Growth:** This course helped me decide if I was going to go into this field or not. It helped me determine my strengths and weaknesses for future employment.
 - **Quality:** Professor Cipolli has a positive attitude and does want a lot of feedback from his students, which is awesome. I think that what is frustrating about this course is that the excuse for a lot of confusing content is "this class doesn't have one right answer." However, I felt like I wasn't provided with the ways to determine if my answer was the right answer. I was constantly struggling with this class and spent hours rewatching and reading videos, course content, and determining what I need to do. I understand that this is difficult course material, but that doesn't mean that it should be up to the students to completely learn things on their own. Additionally, the coursework in this class exceeds what is expected for me to produce in the majority of classes that I've ever taken at Colgate. Professor Cipolli wants us to learn, but I was at a constant state of just trying to get the homework done that I felt like I wasn't learning. Our midterm lasted 2 weeks and part of it was due on election night. Before our final was due, he posted the next homework that had parts of it due shortly after the midterm was due. I felt like I was constantly thinking "I need a break and a higher level picture of what is going on" and I felt like I was communicating that with the professor, however I felt like I was rarely getting this. Cipolli has style that is different from the rest of the math department and is genuinely contributing to teaching differently. I think this is great, but I think he needs to work a bit more on how he will adapt to students instead of how students will adapt to him. This class panders to the geniuses who have already done data analysis before and have been exposed to the majority of these concepts. As a person who has not, and since this is an intro to Data Analysis, I feel that he needs to focus on the people who aren't already at that level.
- o Student: 14
 - **Reason(s):** Elective within major or minor
 - **Effort:** I put a lot of effort into this course. The HWs were especially time-consuming and tough, but I think they helped my understanding of the course material a lot.
 - **Understanding & Appreciation:** Data Analysis was something I've been interested in for a while, but I haven't had any experience with it before this class. This class was super informative and helpful in teaching me data analysis techniques and how to think critically.
 - **Intellectual Growth:** A major component to this course is making decisions based on information presented to you and therefore I think my critical thinking and decision-making abilities grew from this course.
 - **Quality:** I thought Professor Cipolli was taught this class extremely well. He chose to have recorded lectures posted and then in class homework help and summaries of the lectures, which I am not sure

was the most effective technique. I think it might've been better to use the in person class time for the lectures and then leave homework questions for office hours or smaller portions of in-person time. That said, I think Professor Cipolli is really good at answering questions and helping us when we are confused, as well as maintaining an engaging learning environment in which he cares about our wellbeing as students.

○ Student: 15

- **Reason(s):** Elective within major or minor
- **Effort:**
- **Understanding & Appreciation:** I've taken an introductory statistics course before this, and I knew that stats goes a lot deeper than what was taught, but I didn't know by how much. Thanks to this course, I've gained familiarity working with a new programming language specialized for statistics, and am happy to have this experience under my belt.
- **Intellectual Growth:** It helped me develop thinking skills. The professor, towards the end of the semester when we were starting to go over more complex subjects, really emphasized that there's no wrong way to come up with an answer, and there are multiple ways to arrive at an answer. What's more important is to evaluate the quality of the answer we got, questioning "Does it make sense?" Most theory driven classes derive a formula and give it to you, and while there were lots of formulas given to us this semester, we've never had to memorize them because knowing how to apply the formulas was more important, and I agree with that.
- **Quality:** I think the professor was really flexible and attentive to the students' needs. There were multiple places to ask questions, the feedback we were given was detailed, and you could just learn through looking at questions the other students had. There were also multiple resources to go to, including Google, and I got most, if not all of my questions answered. One thing I would like to point out is while the professor had a number of office hour slots open, they were only about 10 minutes long, which to me felt too short in case I wanted to go over something more complex or had a long bug in my code or was just taking a long time to understand a certain concept. Seeing that 10 minute time slot kind of discouraged me from attending office hours, but the good thing was that there were many other places to ask questions, and the professor was responsive through their email so I often resorted to those instead.

○ Student: 16

- **Reason(s):** Major or minor requirement
- **Effort:** This course was very demanding. Homework's took 16+ hours to complete. We had weekly reading, video lectures, and diagnostics.
- **Understanding & Appreciation:** This course heightened my appreciation and understanding of

the course subject. I learned how to use previous knowledge and apply it. We would also go over articles about data analysis in the real world.

- **Intellectual Growth:** Professor Cipolli has been a mentor and made me feel comfortable being uncomfortable and challenging myself.
- **Quality:** The teaching was truly exceptional. Professor Cipolli is a great professor and even better person. He offered multiple modes of learning (video lectures, powerpoints, readings ect). Being online definitely posed challenges and caused more self-learning, but he was always available for questions/help.

o Student: 17

- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
- **Effort:** I put a lot of hours into completing assignments for this class. This class made up about half of my total workload this semester.
- **Understanding & Appreciation:** This class taught me to code in R, which is a cool skill. It also introduced me to some data analysis techniques that I had not seen before.
- **Intellectual Growth:** My favorite part of the class was getting to use real data sets in our assignments. It was rewarding to see the things we talking about in class being directly applied to important and interesting questions.
- **Quality:** Professor Cipolli is a really friendly and approachable professor. I struggled in this class even though I dedicated a lot of time to it, which was frustrating. I felt overwhelmed by the workload and amount of online content we were meant to read/watch outside of class. I feel like this class would be better if it focused more on a procedural approach to data analysis and gave us a deeper understanding of fewer topics.

o Student: 18

- **Reason(s):** Reputation of the instructor; Interest in the course material; I had taken a class with Professor Cipolli before and enjoyed it but largely took the class for the content
- **Effort:** This class required a great deal of effort and independent thinking but Professor Cipolli was always there to help you when you got stuck
- **Understanding & Appreciation:** It was my first time taking this type of class and I really enjoyed the content, Professor Cipolli made it very interesting
- **Intellectual Growth:** It required a lot of independent thought and problem-solving which was great to practice
- **Quality:** I can not possibly give Professor Cipolli enough praise. He was able to make a challenging math class fun and engaging for someone who isn't a math major. He was incredibly willing to help

me whenever I was struggling with an issue either in or out of the classroom. He taught me an incredible amount and challenged me to think independently about the content of the course. His adaptation to teaching during COVID was incredibly impressive. He is an amazing professor and Colgate is very very lucky to have him. He clearly cares about his students.

○ Student: 19

- **Reason(s):** Interest in the course material
- **Effort:** I read the notes, carefully watched the lectures and took notes, went over the code from each chapter. I started the homework assignments at least 5 days before the deadline and attended Office Hours as needed. I attended the recitations and took notes.
- **Understanding & Appreciation:** I did not know much about data analysis or statistics before taking this course and it helped me gain a great understanding in what Data Analysis is and its use in many different fields. Now I feel like I can continue learning about it by myself much faster.
- **Intellectual Growth:** The examples used in this course have a wide range of applications in different fields and make the learnt material much more interesting. I have used various things learned from this course in my other classes which was highly appreciated. The midterm involved peer review and it definitely helped gain some understanding in how the real process works in research.
- **Quality:** Strengths: the instructor is very intelligent and presents the material in a way that is understandable for everyone. The examples used in this course have a wide range of applications in different fields and make the learnt material much more interesting. In fact I have not been bored for a second this entire semester. The course is fast-paced which is nice and challenging. The instructor is also very respectful and available and helps as much as he can. The instructor always returned the homework pretty quickly and released both his answers and other students' solutions which are pretty helpful. The course teaching involves all possible techniques including in class recitations, videos, readings and discussion forums which helps reinforcing the learnt material. Overall, one of the best professors I have had at Colgate! Weaknesses: Sometimes the grading was a little unclear for me. Sometimes the more you write, the more prone to errors your solutions can be and so a couple minor errors resulted in a grade reduction. Although this kind of makes sense since it encourages double checking your answers and presenting your answers in a more clear and concise ways. But I think the grading process is still fair.

○ Student: 20

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** The course was designed to challenge students and it certainly did. The HWs picked up in amount of effort required and difficulty very rapidly and did not taper off at all throughout the semester. Generally, watching the lecture videos before heading to class helped but it also made

some of the class time (in-person) feel redundant and repetitive. Professor Cipolli made sure to try and make the class time engaging and interactive (at least as can be during the pandemic).

- **Understanding & Appreciation:** The course was very material-heavy and application-heavy so it required a decent amount of effort to understand and do. The subject material is obviously very interesting and pertinent in today's time and towards the end of the semester is sort of when it seemed like all that we learnt throughout the semester came together and formed a big clear picture.
- **Intellectual Growth:** The course sometimes required grappling with errors and quirks that were not covered in class before so Googling and understanding other people's work was a skill that the class was dependent upon greatly. It also helped hone coding skills.
- **Quality:** The course was generally taught very well (at least, by any metric that is relevant during the pandemic). Professor Cipolli was very accessible, accommodating and helpful. The in-person class meetings also had time devoted to discussing HW problems and techniques which was very nice. The professor also set up Moodle discussion boards for questions and comments about the class which helped a great deal since it was likely that more than one person was having the same issue due to the nature of the course material. The only weakness in the course was that after having watched the lecture videos before heading into class, the class time sometimes felt a little redundant and repetitive. This was definitely helped by being required to only meet in-person once a week. One other weakness (although i wouldn't call it that at all) was that the course is a mesh between math, comp. sci. and statistics courses. And the professor tried to treat it as such which meant that sometimes the math theory portion of the material would not get enough attention or some times the application portion (comp. sci.) wouldn't. It also took some of us until later in the semester to learn exactly what was required in the HWs and how to organise it in order for us to do well. It would've helped to look at a couple ideal samples at the start of the semester or have an official checklist. But otherwise, this was generally a very fun albeit very challenging course.
- o Student: 21
 - **Reason(s):** Elective within major or minor
 - **Effort:** It took me forever to do the homework.
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** I think professor Cipolli is too harsh on grading and the workload for this class is insane.
- o Student: 22
 - **Reason(s):** Major or minor requirement
 - **Effort:** This course required a lot of effort with lengthy and challenging homework assignments and weekly lecture videos. It was challenging to keep up with the videos and I oftentimes fell behind,

but there were times given to catch up.

- **Understanding & Appreciation:** This course helped me understand modeling in a very applicable way. It is a very interesting subject; however, I feel I spent a lot of time confused about the specifics rather than understanding the big picture. Complicated topics were explained quickly with an assumption that we were following along and I often got lost. I got the most out of the class when we were in R and working with data sets that I could understand how we were analyzing them and why.
 - **Intellectual Growth:** This course challenged me a lot and helped me learn to see the big picture. It taught me to problem solve and work with situations that I had never learned about before.
 - **Quality:** Professor Cipolli is incredibly intelligent and helpful to students. He is so smart that I think he overestimates his students sometimes and assumes we are following along when some of us may not be. He has high expectations and it was difficult for me to feel that I could meet them with each homework assignment being so challenging. However, I did feel supported throughout the semester and do think I learned a lot by the end of it.
- Student: 23
- **Reason(s):**
 - **Effort:**
 - **Understanding & Appreciation:**
 - **Intellectual Growth:**
 - **Quality:** I know Professor is very nice and tries very hard but it is just hard for me to digest it. Maybe the pace is a bit too fast in the sense that we move from one thing to another too fast that it gives too little time to appreciate and differentiate between the uses. I also do not like open-ended questions very much. I think when doing home work, you should give more step by step guidance and after that let go of us gradually. Also, I do not like too lengthy home work, you can break it down into small pieces and make us do every week or twice a week.

Fall 2019: Section A

- Student: 1
- **Reason(s):** Reputation of the instructor; Interest in the course material
 - **Effort:** I spent a lot of time in this class. The course credit should definitely be higher than 1 point because this class just takes so much time. I really learned a lot and I loved it but it took so much time out of my other classes.
 - **Understanding & Appreciation:** The assignments and exams really challenged me. The learning curve is really high and my grades for this class are not great , but I am glad I took this course because I learned a lot.

- **Intellectual Growth:** The class, in general, helped me think about numerous factors before deciding how to tackle a specific problem.
 - **Quality:** Professor Cipolli is literally one of the best professors, if not the best, I had in Colgate. I wish I could have known about him earlier so that I could take Data Analysis II with him. I hope he continues like this because he is so passionate about the subject matter.
- Student: 2
- **Reason(s):** Elective within major or minor
 - **Effort:** I did not do much beyond the required problem sets.
 - **Understanding & Appreciation:** This course helped me appreciate the importance of using good methods and techniques when analyzing data.
 - **Intellectual Growth:** It helped me gain critical thinking skills as we had to decide what methods to use based on the situation and data.
 - **Quality:** I thought the teaching was engaging. The course moved too slowly for me. I think there was a large difference in people's prior knowledge making it difficult to bring everyone up to speed while accommodating those who had a strong background.
- Student: 3
- **Reason(s):** Major or minor requirement; Elective within major or minor; Interest in the course material
 - **Effort:** This class was very time consuming; I spent at least 10 hours on every homework and closer to 20 on the exams/revisions. This involved going through notes and testing things out. Every week there was a diagnostic which was nice to remind us to think back on the week's work, and we had fun (and relatively short) reading assignments every week.
 - **Understanding & Appreciation:** I had done what I had previously considered data analysis prior to this course, but this course reframed how I think about data analysis. I loved statistics when I took it in high school, and this added more of a statistical approach which I enjoyed. I enjoy that I now have different ways (a flow chart in particular) to think about data analysis.
 - **Intellectual Growth:** I now know how to use R/Rstudio, which I think will be useful for me in the future. I got a refresher in statistics, and learned how to write reports that researchers may actually want to read.
 - **Quality:** I think Professor Cipolli is one of the most enthusiastic professors I've had; he clearly loves the subject material, and it's wonderful to see that (it makes it more engaging). He always went above and beyond for the resources he provided. I think this class was extremely work-heavy, but in fairness, he also put in a TON of work, and we got grades back much faster than I would have expected. I would definitely recommend his class to other students (but would also tell them to

start the assignments early; when we have assignments, they take up a good portion of my week). He also clearly has respect for his students- he would make accommodations when they were needed and clearly liked our class. It was a good semester!

○ Student: 4

- **Reason(s):** Interest in the course material
- **Effort:** This course was a LOT of work. However, I do think the coursework/hw was crucial to understanding the material.
- **Understanding & Appreciation:** This course was extremely helpful in solidifying my interest in the material and I love the professor's enthusiasm about statistics and data analysis which definitely transfers to the whole class and makes us excited about it.
- **Intellectual Growth:** Thanks to this class (and biostatistics), I have realized that I actually really enjoy data analysis and statistics. It has definitely shaped my outlook on statistics in my research and shaped my research interests. Very bummed I will not get to take the second part of this course.
- **Quality:** I think the quality of the teaching was very good. At times, concepts were slightly confusing but the professor was always very good about answering questions and going over difficult concepts over and over again. I would say the only weakness with this class is it started a bit slow for my taste because we are all from different backgrounds. Since I already know R, I was a bit bored in the first two weeks of class.

○ Student: 5

- **Reason(s):** Interest in the course material
- **Effort:** I spent hours and hours sifting through videos and the prof's notes to get an understanding of the material, especially at the start of the semester when I lacked any sort of statistical vocabulary. I would say I went through a good amount of the lectures not understanding anything and having to go back and read through slides/notes and other online resources to get it.
- **Understanding & Appreciation:** The course was a helpful and practical intro to data analysis and concepts surrounding this subject. I gained an understanding of various statistical inference methodologies and got a peek behind the scenes without getting bogged down by complicated mathematical procedures. Overall, I feel empowered to go on and learn new methodologies and delve deeper into statistics. At some point, I hope to ground the mostly applicational skills I gained in rigorous mathematics.
- **Intellectual Growth:** I can now formally dispute all those "[insert anything here] causes/cures/helps [insert anything here]" articles by sifting through the cited papers and examining the statistical procedures used. In addition, I gained an understanding of LaTeX, which is seems preferred within the scientific community. This class ended up being the one with the most workload; I have spent

hours working on assignments and have come out with an appreciation for hard work.

- **Quality:** The instructor was very generous in his grading; in almost all testing instances, I felt I performed worse than it turned out to be. Going the extra mile was rewarded and this encouraged me to play it a bit more bold in the assignments. The biggest strength, I would say, is the fact that the prof showed us all up in terms of work ethic and discipline. The man is practically a god.
Weakness: this class definitely needs a prereq. This would have been extremely helpful to me.

o Student: 6

- **Reason(s):** Major or minor requirement; Elective within major or minor
- **Effort:** I found this course to be very difficult, in that I would spend hours on problem sets and exams and often feel like I did not even get anywhere or not know where to start. I put a lot of hours into our assignments, as well as reading the notes and moodle discussion to better understand what we were learning and to learn from other students' questions or inputs. This course felt like a ton of content.
- **Understanding & Appreciation:** This course was interesting in that we used really interesting examples in class and problem sets.
- **Intellectual Growth:** This course was important because it has many possible career applications, as handling large sets of data is important in many careers.
- **Quality:** Professor Cipolli is a great teacher and I could see how excited he was about everything he was teaching, which made class fun. He did a great job of engaging the class and allowing students to apply what they have learned in other disciplines. I often had trouble following the lectures because I didn't really understand how what we were doing was relevant or related to other topics we had learned until we did a homework to apply them. I found that I learned new material better after I was given the flow chart because it allowed me to understand where I might use the information. I think in the future it would be helpful to outline what we are doing and why a little more clearly before going deep into details of what tests and methods are in terms of their formula and how they are calculated.

o Student: 7

- **Reason(s):** Elective within major or minor
- **Effort:** This class was waves of effort centered around the homework assignments and exams but overall was not too much work. There were occasional readings and diagnostics but overall it was a very fair amount of work.
- **Understanding & Appreciation:** I think I learned a lot about what data analysis is and what analysts do in this class, and I have a good understanding of the concepts but I also realized it is definitely not for me. So I wouldn't necessarily say my appreciation increases.

- **Intellectual Growth:** I think this class improved my report writing skills through the peer reviews and I definitely gained skills I could use in the real world.
- **Quality:** I think Professor Cipolli did a great job with this class. There was a strong focus on making sure the students guided lectures when we were confused and he answered all of our questions clearly. Assignments were returned quickly and usually had a good amount of feedback.
- o Student: 8
 - **Reason(s):** Interest in the course material
 - **Effort:** I completed all assignments on time, attended all classes, and actively participated when possible.
 - **Understanding & Appreciation:** I came into the course thinking I might be interested in data analysis and visualization. I am leaving it with no doubt that I want to incorporate both of those things into whatever I do post-graduation.
 - **Intellectual Growth:** The problem-solving methods the data visualization techniques I learned in this class have already helped me elsewhere in my education, and will continue to do so post-graduation.
 - **Quality:** Positives: First, I can honestly say I have never had a professor who put more work into their course than Professor Cipolli. The amount of resources he generated for us and posted on Moodle were more extensive than perhaps all my prior courses combined,. This showed amazing dedication, and I will hold on to the resources long after I leave Colgate (already have them printed!). Second, he was very good at connecting sometimes abstract concept to real-life examples. Third, he was always always always accessible. In fact, he had a Moodle board for the class, and I learned probably a semesters worth of things on that alone! Overall, an incredible dedicated and hardworking professor who cares about his students and their education. I would recommend any friend from any major to take a course with him. Negatives: The negatives are far and few between. The major one I will say is that, at least at the start, his lectures were a bit over our heads and he was not really connecting with the class. However, to his credit, he adjusted his methods when this was brought to his attention, and since then the lectures were much easier following.
- o Student: 9
 - **Reason(s):** Exploration of possible major or minor; Elective outside major or minor; Interest in the course material
 - **Effort:** I have never put so many collective hours into a course.
 - **Understanding & Appreciation:** I want to pursue data science further because of this course.
 - **Intellectual Growth:** Coding in a math class is very different from coding in a computer science course. Having so many available resources would seem easy in any other course, while instead the

amount of resources we had made it difficult to optimize which sources we used and how we wanted to answer questions. This course was very applicable to what I intend to do in my career later and it helped me think about presentation of information and how to communicate that information more than I have in any other class thus far.

- **Quality:** Professor Cipolli is awesome! He was accessible to meet with, he went over the top writing course notes and in written presentations, and he was always available to answer questions via email or our class stack overflow. Every assignment we had felt purposeful, I never felt like any work we did was busy work– that is saying a lot considering I spent 15-20 hours on average per homework. Sometimes spoken presentations were a little hard to follow, but the written out notes were extremely clear, and his excitement made me excited to analyze data.

o Student: 10

- **Reason(s):** Interest in the course material
- **Effort:** I genuinely do not think I have put in more effort into a course during my time as an undergraduate. Prof. Cipolli assigned a lot to do, but I felt that every assignment was valuable and challenged me to think for myself. It was a good balance of high expectations, a tough course load, and valuable assignments for my education.
- **Understanding & Appreciation:** I can't say enough good about this course and how it has changed my appreciation for the subject. I took the class to get better at statistics for my own discipline, as well as a genuine interest in the material. I came out of the class with a great appreciation of the history of statistics, how much data analysis has changed over time, and what is on the horizon for the field. I learned more in this class than I have in any other class.
- **Intellectual Growth:** This course was the pinnacle of independent thinking. Every assignment used real data from real experiments, and there was obviously a great deal of planning and effort on Prof. Cipolli's end to incorporate this material into the lectures effectively. I never felt like I was unprepared for assignments; rather, I was forced to use my own thinking, decision making, and newfound expertise in data analysis in the course.
- **Quality:** Prof. Cipolli will go down as one of the most influential professors I have had during my time at Colgate. He expected the world from his students; not to be mean, but because he genuinely believed that the class was able to do anything. He consistently provided positive, immediate feedback, but was not afraid to be explicitly clear when something was wrong. He was caring, understanding, and passionate about the material. The excitement he has for the subject was contagious, and I come out of the course with a genuine desire to pursue the material further, something I can say only about only a handful of other classes from my time at Colgate. Prof. Cipolli is an integral part of the math department, and more broadly, the liberal arts curriculum at

Colgate. I will be happy if I am even half as passionate and successful in my career as Prof. Cipolli is about statistics.

○ Student: 11

- **Reason(s):** Major or minor requirement; Reputation of the instructor; Interest in the course material
- **Effort:** 5 homeworks and 2 exams have required many hours of staring at R and making graphs. Professor Cipolli is intentionally unclear about his expectations so these assignments are very open ended, which can cause the amount of work required for each to be immense. Overall, this style of learning is very conducive to mastery of material.
- **Understanding & Appreciation:** Cipolli has done a great job making data interesting. It is everywhere, and being able to analyze it will be very valuable.
- **Intellectual Growth:** It has made me think deeply about data.
- **Quality:** Cipolli is a phenomenal professor, being very organized and intentional about his pedagogy. I feel his biggest flaw is he will continue to change his teaching style in his pursuit to perfect it, and never realize it is correct.

○ Student: 12

- **Reason(s):** Interest in the course material
- **Effort:** I did homework, diagnostic on time. I did take-home exams with enough time for revising.
- **Understanding & Appreciation:** The basic concept of probability. How to code in R. How to conduct hypothesis test and confidence interval.
- **Intellectual Growth:** How we should access a dataset. Not just answer a given question but to come up with my own question.
- **Quality:** I think Professor Cipolli is a very dedicating professor. He has high standard for his students and I learnt a lot from this lecture.

○ Student: 13

- **Reason(s):** Major or minor requirement
- **Effort:** I went to numerous office hours, completed every assignment, and spent numerous hours reviewing material posted to the moodle page.
- **Understanding & Appreciation:** I've wanted to go into a career in data since I first started taking computer science classes. This class has helped me expand my desire for this subject and has reaffirmed my path later in life.
- **Intellectual Growth:** This class was extremely fast paced, and I often found myself looking back over notes taken and posted to moodle. While this was challenging at first, I was able to get a mastery for it and often found myself "teaching myself" the material in a manner that made it easier for me to understand. Combined with Professor Cipolli's knowledge, I was able to get a mastery of

the material that I understand.

- **Quality:** Professor Cipolli did a wonderful job teaching this course and it has by far been the best course I have taken at Colgate. Lecture was fun and informative, work was tough but fair for those that applied themselves, and the classroom atmosphere made for a fantastic learning experience. I would highly recommend that more people take this course and that applied statistics get more integrated into the Colgate curriculum.

○ Student: 14

- **Reason(s):** Interest in the course material
- **Effort:** I tried to look over my notes periodically, completed each homework with maximum effort, and spent many hours studying for each assessment.
- **Understanding & Appreciation:** This course really allowed me to appreciate the course subject. It also made me realize how much there is still to learn within the field of data analysis and got me interested in potentially taking data analysis classes at a higher level.
- **Intellectual Growth:** The course contributed to my intellectual growth by making me modify my existing ideas of concepts and adapting each to the problem presented.
- **Quality:** I thought Professor Cipolli did a good job teaching the class. He clearly knows a lot about the subject and was engaging in the way he presented his lectures. I also really appreciated the examples he gave in class and thought he did an excellent job of answering all questions. The only critique I have is in the structure of the class. I felt that we spent a little too long at the beginning of the semester in review of R and basic statistical analysis. I suggest maybe creating a pre-req to this class where we can explore R and basic data analysis concepts, so that we can hit the ground running in this class and spend less time in review and more time on upper-level concepts. I also appreciated the different backgrounds of everyone in the class, but I think pre-reqs would allow everyone to be on the same page in terms of both programming and general statistical knowledge.

○ Student: 15

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of effort into this course. I would always spend a lot of time working on homework and learning the material. I made sure to outline all the lectures to make sure I understood the material and was able to ask well-informed questions.
- **Understanding & Appreciation:** This course helped me understand when to use certain statistical tests and how to deal with large sets of data. I feel very comfortable being able to clean, interpret and draw conclusions from a data set. I can apply a vast variety of tests to reach certain conclusions.
- **Intellectual Growth:** This course helped me to strengthen my strategic thinking skills. I was able to be given large amounts of information and decide what the best approach was before diving into

the project or homework.

- **Quality:** I thought the quality of teaching in this course was good. I think this course covered a lot of ground in a little time, but all the information is very useful and important going forward. I feel confident talking about what I did in this class in an interview or to a friend. However, with all the information we learned, I sometimes felt overwhelmed with how much we were learning and sometimes felt that I did not understand much. The homework always made me feel better and more confident in my skills. I think the way the information was presented in class sometimes felt overwhelming since so many equations were on the board at once. It might be good to integrate more coding into all the lectures rather than at the very end.

○ Student: 16

- **Reason(s):** Major or minor requirement
- **Effort:** A lot of effort, it felt like a 2 credit course.
- **Understanding & Appreciation:** I learned some new things.
- **Intellectual Growth:** Not really.
- **Quality:** Professor Cipolli is really passionate about the course, yet his teaching style isn't really helpful. He gives out way too much homework and his grading is incredibly harsh.

○ Student: 17

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor
- **Effort:** Moderate to high effort. Professor Cipolli really expects you to be clear in your communication and critically engage with course contents. Taking a class on data analysis, the instructor had a very clear conception of the broader goals and objectives for the class. These included the ability to think independently about data analysis using our class lectures and concepts as tools, as well as having good writing skills to summarize findings and effectively communicate results. This has pushed me throughout the semester to spend long hours on the homework. Really, the design of exams and homeworks was such that most of my learning happened outside the classroom.
- **Understanding & Appreciation:** I had a strong desire to take the course when I took it, and I have only grown to appreciate it. This course is an amazing starting point to understand the fundamentals of data analysis on a mathematical and applied computational level. Data visualization skills and the ability to interpret graphs are some of the key skills I take away from the course. Professor Cipolli also tried to include articles that were relevant to data analysis and visualization, some of which very interesting. There was always a focus to understanding class concepts with a real world focus.
- **Intellectual Growth:** 1) Independent learner- focus on systematically developing the skills to find tools and resources to accomplish a job 2) Importance of collaboration with the researcher in any

data analysis work 3) Making assumptions explicit in a model and understanding results in context of those assumptions

- **Quality:** The quality of teaching in this course has been extremely high. Strengths: Highly accessible, detailed and organized notes, flexible with assignment deadlines and students' busy schedules, varies the pace of the class to promote best student understanding and outcomes, interesting homework and taking his exam was an especially important learning experience Weaknesses: We didn't cover a lot of ground in the first 1.5 months, and then the pace of the course was relatively quick.

○ Student: 18

- **Reason(s):**
- **Effort:**
- **Understanding & Appreciation:**
- **Intellectual Growth:**
- **Quality:**

○ Student: 19

- **Reason(s):** Major or minor requirement; Exploration of possible major or minor
- **Effort:** I spent quite a good amount of effort on doing the homework and other projects. Missed class sometimes, but only because I had exams and tests on Thursday.
- **Understanding & Appreciation:** I have gained an understanding of what data analysis is about, the statistics behind it, and how to apply it.
- **Intellectual Growth:** I found this topic quite challenging and interesting, and there is certainly a lot of room to explore. I went into this course wanting to see what data analysis is about, and I think I got what I came for. I had a hard time developing an appreciation for the subject though. Somethings just didn't click with me - perhaps I should dig deeper into the theoretical side of things, or take further data analysis classes. That's on me though.
- **Quality:** I think prof Cipolli put a lot of thoughts into the course materials - homework and tests and notes were well designed in my opinion. He also put a lot of effort into the course (examples: stack overflow, the remarkably short return time for homework and exams, weekly diagnosis). I really appreciate these efforts.

○ Student: 20

- **Reason(s):** Elective within major or minor
- **Effort:** I put effort into this course by attending class, completing assignments, and reviewing the notes that Professor Cipolli posted online.
- **Understanding & Appreciation:** This course has helped me to understand the different forms that data can take and how to assess the given data and make educated decisions about what

evidence can be identified to most effectively support or refute a claim.

- **Intellectual Growth:** Beyond the direct subject of data analysis, this course has helped me to cultivate skills of using supplementary learning resources to problem solve, particularly in a coding context. It has also helped me to enhance my decision-making techniques when it comes to addressing a problem.
- **Quality:** The quality of teaching in this course was very high. Professor Cipolli was extremely organized and presented the course material in a clear and enthusiastic way that sparked a lot of natural curiosity throughout the members of the class. He taught the course in a very engaging way and was always more than open to questions that people had and made these questions into learning opportunities for everyone in the class. Additionally, he clearly displayed a lot of care and concern for the students in the class and was always available with lots of resources for help.

o Student: 21

- **Reason(s):** Major or minor requirement; Elective within major or minor; Reputation of the instructor
- **Effort:** This course was the course I spent the most time on this semester. Homeworks would take about 12-16 hours, which was the professor's expectation, but I think it would've been helpful if this course had a lab or was 1.5 credits as this I feel would be commensurate with the workload of the course.
- **Understanding & Appreciation:** This course gave me a foundation to be a data scientist and to approach statistical problems from a mathematical perspective rather than an economic perspective.
- **Intellectual Growth:** This course allowed me to be able to boil down problems from different disciplines into mathematical sections. I also learned R Studio, which is a better alternative to STATA in some respects and will be a skill that I'm sure I'll be able to pull on in the professional world.
- **Quality:** Professor Cipolli was an incredibly engaging professor. He was always available to ask questions and this class always made me feel as though everyone was involved and participating, even though it was a heavily lecture-based course. The homeworks he assigned were long, but the individual questions themselves allowed me to feel comfortable approaching a variety of different problems. He tried to be responsive to a variety of ways and gave students as many chances to critique him as he critiqued us. You can tell he's very interested in the topic, which makes it easier for me to engage with the material. I'm sad I won't be on campus to take Data Analysis II.

o Student: 22

- **Reason(s):** Major or minor requirement
- **Effort:** I put a lot of time and effort into this course. It was more work than my other two classes

combined so I had to put a lot of my energy into doing the assignments. It also required a lot more critical thinking than most of my other classes.

- **Understanding & Appreciation:** This class was fairly interesting and served as an introduction to working with data and drawing conclusions. After taking it, I now certainly have more interest in working with data.
 - **Intellectual Growth:** This class helped me understand the basic methods of working with data which was helpful but it was more helpful in teaching me how to draw conclusions and plan approaches depending on the data given. Critical deals.
 - **Quality:** Prof Cipolli was a very committed professor that was always available to answer a question related to course material. The class was a whole lot of work but the fact that he was so committed made it a bit easier to deal with.
- o Student: 23
- **Reason(s):** Elective within major or minor; Reputation of the instructor; Interest in the course material
 - **Effort:** I spent a great deal of time and effort in completing the various assignments for this course. Moreover, I regularly consulted the notes and lecture slides to refresh my understanding of the concepts and techniques taught in this course. I also discussed problems with my professor and classmates.
 - **Understanding & Appreciation:** This course presented a steep learning curve as I had to learn coding from scratch while learning advanced statistical concepts. I really enjoyed applying the various concepts to real world research problems while learning the theoretical underpinnings of the various techniques involved.
 - **Intellectual Growth:** The course provided a completely fresh perspective on mathematics and exposed me to the subjective decision-making that goes into creating statistical analyses. I learned to think critically about the advantages and disadvantages of various techniques and to always think carefully about my assumptions.
 - **Quality:** Professor Cipolli is extremely well-organized and conscientious. He put a great deal of effort into preparing comprehensive lecture slides and notes for our class and was always accessible to answer questions, whether online or in person. He explained the concepts clearly and supplemented technical instruction with articles and podcasts to contextualize the content in the real world. He was a friendly and encouraging presence in class and coaxed the best out of us. One of the difficulties I faced in the class was that homework assignments and exams could be unreasonably time-consuming. Working on the assignments of this class could be considerably stressful at times and made it somewhat difficult to engage with my other classes. There are upsides to this, of

course. I worked harder than I ever have during college and as I gradually became more comfortable with R and the content of the class, the assignments became more manageable. This class has been a test of resilience, work ethic, and time management and overall, I'm glad to have been part of MATH 354 with Professor Cipolli.

— Fall 2018: Section A

- Student: 1
 - **Reason(s):** Major or minor requirement
 - **Effort:** not that much
 - **Understanding & Appreciation:** good amount
 - **Intellectual Growth:** yes
 - **Quality:** cipolli is a great professor and a great guy. he is funny and easy going and wants the best for us. give this man a raise
- Student: 2
 - **Reason(s):** Interest in the course material
 - **Effort:** I worked around 8 hours every week to do homework assignments. I also tried to keep up with readings but found that a bit difficult.
 - **Understanding & Appreciation:** It taught me that unlike other areas in math, data science is not exact and is very similar to the arts. I learned about the assumptions you make when fitting various models and what steps to take to resolve issues related to those assumptions. Not only am I able to tackle statistical problems I can look at other people's work and critic it and give examples of where they could improve.
 - **Intellectual Growth:** It made me realize that statistics don't dictate individual experiences and should be approached critically. This course made me realize how statistics could be use to make inaccurate assumptions. It also showed me that statistics can take a large amount of data and summarize it so that it's easier to act upon when applied to science to policy make to business.
 - **Quality:** This is one of the best classes that I've taken. I often go through classes cramming information, with much time to truly grasp things used in previous chapters, but this time around, either by the nature of the material or how the class was designed I feel very confident that I've walked away with something I'll be using in the future. I think the speed of the course and the focus on "productive failures" forced me to look back and build upon weaknesses. I think a weakness of the class was some of the lectures, I wished there was more interactivity in them.
- Student: 3
 - **Reason(s):** Elective within major or minor
 - **Effort:** I spend around half an hour to review slides before class and around 20 to 30 hours for each

problem set.

- **Understanding & Appreciation:** I learned about how to build regression models to assess a set of data.
- **Intellectual Growth:**
- **Quality:** Professor Cipolli is very smart and responsible. He definitely puts in a lot of hours every week preparing for lectures and course materials. I really like that he offers a lot of resources on moodle for our use. However, I feel like he can improve a little bit in his way of presentation, since some less than intuitive concepts went by unexplained and his answers to some class questions were a little bit hard to understand. In addition, I think his problem sets are too long. Many of the questions are repetitive, from which I benefit little.
- Student: 4
 - **Reason(s):** Elective within major or minor
 - **Effort:** I put a lot of effort into doing the work and understanding the material.
 - **Understanding & Appreciation:** There were many interesting topics and areas of study where what I learned in this class could apply.
 - **Intellectual Growth:** I got experience in working with R.
 - **Quality:** The class was great. The feedback we got on homework and tests was very helpful. I think being able to do more hands-on examples before tests would've helped.
- Student: 5
 - **Reason(s):** Elective within major or minor; Interest in the course material
 - **Effort:** I put a lot of effort into this course, the material was difficult and grasping the material took time and engagement with it. Time management proved to be very important in the course and definitely helped in easing the work load. That being said, after putting in the effort and work to engage with the material I found it to be very enjoyable.
 - **Understanding & Appreciation:** Most of the time this course did contribute to my appreciation of the field, however, my understanding of the course subject differed per day. I felt as though I understood most of the material after going through the examples and the homework but during class, especially when lecture focused on the large complicated equations used, I felt lost.
 - **Intellectual Growth:** I think this was one of the few classes I have taken here that actually feels very applicable to what I want to do after college, it made me more convinced that I want to do something with data analytics in the future.
 - **Quality:** I think Professor Cipolli cares a lot about the performance of his students, it seems as though he really wants students to succeed. He seems very excited about the course material which I found to be refreshing and helpful in my engagement with the material. However, his lectures

were sometimes boring but I think this was at times necessary as there doesn't seem another way to teach some of this.

○ Student: 6

- **Reason(s):** Major or minor requirement; Elective within major or minor
- **Effort:** This was a particularly difficult class for me. I have never taken any of the prerequisites except for Math260, which does not deal with r code or data analysis. It still continues to be difficult and challenging, but is very interesting and I know the hard work will pay off in my learning after I graduate.
- **Understanding & Appreciation:** This was my first introduction to statistical work, coding in R, and data analytics. I really enjoyed learning about these topics and have a greater appreciation for data analytics.
- **Intellectual Growth:** This helped me to think about how I could apply my skills once I graduate. I am a sociology minor and this correlates perfectly with the idea of data sifting and analytics that I am interested in doing in the future. I think that applying these skills to research would be an excellent way to expand my education past this course.
- **Quality:** I thoroughly enjoyed learning from Professor Cipolli this year. He is great in office hours and really has a passion for this subject. I had a tough time because this class allows students with a range of skills/backgrounds in math, comp sci, econ, and stats, and I felt like I was and still am very behind many other students. Professor Cipolli was always helpful and encouraging in office hours, yet for me it seemed as if the course lectures were catered towards students with a much higher level of understanding in this material than others.

○ Student: 7

- **Reason(s):** Reputation of the instructor; Interest in the course material; I was extremely interested in the course material from both an academic and a potential career perspective. Additionally, Professor Cipolli's reputation was that of someone who has an excellent grasp of the material and is extremely good at conveying the material to students.
- **Effort:** I put in a medium-high level of effort into this course.
- **Understanding & Appreciation:** This course thoroughly explained the course material and directly increased my appreciation for the subject. Upon enrollment, I was unsure whether it was a subject I would wish to pursue in the future, but upon (near) completion, I must say that my understanding and appreciation have both increased tremendously.
- **Intellectual Growth:** This course consistently contributed to my intellectual growth beyond the course subject. Material in class was tied directly to real-world examples through homework and classwork and developed/blended skills from a number of disciplines.

- **Quality:** This course and Professor Cipolli's teaching of this course have exceeded my expectations. He has an incredible grasp of the material, understands how to convey it to students, and is beyond willing to work with students to ensure understanding, rather than simply a grade. His lectures are full of useful content that clearly explain the material and he is extremely receptive to questions, providing valuable answers that often explain not only the material, but their relation to previously covered material. The focus on understanding the topics presented is unrivaled across nearly all courses I have enrolled in in the past four years. Note: Thank you Professor Cipolli - this course, and more importantly your teaching of it has been incredible.
- o Student: 8
 - **Reason(s):** Major or minor requirement; Interest in the course material; I was very happy to see the math department offer another applied math course that expanded on the math260 computational practice
 - **Effort:** This is certainly the most time intensive course of my semester. The homework assignments were very long and difficult and I felt could not have been completed without going to office hours multiple times. They did help me learn the material however
 - **Understanding & Appreciation:** This course is certainly motivating me to continue my studying of applied math. I really liked the examples we studied and learned with.
 - **Intellectual Growth:** It was a very hard class that challenged me and my time management skills.
 - **Quality:** Professor Cipolli did a great job teaching this course overall in my opinion. He was incredible accessible and always helpful when I reached out to him, even offered to meet through video call when I was away for an interview one time. The lectures were extremely boring however, I think its just the material he had to get through not his delivery, but they felt like very long classes. Overall, very happy I took this course and will try to take more courses with Cipolli
- o Student: 9
 - **Reason(s):** Major or minor requirement; Interest in the course material
 - **Effort:** I always completed my assignments on time. When prof cipolli added the time spent each day to the homework, I was originally annoyed because it felt like middle school, but it actually helped me work on the assignment little by little.
 - **Understanding & Appreciation:** I definitely deepened my understanding of data analysis from the little I learned in my previous class. I feel well equipped to pursue my senior seminar which will have a lot of data analysis and use concepts from this class.
 - **Intellectual Growth:** It will help me in my future coursework as I finish my major as well as in the real world for making business decisions.
 - **Quality:** I really enjoyed the format of this class and the examples in the homework. I would have

enjoyed doing more case studies during class because sometimes it could get a little dry. If we had time to look over data before coming to class, then working in groups to compare it would work well.

○ Student: 10

- **Reason(s):** Elective within major or minor; Interest in the course material
- **Effort:** I went to office hours occasionally and Professor Cipolli was very helpful and accessible. I put in a lot of time on the problem sets as they were quite lengthy and time consuming. Probably on average roughly 10 hours per homework.
- **Understanding & Appreciation:** At first I was worried I didn't have enough prerequisite knowledge with coding and statistical background, but I felt as though I picked it up and was able to meet expectations of the class. I think I gained a good understanding of the material because of the time required to do the work. I came in with an interest in data analysis, and I think this course affirmed my interest.
- **Intellectual Growth:** The problem solving skills I gained from this class are very helpful in application to other problems. I think that because data analysis plays such a large role in society today, this education applies to most aspects of life and can be implemented in many ways.
- **Quality:** Professor Cipolli was excellent in being available and comprehensively teaching the material. He offered time to meet pretty much every day with flexible hours. Would have liked a little more clarity on grading even though he was thorough in his explanations and expectations. The clarification I seek is how are the letter grades from questions turned into a numerical percentage (what differentiates an A converted to a 93 from an A that is converted to a 96?). Overall I learned a lot in class and the problem sets reinforced my knowledge on the topic well even though they were very long.

○ Student: 11

- **Reason(s):** Major or minor requirement
- **Effort:** I have put a considerable amount of effort into this course, far more than any of my other classes this semester.
- **Understanding & Appreciation:** I have learned a lot throughout the semester. I have come to understand that data analysis is not simply about cookie cutter mathematics but more about telling a story.
- **Intellectual Growth:** I have learned to explore all avenues in an exhaustive search before deciding I am stuck.
- **Quality:** I have really enjoyed my time in Professor Cipolli's class. He is attentive, organized, and clear in his lectures. The only two areas I feel that his teaching can improve are in structuring the

workload for the course and making lectures less monotonous. Other than that I have learned a lot and am thankful for my time in the course.

○ Student: 12

- **Reason(s):** Elective outside major or minor
- **Effort:** I put an immense amount of effort into learning the course material and Professor Cipolli was constantly available to help me.
- **Understanding & Appreciation:** I gained valuable insight into the world of data analysis through this course and have acquired the tools necessary for me to advance in my career down the line. I have learned so much about the numerous possibilities to consider when performing data analysis and I have come away with the skill set to draw conclusions from raw data sets.
- **Intellectual Growth:** In teaching the material in this course, Professor Cipolli constantly gave real world applications. In working with these real world applications I was ultimately able to extrapolate the skills I learned to my Economics courses in order to build better models and come to more unbiased conclusions.
- **Quality:** I think Professor Cipolli is of the highest quality and his ability to teach difficult material in an interesting way is second to none. He constantly made himself available for questions or difficulties that the class may have had and tailored lectures and pace to our learning rate. It was clear that he genuinely cared for the success of his students.

○ Student: 13

- **Reason(s):** Interest in the course material
- **Effort:** I put in a lot of effort into this course. I did every homework assignment far in advance, visited office hours frequently, did all course readings, and attended every class session.
- **Understanding & Appreciation:** I had a general interest in data analysis, but was unsure of whether I wanted to rely go down that path in the future. This course has confirmed that data analysis is a passion, and I am so glad I took this course. My appreciation and understanding of the subject were both significantly increased as a result of the course.
- **Intellectual Growth:** This course helped me evaluate what I see in news articles, giving me a familiarity of how statistics are applied in everyday writing. As a result, I see the world in a much more critical lens and have a far greater time understanding what I read, both in terms of news and academic papers. Additionally, this course helped me improve my time management skills, based on the way the professor structured homework assignments and other due dates.
- **Quality:** This class was a lot of fun to be in, extremely engaging, and taught me a lot. The instructor is clearly very dedicated to the success of the students, in a way I have not seen before in any class at Colgate. This is not criticism of my past professors, but rather testament to how

dedicated Prof Cipolli is to his students. At every step, Cipolli did everything in his power to make himself and resources available to students, including creating a long typed up document of notes after a student's suggestion, and even being available for Google Hangout calls over weekends. The professor treated us as colleagues, as opposed to inferiors which is a more common experience with professors. He was incredibly adaptive to the way the students received the material, and how the assignments progressed. This is a stark contrast to the typical Colgate class where you receive a paper syllabus on Day 1, and that syllabus remains fixed and unchanging no matter what happens. Cipolli took the time to see what methods were most successful for the class and adjusted accordingly. Perhaps my only complaint is that the class was sometimes too adaptive. As a student who refuses to miss a deadline, at every step where Cipolli extended deadlines or changed expectations (such as making certain problems ungraded after students had already submitted the problem set, or delaying homework due dates by nearly a week only two days before it was due and diligent students had already completed it) it was sometimes frustrating to have put the hours in and not have it mean much. There were times where I spent far more hours than I would have liked on a homework, with the intention of having a good copy to turn in by the day it was due, only for the deadline to be moved and nullify the hours I had spent on it. Otherwise, I have no complaints about this class. The material was well taught, and the class was immaculately planned and documented, with each lecture having the slides posted as well as neatly organized sections of R code. After having become accustomed to such a level of clarity, flexibility, and available resources, it will be difficult to experience other less well-organized classes at Colgate. I look forward to taking more classes with Professor Cipolli.

- Student: 14
 - **Reason(s):** Major or minor requirement; Elective within major or minor
 - **Effort:** This course was great everyone had to essentially take a crash course into RStudio and learn on the fly but the professor made it work.
 - **Understanding & Appreciation:** This course helped me see that while there are various models that can be fitted and tests to check assumptions on those models each model could very well be different. It is important to take into consideration how one wants to represent data and where that data is coming from.
 - **Intellectual Growth:** This course helped me think more critically and ask questions before we even begin to build the model that would help us assess and interpret the data that we were given.
 - **Quality:** I think that the professor did a fantastic job teaching this course. I know that everyone in the class had a different background in terms of code and stats but he took that all into consideration and was very respectful and willing to adapt the course. Thanks for everything!

- Student: 15
 - **Reason(s):** Elective within major or minor; Interest in the course material
 - **Effort:** I put a decent amount of effort into this course—it was hard as even though we had few homework assignments, they were long homework assignments. He encouraged us to start them ahead of time, and I honestly tried too but it could be hard with other assignments and my involvement in extracurriculars. I do think I put a substantial effort into my work though.
 - **Understanding & Appreciation:** Because of the use of real world examples, I was able to get a good understanding of what data analysis is really about. While the lecture material itself could sometimes be dry (just by nature of the material and the fact that it's hard to teach code), the examples used to convey this information were highly interesting and held my engagement in the class.
 - **Intellectual Growth:** I am very interested in data analysis as a career and this course helped me realize that what I want to do someday is some form of what we have been doing this past semester. I have always been interested in applications of numbers/math in the real world and the use of examples like stop and frisk data, or spotify playlists, have really solidified my interest and appreciation in the course subject
 - **Quality:** We were always encouraged to come to office hours and ask questions about material in class or on the homework, which contributed to a positive learning environment. This is the first time the course is being offered here, so obviously it's not going to be perfect. I wish we had spent more time discussing how to really craft a 'good' data analysis paper, however I do think quality of teaching was high in this course and I can tell Professor Cipolli has genuine enthusiasm for the material and cares about each of his students.
- Student: 16
 - **Reason(s):** Major or minor requirement; Seemed applicable to real world scenarios
 - **Effort:** This class required a lot of effort. While the exams were less difficult the problem sets were brutally hard and required lots of hours. Sometimes the questions were vague but overall the problem sets required a lot of effort and critical thinking.
 - **Understanding & Appreciation:** I really understand the content better because of this class as it goes way beyond a basic statistical understanding. The complexities of these problems are introduced well and are challenging but interesting.
 - **Intellectual Growth:** This class did interest me in attempting side projects and working on different methods to solve for the problems. As such I learned a lot as the problems were difficult but the professor applied lots of interesting real world applications which kept the objects interesting.
 - **Quality:** Strengths are engaging professor who understands the content well and is highly qualified

to teach this subject. The enthusiasm is contagious and interests students into working hard for exams and topics. Weaknesses are difficulty worded questions on problem sets and sometimes unclear expectations.

- Student: 17
 - **Reason(s):** Reputation of the instructor; Interest in the course material; I took it so that I would have 4 courses and it seemed to be interesting. It's not for major nor minor nor needed credit.
 - **Effort:** I unfortunately did not manage to put enough effort into the course in terms of completing assignments in a timely manner.
 - **Understanding & Appreciation:** I realized that I really don't have any passion left for physics or math anymore. After going to Germany and studying physics there I'm very burnt out.
 - **Intellectual Growth:** I learned, and am in the process of learning how to manage time better and do work which is necessary to complete, but I have no desire to do.
 - **Quality:** As for strengths. Professor Cipolli was extremely accessible at anytime. He almost instantly answers questions on the discussion board, is in his office most of the time and when he's not he's still reachable. He also leads class in one of the most exciting ways I've seen throughout my schooling. He's very energetic and interested in what he is teaching. In terms of assignments. He gives feedback after grading, and is open to help throughout the process. If an assignment is late, he values more the learning of the material as opposed to applying a penalty and forgetting about the assignment. I think this aspect in teaching is very valuable. Another not for organization is that he has weekly "diagnostics" which allow him to get feedback in teaching and evaluate where the class is. This helps tailor the lectures towards information which is useful for the class on a certain day. As for weaknesses, I can't think of any.

Student Feedback from University of South Carolina

Last updated: August 15, 2016.

This portion of the document provides a complete summary of student evaluations during my 4 years as a Graduate Assistant (Fall 2012-Spring 2016).

As a Graduate Assistant at **The University of South Carolina**, I have taught 2 different courses:

- STAT 201: Elementary Statistics
- STAT 515: Statistical Methods I

It is required that each student completes a course evaluation towards the end of the semester. One question asks the student to rate "the overall performance" of the instructor. A standard 5-point scale is used as a measurement system (5 = best).

STAT 201	Spring 2016	4.6/5
STAT 201	Fall 2015	4.73/5
STAT 515	Summer 2015	4.6/5
STAT 201	Spring 2015	4.8/5
STAT 201	Fall 2014	4.8/5
STAT 201	Summer 2014	4.9/5
STAT 201	Spring 2014	4.9/5
STAT 201	Fall 2013	4.6/5

Below I provide handwritten student comments taken from the evaluation forms at USC for the question “please comment on what you feel are the positive and negative aspects of your instructor and his/her teaching outlook;” every (legible) comment has been included.

—— STAT 515: Statistical Methods I

Target audience: Undergraduate and graduate students from other majors

—— Summer 2015

- Teacher cares and is funny. It’s my second time taking it and I learned a lot more than the first time with a different teacher.
- BEST INSTRUCTOR EVER!!!!!! WE NEED MORE PEOPLE LIKE HIM TO TEACH!!!
- Will is amazingly gifted at both statistics and the R software. Unfortunately, I think it’s hard for him to see from the POV of someone who doesn’t understand it as well.
- Will is one of the best teachers in the math department that I have encountered.
- Very good/passionate teacher, but at times I feel like you know the subject so well you assume we do also & really we don’t. I enjoyed the class though.
- He is very nice and makes class fun, but since it is a graduate level course he seemed to assume we did not need help and did not seem to care if we were interested in the material. I would have appreciated a little more help when I came to ask questions
- There was too much focus on the PowerPoints and not enough practice problems in class. The homework was helpful but confusing at times because we didn’t do problems in class.

—— STAT 201: Elementary Statistics

Target audience: Undergraduate non-majors (mostly freshmen and sophomores)

Spring 2016

- Will did a great job teaching.
- I like the standards method Cipolli uses. He's good at explaining the material.
- I think a positive aspect about my instructor is that he always came in with a smile.
- Will is open to new ways of teaching. His goal is for you to learn and he will do whatever it takes to ensure that you do.
- Positive: very knowledgeable of the material. Negative: could be sarcastic with students(though most deserved the sarcasm) and could be seen as unprofessional.
- Positive was the many attempts at certain standards. Negative was the online portion.
- He has a very efficient way of teaching. He explains everything clearly and go through several examples to fully provide us practice.
- He's a good professor and teaches us what we need to know. Love his grading system.
- Positives: I loved how I did not feel stressed about grades during the class. I also love how much he cared through office hours and emails etc.
- Will cares about students and their grades. Sometimes more than his students.
- Genuinely cares about his student's success.
- I like the way he did standards, it helps intrinsically motivate us and actually learn the material.
- I hated the homework. Instructor was very clear and fair. Instructor was always willing to help and made the material easy to learn.
- I loved Will! He is an awesome teacher and actually cares whether or not his students learn stuff.
- The teacher taught the content extensively and in an enjoyable manner.
- Went really fast on some of the harder topics.
- Postive: great at answering questions. Negative: None.
- Will is great!He has a sarcastic personality which is funny but I know several people were intimidated to approach him for that reason.
- Positive: Willing to help, answer questions, grading using standards. Negative: Rude to students (comments).
- The unique way of grading standards separately allowed me to feel less anxiety regarding my grades.
- Some of the positive aspects is that he is prepared for class and well at speaking.
- He takes the time to explain each step and each method.
- He eventually modified the course to meet our needs. Some students find him blunt but I didn't find it to be a problem. He puts a great deal of effort into the class and into making sure we understand the material.
- Very enthusiastic and wants everyone to pass. Some subjects went a little fast.

- Was one of the best professors I've had through out my college years.
- I thought the course was good and the standards were great. Made the class much less stressful.

Fall 2015

- Positive: humorous, cares; Negative: sarcastic.
- Instructor was great! No negatives.
- Positive: Quizzes
- Enjoyed all aspects of course.
- Actually learned
- He is very concerned with student progress and is very willing to assist a struggling student if they come to him during office hours.
- He is a very good teacher and understands students and how to teach. I had a great time coming to class and it was actually fun to learn statistics.
- I love the way my instructor taught
- Pos: Always made time for extra help, very fair, well educated in statistics, good communicator, nice and helpful teacher
- I felt like Professor Cipolli was a great instructor and he meshed well with students.
- Very helpful instructor - he made sure everyone understood the material fully before moving on.
- He is adorable and very happy about statistics.
- Awesome instructor!!!
- Professor Cipolli showed a clear desire for each student to learn and succeed; not just in class but in general. He was passionate about the material, was readily available for questions and was an excellent professor.
- Enthusiastic about the material and very well dressed.
- Relates class and studies to modern times and current events. Motivates students to learn material and excel.
- I do not like PowerPoints, but he is enthusiastic on teaching statistics.

Spring 2015

- Will did a great job of making class fun and interesting! He cares about all of us and wants us to learn the material. The only problem I came across was understanding the material on the PowerPoint slides. I am very happy I took Will's class and he was extremely helpful by offering extra help after class and extra problems for every chapter.
- He was a great professor. He made it easy and fun to learn. He was always funny. Sometimes a little intimidating but overall one of my favorites.

- He does a great job making the lecture fun and clearly teaching all the material
- Will is a great instructor who really cared about his students. He was understanding and patient with all of us and our questions.
- I thought he did a great job explaining things and using examples that would help me on the test. Thanks for grading things so quickly.
- The positives of my instructor are that he is very enthusiastic and always comes into class in a positive mood. He teaches very lively and energetically which helps keep the class involved. Maybe answer some questions more straight forward, other than that no negatives for Will's teaching aspects and personality.
- Very energetic and funny (makes class interesting) could work on going through the chapters more slowly. Sometimes it feels rushed and I feel like I don't receive all of the information I need.
- The PowerPoints are fantastic and most of the data used in class was pulled from our class so it made it interesting.
- Will was a nice fun guy but his teaching skills could still be improved. The explanation behind why and what certain statistical tests or variables could have been better but overall a good teacher.
- Very funny and relatable. Young and dresses nice so he was enjoyable to look at in class. Always came in with a smile and I really appreciate that.
- Very enthusiastic about the subject and motivates students to participate and learn rather than memorize the material.
- He really wanted us to understand the power of statistics which made the material very interesting.
- I liked this teacher. He always had a positive attitude and motivated us to learn. Wish I had him next semester.
- Will is the best teacher at USC. He actually cares if you learn the material. I have nothing bad to say.
- I learned a lot this semester and will made the class interesting which helped a lot.
- Very positive and willing to help.
- It was obvious that Will really cared about his student and wanted them to do well. All teachers should have this quality. Provided more resources for extra practice than all of my other courses combined.
- Will was an amazing teacher and so passionate about stats. He really wanted students to learn and do great as long as they took effort.
- Very interactive with the class, well informed, knows his stuff and funny.
- He did a great job taking the time to work out problems with us during both class time and office hours.
- Will is very outgoing, high energy person. He makes class interesting and is very approachable. His class is great.

- Will was overall an excellent teacher. He went above and beyond for the success of his students. He also made sure to answer all of my email, in class and extra help questions.
- He is passionate about the subject and wants the students to learn. He is fair with grading and absences. Overall, no negative aspects.
- Very passionate teacher. Extremely good instructor in my opinion.
- Will was good with the students and clear during lecture. Was always willing to go over things if unclear. A+ job.
- Friendly and approachable. I didn't like working with classmates to independently figure out/solve on our own.
- Great! Really cares that the students learn and do well.
- Very energetic which helps the students stay awake/pay attention. Cares about the quality of students education.
- He is a great teacher and motivates the class to do well.
- He cares about the content and students learning the content and understanding how the course does impact things you do everyday. Strong knowledge of the material.
- Concerned with students – helpful/approachable but sometimes unclear with examples in class.
- He knows his subject well and enjoys teaching it but can get off topic.
- Very motivated, gives good lectures but goes over the material a bit too fast.
- Always willing to meet with students, provided extra material, timely grading and used different teaching styles to accommodate everyone.
- Will did a great job of making the class enjoyable and understandable. I would highly recommend others to take his class.
- He is very helpful, approachable and funny. Makes things interesting and gets you involved. Knows what he's talking about. Maybe just slow down the emails a little.
- He is very energetic and makes AM class bearable.
- Fun, understanding, knowledgeable. If you ask a question he will give and answer and be able to explain it. Very approachable.
- Everything was great.

Fall 2014

- Will did a great job and really knew his stuff. Would definitely recommend taking his class!
- Will is great. He loves what he teaches and it shows. He respects all his students and encourages them to learn. Would recommend to anyone.
- Funny to keep us engaged. "Laid back" and gives second chances.

- Great teacher. Enthusiastic and willing to help out in any way possible.
- Will is one of the best professors I've ever had. He is always willing to help out his students and is willing to meet up with students during office hours. He is clear as to what he expects out of his students. He keeps the class interesting and engaging.
- He cared about the students and had energy – nothing negative.
- Very knowledgeable and made an 8:30 math class fun. No negatives.
- I feel like Will was a great instructor He actually wants his class to succeed and make good grades. Wonderful!
- Really motivates students to learn, while making the subject fun.
- Very good at keeping students interested.
- Good teacher, keeps it interesting even though he knew class was out of it at 8:30 in the morning. Can tell he enjoys what he does.
- Teacher cared about students and their grades, helped us when needed. Always responded to emails. Best mat teacher I've ever had.
- Great in all aspects
- I enjoyed this class and the teaching by Will. He enjoys what he does and makes learning a better experience.
- HE was a pleasant person but was vague when we asked questions. He was sarcastic in points where students were serious. He knew what he was talking about and teaching but didn't understand when students didn't learn as easily as others.
- He wants to help you, you just have to ask.
- Will was always engaging and wanted to present the material in an interesting way. I found his use of class data the most fascinating part of his class.
- He was clear and was able to answer questions precisely but we didn't do a lot of work on our own in class.
- My professor was a very good professor. Full of energy for an 8:30 class. Really enjoyed him – don't really have anything negative to say just wish he gave a little extra credit.
- Very upbeat for the morning which is good but made us feel guilty sometimes for not being upbeat.
- Great teacher and person. Makes you earn the grade.
- I don't have any negatives. He made class very interesting and fun to learn. He was always willing to help you with whatever you were stuck on.
- Makes the information easy to understand.
- One of the best teachers I've ever had.
- Overall, he is a fun teacher and is easily approachable. I felt like he was teaching us higher level

statistics time and/or he might have made the material presented seem harder than it should be. Work on explanation of course work so it's easier to understand.

- The instructor made the class enjoyable and was very clear when explaining the material.
- Will loves teaching and he is very good at it.
- Will was a really great professor. Not only did he teach the material well, but you could tell he really cared a lot for his students. He was always willing to do whatever to help us learn and he cared that we learned statistics past the spectrum of this class.
- Will always has a great attitude and tries to make the class entertaining and engaging. He has a lot of knowledge of the material and is always happy to help.
- He was very understanding and seemed to really care about his students, negative - none.
- Challenging but its good to have a challenge.

— Summer 2014

- Extremely smart and enthusiastic. Always trying to make thinking about things simple. Great teacher.
- Outstanding Teacher.
- Very friendly and outgoing which makes the subject interesting.
- Very enthusiastic. Caring approach to teaching but sometimes the pace was too fast to listen and understand.
- Will is an excellent teacher. I hate math but enjoyed learning from him this semester.
- Will is a great teacher and his ideas are better than whoever is making them now.
- Will was great
- Will's enthusiasm is easily his strongest trait on top of his extensive knowledge of the material. Nothing negative to report.
- Very explanatory and helpful. Best stat professor by far!
- Will was always quick to answer emails and his tests reflected what we learned in class.
- I enjoyed his take on the subject matter and how it applied to many aspects of life and many careers.
- Will was an excellent professor. Made stat 201 an excellent summer course.
- He was enthusiastic and took time to answer any questions I had. He seemed to want everyone to try their best and understand the material. He had great powerpoints.
- Great guy – very personable. Willing to help. Not so many powerpoints please!
- Super well prepared (site, video, lab walk-through). Personable.
- Awesome!
- Practice exams and website help immensely. If you do not want something in your class, rewards students instead of punishing them. Positive reinforcement is always more successful than negative reinforcement.

- Wonderful teacher, very personable, knowing what he's doing. I would recommend him to everyone!
- Great teacher, really help explain problems in a way that's easy to learn.
- He was a great instructor and did his job very well.
- Very patient, laid back and responded quickly to emails. Negatives: none.
- Really enthusiastic and willing to help
- Very helpful to students
- He was very enthusiastic about the material. He used examples that were fun and meaningful.
- Seems to really enjoy teaching and tries to engage students in the importance of statistics by showing examples of everyday usage. Labs were hard to understand during lab time, but understand it when I got home and looked at it.
- Will is a great teacher, this was the first time I didn't fall asleep in a math based course. I enjoyed it.

— Spring 2014

- Very enthusiastic and cares about the material and the students!
- I loved this class. I'm not a math person but I understood stat through his teaching.
- He's always prepared and on time for class but got upset when proven wrong.
- Great professor – makes statistics pretty easy for people who don't get math at all! Loved him!
- The best stats teacher I ever had. If there was a perfect teacher, he's perfect.
- Will was one of the best professors I have had at this university – he motivated students to learn and had a lot of charisma which made the class interesting.
- Will does a really good job of emailing back and helping understand the material.
- He was a great teacher. Very helpful.
- He made statistics very enjoyable. I learned so much!
- Cool professor, very laid back and knowledgeable.
- Made class interesting.
- Good, easy going.
- He made stats fun. Always was a joy to come. Also he was very helpful.
- Will was always positive and in a good mood.
- Great professor, I just hate math and I'm very bad at math.
- Very easily made the course more interesting and was over to get students involved.
- Kind of hard to still understand.
- Very helpful, willing to explain things.
- Sense of humor!
- Will was great! Generous and helpful!

- He literally is the best teacher I've ever had. Will helps students with anything they need help with and wants his students to succeed.
- Positive: Expressive, fun, gets people excited and involved.
- Really connected with the students.
- He is passionate about statistics and does his best to be fair about the class and materials.
- I felt he really cared about us and wanted us to succeed.
- Best instructor in the math department thus far.
- By far the best instructor I've had in five years at USC.
- Very concerned about his students. Goes above and beyond what is expected of a professor. Give the man a RAISE!
- Will is a boss!
- Mr. Cipolli really cares about his students and motivates you to learn the material.
- Makes class interesting.
- Really cares about teaching and gives good examples in class.
- Course is well organized.

— Fall 2013

- He kept the class entertaining
- The positive aspect is his energy. He loves his job and he is a great teacher. I would recommend him to everyone. No negative aspects.
- He was very enthusiastic about teaching and did his best to help us learn the material without making it difficult.
- He was very concerned about the students grades and graded fairly.
- Class act. Great professor. Best math course I've ever taken.
- He moves at a great speed and goes above and beyond to help us.
- Class was too easy. You could see how exhausted everyone was. The notes were very helpful.
- I feel will was very knowledgeable of the subject and taught it well but I feel like he was too nice to the students and gave too many extra chances.
- Very positive and helpful – evident that he wanted students to learn and understand material.
- Will is sunshine on a cloudy day. He's a real chill dude and knows all kind of stuff about stats. He is the man, plus he is a very snazzy dresser.
- PowerPoints are good and helpful. Study guides are also helpful. Good teacher.
- Great instructor!
- He's a very helpful instructor and wants students to learn the material. He should be a little stricter

on the homework.

- Will was a great instructor. He was very fair and pushed us to do well. He taught the information in a fun and interesting way.
- He was down to earth and approachable – he got off topic often though.
- Really motivated students to learn the material – no due dates and moved a little fast.
- The positive aspects of my instructor is that he makes sure everyone understands the material and does a lot of examples.
- Very active and made the class lectures engaging. Was about tests and grading. No negative aspects.
- Will truly was an amazing teacher. Even though I hate math and struggled with my goals, Will never gave up on me and always answered my questions with patience and care. He really is a talented instructor and I would recommend him to anyone.
- Very laid back attitude and brings the material down to our level. Sometimes moves too fast.
- He's smart and knows the material but sometimes isn't thorough enough.
- He's always willing to help, but no jolly ranchers.
- Very understanding and helpful.
- Class was very early and not mandatory so it was hard for me to get motivated to attend. Teacher was fair and approachable.
- The professor was really funny and had a good attitude throughout the course. He really wanted students to learn the material and helped us a lot.
- Just great.
- Very good teacher. Cares about students and grades fairly.
- Great instructor, didn't over complicate the subject at all. Made the class fun and interesting.
- Helpful – study guides are good and he explains the material well.
- Knows his stuff and is interesting, learning math at 8:30AM is just hard and that's not his fault.
- Very concerned about students learning and progressing. Has flexible hours outside of class.
- Makes class fun and makes you want to learn.