

EPsy 3264: Basic and Applied Statistics

Spring 2022 / Credits: 3

Tuesdays & Thursdays 9:45-11am

Instructor

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Teaching Assistant

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Course Description

EPsy 3264 is designed to engage students using a modeling and simulation approach to inference. Statistics is more than just an application of mathematics or a methodology used in some disciplines. Statistics is a principled way of thinking about the world. In particular, it is a principled approach to data collection, prediction, and scientific inference. In today's dynamic and interdisciplinary world, success in confronting new analytical issues requires both substantial knowledge of a scientific or technological area and highly flexible problem-solving strategies. This course uses pedagogical principles that are founded in research, such as daily small group activities and discussion. Upon completion of this course, students should

have an understanding of the foundational concepts of data, variation, and inference, as well as an appreciation for the fundamental role that statistics plays in a host of disciplines, such as business, economics, law, and medicine.

Office Hours

All students are welcome to attend office hours held by any one of the instructors and TAs who teach EPSY 3264 this semester. All office hours will be held in the Educational Sciences Building.

Vimal Rao: W 11-12 @ ESB 192

Qian Zhao: W 9-10 @ ESB 198

Youfu Yan: M 3-4 @ ESB 195

Regina Lisinker: Tu 230-330 @ ESB 192

Justine Scattarelli: W 11-12 @ ESB 192

Required Course Materials



The course textbook is online at <http://RaoVNV.github.io/statistical-thinking/>. This includes the material you will read outside of class.



You will work from the lab manual every day in class. To download a PDF copy of the lab manual, click this link:

https://github.com/RaoVNV/statistical-thinking/blob/master/statistical-thinking-v4_3_Rao.pdf?raw=true .



There are several data sets used in the lab manual, as well as in EPSY 3264 assignments. To download a ZIP file to your computer that includes all the data sets, click this link:

<https://github.com/RaoVNV/statistical-thinking/blob/master/data.zip?raw=true>. Once the ZIP file has been downloaded to your computer, double-click the ZIP file to unzip it and access the materials.



This course requires the use of the software TinkerPlots. This software can be downloaded to a Mac or PC, or accessed via [Apps2Go](#) using your UMN x500 and password. However you decide to use TinkerPlots, you will need to purchase a license from <http://www.tinkerplots.com/>. (These are roughly \$8 for a year-long license.)

Course Philosophy & Format of Instruction

This is not a class where you only come each day, listen, watch, and take notes! The primary method for learning new statistical concepts and methods will be by reading provided materials before class, participating in class activities and discussions, and working through lab assignments. This course makes extensive use of small group and large group activities and discussions to introduce ideas and understanding of material encountered in the readings. Your learning experience is thus dependent—to some extent—on your classmates and vice versa. Because of this, it is essential that you not only attend class each day and participate in the activities and discussions, but that you show up prepared, having completed the assigned readings. Internalizing a discipline's way of thinking about and solving problems is a time-consuming process, with the keyword being “process.” It is not something that can be taught to students in a semester, or even year– long, course. Learning statistics takes much more than memorizing formulas or software commands. It requires active participation and questioning both in and out of the classroom. The instructor of this course will provide you with many opportunities to learn the material through class activities, readings, and lab assignments, but in the end, you will have to do all of the hard work of actually learning that material.

Student Learning Outcomes (SLO's)

EPSY 3264 addresses two components of the University of Minnesota's required learning outcomes.

- After completing this course, students will know the basic terms, concepts, principles, methods, and perspectives of statistics and will be able to build a framework of knowledge within the major themes of the course (Component 3: Have mastered a body of knowledge and mode of inquiry).
- Students will also be able to communicate the results of a statistical analysis with others, as well as discuss both ideas and applications of the discipline with peers (Component 5: Can communicate effectively).

Liberal Education

EPSY 3264 fulfills the Mathematical Thinking component of the Liberal Education requirements at the University of Minnesota. An important part of any liberal education is learning to use abstract thinking and symbolic language to solve practical problems. Understanding quantitative information is fundamental to engaging in our complex world. Business, academia, and even everyday life are filled with the enumeration of information, and all increasingly require data-driven decision-making. In this course, students will be immersed in the fundamental activities of collecting data, producing data, analyzing data, and interpreting summaries and analyses of data. In addition, students will encounter the diversity and cross-disciplinary application of statistics in the real-world through problem contexts, assignments and readings.

Course Prerequisites

This course is intended for undergraduate students who have completed a high school algebra course, but not previously studied statistics. The course uses technology on a regular basis during both instruction and assessments (e.g., homework assignments, exams, etc.). Because of this, students enrolled in the course should be familiar with computers and technology (e.g., internet browsing, Microsoft Word, opening/saving files, etc.).

How Can I Be Successful in this Course?

There are several things you can do to be successful in this course. First and foremost, complete all of the readings and come prepared to class. Complete all the lab assignments. Ask questions. If you are experiencing problems, need help, or have any questions or other course-related concerns, do not hesitate to get in touch with the instructor.

GRADED ASSESSMENTS



Individual Take-Home Exams (50%)

- There are 5 individual take-home exams, which you will complete outside of class.
- Each exam will make up 10% of your grade. They include problems that will help evaluate your understanding of the course material, including use of the TinkerPlots software.
- Students submitting a test more than 24 hours after the due date/time will receive a score of 0.
- Although you will complete the exams outside of class, **they are individual in nature**. In other words, you need to complete them without help or discussion with any other people. If we have any reason to suspect that a student gave assistance or received assistance from another student or person outside the class, all students involved will receive a score of zero on that test and will be reported to the Office of Community Standards (<https://communitystandards.umn.edu/>).



Group Quizzes (50%)

- There are 5 in-class group quizzes, which you will complete in class.
- Each quiz will make up 10% of your grade. They consist of several short answer questions designed to test your ability to apply the knowledge you gained by reading the assigned material, working on assignments, and participating in class activities and discussions. You will also be expected to use TinkerPlots on the group quizzes.
- It is expected that you will work cooperatively with your group members to decide on the answers to the questions posed in the group quiz. Only one quiz per group will be graded, and each student in the group will receive the same grade.
- If you arrive late for a quiz, or have missed previous class periods, you may be required to take the quiz by yourself. The instructor also reserves the right to re-assign groups on the day of the quiz.

Attendance

In a collaborative learning environment, attendance is critical. Missing class does not only affect you. It also affects your classmates. Because of the adverse impact missing class may have on your classmates, the instructor reserves the right to re-assign groups on the day of the quiz, or have you work independently. As a courtesy If you cannot be in class, you should email your group members with as much advance warning as possible.

Please be on time. Showing up late to class is not only disruptive, it is disrespectful to your classmates. When you show up late, your group needs to spend valuable time catching you up on what you missed. If you show up late for group quizzes, you may be required to take the quiz by yourself.

If you are absent on the day a quiz or test is due, you must provide documentation explaining your absence for the instructor to determine whether you will be allowed to submit that test later or take a make-up quiz. This will be at the instructor's discretion and will be evaluated on a case-by-case basis (see policy at <https://policy.umn.edu/education/makeupwork>).

Class Participation

Engaging in active class participation is an important part of taking ownership of your learning. Active participation is more than just showing up for class. It also includes being engaged during the class, asking questions (if you have a question, it is likely that others do as well), providing additional insight and material, responding to other students and the instructor, and always being open and inquisitive.

Course Calendar

The calendar below lists the tentative dates of the readings, group quizzes, and course activities. Exam and quiz dates are also provided. These dates are subject to change at the instructor's discretion.

Date	In Class Activity	Out of Class Activity (due at start of class)	Unit
1/18	Introduction to EPsy 3264 Download TinkerPlots		
1/20	Building a Sampler	<i>Readings:</i> <ul style="list-style-type: none"> • <i>Introduction</i> • <i>Modeling & Simulation</i> <ul style="list-style-type: none"> • Introduction Discussion Post 	Modeling and Simulation
1/25	Generating Random Data	<i>Reading: Generating Data From Models</i> <ul style="list-style-type: none"> • Pet Factory Assignment 	
1/27	Introduction to Monte Carlo Simulation	<i>Reading: Monte Carlo Simulation</i>	
2/1	Automating the Simulation Process		
2/3	Group Quiz #1		
2/8	No Class	Individual Exam #1 Due	
2/10	Features of Distributions	<i>Reading: Describing Distributions</i>	
2/15	Monday Breakups	<i>Reading: Modeling Sampling Variation</i>	
2/17	Helper or Hinderer		

2/22	Comparing Hand Spans		Modeling Sampling Variation
2/24	Racial Disparities in Police Stops		
3/1	Group Quiz #2		
3/3	No Class	Individual Exam #2 Due	
MARCH 7 to 11 — SPRING BREAK — NO CLASS			
3/15	Memorization	Reading: Experimental Variation and the Randomization Test	Experimental Variation And the Randomization Test
3/17	Memorization using TinkerPlots	Reading: Internal Validity Evidence and Random Assignment	
3/22	Sleep Deprivation	Reading: Quantifying Results: p-Value	
3/24	Contagious Yawns		
3/29	Group Quiz #3		
3/31	No Class	Individual Exam #3 Due	
4/5	Speed Skating	Readings: <ul style="list-style-type: none">Sampling Variation and the Bootstrap TestObservational Studies and the Bootstrap Test	Sampling Variation And the Bootstrap Test
4/7	Murderous Nurse		
4/12	Movie Sequels	Readings: <ul style="list-style-type: none">External Validity Evidence and Random Sampling	

		<ul style="list-style-type: none"> • <i>Validity Evidence and Inferences</i> • Gettysburg Address Assignment 	Estimating Uncertainty
4/14	Group Quiz #4		
4/19	Kissing the 'Right' Way	Individual Exam #4 Due <i>Reading: Estimating Uncertainty</i>	
4/21	Minnesota College Debt	<i>Reading: Uncertainty and Bias</i>	
4/26	Comparing Cuddling Preferences		
4/28	Group Quiz #5		
5/3	No Class	Individual Exam #5 Due	

Evaluation of Student Performance

Course grades will be based on the weighted average of your individual take-home exam scores (10% for each) and group quizzes (10% for each). For more information on computing a weighted average, see <http://mathforum.org/library/drmath/view/57605.html>. Grades will be assigned using the following criteria as a guideline:

Cutoff	Grade	Cutoff	Grade	Cutoff	Grade
93%	A	83%	B	73%	C
90%	A–	80%	B–	70%	C–
87%	B+	77%	C+	63%	D

Students who earn below 63% will receive the letter grade of F. Students who wish to receive a Satisfactory (S) must obtain the total points required for a C– grade. Shortly after the course, you may access your grades on-line at <http://www.onestop.edu>.

Extra Credit Policy

There is no extra credit in this course.

Professionalism

Evidence of professional practice on both our parts include:

- Starting and ending on time
- Being prepared
- Being physically and mentally engaged
- Performing at a high level
- Making sure cell phones are off
- Refraining from sending and checking email, playing solitaire, shopping, or using social media during class

Incomplete Policy

Incompletes are normally not given in EPSY 3264. However, in rare instances, incompletes may be given to students who can document that for legitimate reason, which was beyond their control, they could not finish the last part of the course. If the instructor believes that the work cannot be made up, an 'F' is assigned. An 'I' will automatically convert to an 'F' on a student's record after one year. Students who receive an 'I' in a course may not repeat the course without re-enrolling and paying tuition for the course. That is, you cannot receive an incomplete and then make up the course by "sitting in" on a section of the course at a later time. If you miss too much of the course you must withdraw and re-register in a subsequent semester.

Email

Email is the primary source of communication among instructors, teaching assistants, and students for this course. As such, you will be expected to check your email frequently (i.e., at least once per day). As per the University policy, "students are responsible for all information sent to them via their University assigned email account. If a student chooses to forward their University email account [they are] responsible for all information, including attachments, sent to any other email account."

Course Technology Policy

The course uses technology on a regular basis during both instruction and assessments (e.g., lab assignments, exams, etc.). Student difficulty with obtaining or operating the various software programs and technologies—including printer trouble—will not be acceptable as an excuse for late work. Due to the variation in computer types and systems, the instructor may not be able to assist in troubleshooting all problems you may have.

Mission Statements & Additional Policies

College of Education & Human Development Mission Statement

The mission of the University of Minnesota College of Education and Human Development is to contribute to a just and sustainable future through engagement with the local and global communities to enhance human learning and development at all stages of the life span.

Department Mission Statement

Educational psychology involves the study of cognitive, emotional, and social learning processes that underlie education and human development across the lifespan. Research in educational psychology advances scientific knowledge of those processes and their application in diverse educational and community settings. The department provides training in the psychological foundations of education, research methods, and the practice and science of counseling psychology, school psychology, and special education. Faculty and students provide leadership and consultation to the state, the nation, and the international community in each area of educational psychology. The department's scholarship and teaching enhance professional practice in schools and universities, community mental health agencies, business and industrial organizations, early childhood programs, and government agencies.

Quantitative Methods in Education

QME strives to be a premier program recognized for leadership, innovation, and excellence, and to enable human potential through the advancement of education. QME prepares students to become cutting-edge professionals in educational measurement, evaluation, statistics, and statistics education, through excellence in teaching, research, and service; and through investigating and developing research methodology in education.

How to Access Your Grades

You can view your grades on the Grades tab in MyU: Academics. Additional instructions can be found on One Stop at <https://onestop.umn.edu/academics/viewing-grades>.

Online Course Communication Methods

The following methods of communication may be used in this course:

- Announcements - Periodically, you may receive a course announcement. If you have any questions regarding an announcement, feel free to respond to it, replies will allow the whole class to benefit from clarification. [Set up notification preferences to receive course announcements by email \(Links to an external site.\)](#). For more private matters, you may email individually.
- Introductions - A discussion for introducing yourself to the instructor and the other students in the class may be provided. Please complete this activity in a timely manner. Additionally, you may want to [update your profile in the system \(Links to an external site.\)](#).

The University-assigned student email account is the University's official means of communication with all students. Students are responsible for all official information sent to their University-assigned email account. If a student chooses to forward messages to another account, the student is still responsible for all information, including attachments.

<https://policy.umn.edu/education/email>

Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference: <http://policy.umn.edu/education/studentresp>.

Makeup Work for Legitimate Absences:

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: <http://policy.umn.edu/education/makeupwork>.

University Resources

Learn About Canvas

Learn more about how to use Canvas by watching the following videos.

- [Canvas Overview](#)
- [Update Your Profile](#)
- [Update Your Notification Preferences](#)
- [Communicate with Your Instructor and Peers](#)
- [Participate in Discussions](#)
- [Keep Track of Assignments Due](#)
- Guide: [Add the Canvas Calendar to Your Google Calendar](#)
- [Submit Your Assignments](#)
- [Participate in a Group](#)
- [Check Your Grades](#)
- [View Assignment Feedback from Your Instructor](#)
- [Canvas Student App](#)

You can also learn more about the features of the Canvas learning management system by reading their guide for students. [Find it here](#)

Student Resources

- [Hardware and Software Information](#) - Computer and Device Support can connect you with discounted hardware, software, and cell phone options.
- U of M Support - Online specialists can be reached via email, phone, or chat: [Contact Us](#).

- [University Libraries](#) - Information about distance learning, as well as services to online students affiliated with each campus: [Duluth](#), [Crookston](#), [Morris](#), and the [Twin Cities](#).
- University of Minnesota Libraries - [Online tutorials](#) and [workshops](#).
- The U of M Learning Platform - Academic applications (e.g., Canvas, myLibrary, podcasts). Students access the Learning Platform via the [MyU Portal](#) (login required).

Additional U of M Resources

- [Educational Policies](#)
- [Smart Learning Commons](#)
- [Student Writing Support](#)
- [Campus Safety and Security](#)

Tips and Training

- Free [training courseware](#) for MS Office products.
- Free [mini-course](#) (requires registration) on assessing and overcoming your tendency to procrastinate.
- [Online learning tips](#) from the University of Illinois.
- Information on [how to be a successful online learner](#).

U of M Technology Support

- [Online Tech Help](#)
- [In-Person Tech Help](#)

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community. As a student at the University you are expected adhere to Board of Regents Policy: Student Conduct Code. To review the Student Conduct Code, please see: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Scholastic Dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/education/instructorresp>.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty:

<https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-...> If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted,

requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Appropriate Student Use of Class Notes and Course Materials

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes, tests, and quizzes beyond the classroom community or accepting compensation for taking and distributing classroom notes, tests, and quizzes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Students may not distribute instructor-provided notes or other course materials, except to other members of the same class or with the express (written) consent of the instructor. Instructors have the right to impose additional restrictions on course materials in accordance with copyright and intellectual property law and policy. Students may not engage in the widespread distribution or sale of transcript-like notes or notes that are close to verbatim records of a lecture or presentation. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/education/studentresp>.

Grading and Transcripts

The University has two distinct grading scales: A-F and S-N.

A-F grading scale. The A-F grading scale allows the following grades and corresponding GPA points:

Grade	GPA Points	
A	4.000	Represents achievement that significantly exceeds expectations in the course.
A-	3.667	
B+	3.333	
B	3.000	Represents achievement that is above the minimum expectations in the course.
B-	2.667	
C+	2.333	

C	2.000	Represents achievement that meets the minimum expectations in the course.
C-	1.667	
D+	1.333	
D	1.000	Represents achievement that partially meets the minimum expectations in the course. Credit is earned but it may not fulfill major or program requirements.
F	0.000	Represents failure in the course and no credit is earned.

S-N grading scale. The S-N grading scale allows for the following grades and corresponding GPA points:

Grade	GPA Points	
S	0.00	Satisfactory (equivalent to a C- or better)
N	0.00	Not Satisfactory

For additional information, please refer to: <https://policy.umn.edu/education/gradingtranscripts>.

Sexual harassment, sexual assault, stalking and relationship violence

The University prohibits sexual misconduct, and encourages anyone experiencing sexual misconduct to access resources for personal support and reporting. If you want to speak confidentially with someone about an experience of sexual misconduct, please contact your campus resources including the Aurora Center, Boynton Mental Health or Student Counseling Services (<https://eoaa.umn.edu/report-misconduct>). If you want to report sexual misconduct, or have questions about the University's policies and procedures related to sexual misconduct, please contact your campus Title IX office or relevant policy contacts.

Instructors are required to share information they learn about possible sexual misconduct with the campus Title IX office that addresses these concerns. This allows a Title IX staff member to reach out to those who have experienced sexual misconduct to provide information about personal support resources and options for investigation. You may talk to instructors about concerns related to sexual misconduct, and they will provide support and keep the information you share private to the extent possible given their University role.

https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy_sexual_harassment_sexual_assault_stalking_and_relationship_violence.pdf

Sexual Assault and higher education: Training modules and information

The Department of Educational Psychology supports the efforts of the University of Minnesota towards prevention of sexual assault. We encourage all students to participate in the free online training that has been established for undergraduate students and graduate students. The training highlights pertinent issues regarding sexual assault, including, but not limited to: defining healthy relationships, consent, bystander intervention, and gender roles. The guide for the training in your [My Training page](#) is available at <https://it.umn.edu/training-guide-preventing-responding>. Additionally, to learn more about how you can help reduce sexual assault at the University of Minnesota, please visit the [Aurora Center](#).

Equity, Diversity, Equal Opportunity, and Affirmative Action

The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, membership or activity in a local commission created for the purpose of dealing with discrimination, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: https://regents.umn.edu/sites/regents.umn.edu/files/2019-09/policy_equity_diversity_equal_opportunity_and_affirmative_action.pdf.

Unfairly Prejudicial Comments in Teaching Evaluations

While we have much to learn from the critical feedback our students give, unfairly prejudicial comments have no place in the teaching evaluation process and are inexcusable and wrong. According to the [University of Minnesota's policy on teaching evaluations](#), these comments may include offensive, racist, sexist, homophobic, and other personal comments.

UMN's Center for Educational Innovation has provided a list of comments likely to be labeled unfairly prejudicial because they refer to one or more of the following properties in describing an instructor:

1. body characteristics (e.g., weight, level of attractiveness, body shape or contour, other distinguishing physical features)
2. professional appearance (e.g., apparel or accessories, hairstyle, grooming habits)
3. discriminatory statements counter to Equal Opportunity and Affirmative Action values (e.g., sexual identity, age, race, religion, nationality, visible or invisible disabilities)

4. a bullying, abusive, or offensive tone that comprises harassment or intimidation

Student comments might be unfairly prejudicial if they refer to:

5. elocution of speech (e.g., accent, pronunciation, rhythm, speed)

Please be mindful to not include these types of comments when providing feedback on your course evaluations.

Disability Accommodations

The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities - 612.626.1333) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.
- If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).

Additional information is available on the DRC website: <https://diversity.umn.edu/disability/> or e-mail drc@umn.edu with questions.

Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

Academic Freedom and Responsibility

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

Diversity, Equity, and Inclusion Statement

In this class, we will work together to develop a learning community that is inclusive and respectful, and where every student is supported in the learning process. As a class full of diverse individuals (reflected by differences in race, culture, age, religion, gender identity, sexual orientation, socioeconomic background, abilities, professional goals, and other social identities and life experiences), I expect that different students may need different supports to promote their learning. The TAs and I will do everything we can to help with this, but as we only know what we know, we need you to communicate with us if things are not working for you or you need something we are not providing. I hope you all feel comfortable in helping to promote an inclusive classroom through respecting one another's individual differences, speaking up, and challenging oppressive/problematic ideas. Finally, I look forward to learning from each of you and the experiences you bring to the class.

COVID-19 University Face Covering Protocol

This section will meet in-person on campus, and thus will follow all university policies and guidelines regarding face coverings. To access the current face covering protocol,

visit <https://safe-campus.umn.edu/return-campus/face-coverings>. Below are excerpts relevant to our classroom:

All University of Minnesota faculty, staff, students, and visitors (including contractors, service providers, vendors, and suppliers) are required to wear an acceptable face mask that is properly fitted to cover the wearer's nose and mouth, wrap under the chin, and not have any noticeable gaps at all times when in any enclosed or indoor space on University campuses and properties (including leased facilities), regardless of vaccination status, with a few exceptions.

University faculty, staff, and students should carry two masks with them at all times to account for the possibility a mask might be lost or spoiled.

University faculty, staff, and students are required to familiarize themselves with this Mask Protocol and follow it at all times. This Protocol and its directives shall remain in effect until further notice.



SRT Individual Report for EPSY 3264 002 Basic/Applied Stats (Vimal Rao) - Spring 2022

Project Title: **Student Rating of Teaching - Spring 2022**

Courses Audience: **44**
Responses Received: **28**
Response Ratio: **63.64%**

Report Comments

Office of Measurement Services
Phone: 612.626.0006
Fax: 612.624.1336
879 29th Ave. S.E. Room 103
Minneapolis, MN 55414
<http://oms.umn.edu>
eval@umn.edu

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Creation Date: **Thursday, August 25, 2022**

Message from the Vice Provost for Faculty and Academic Affairs

The University is committed to monitoring and improving students' educational experiences. Student Ratings of Teaching (SRT) help to ensure that the student voice is present in fulfilling this mission. We encourage all instructors to incorporate student feedback into your ongoing efforts to improve your teaching and your courses.

How SRT Results may be Used

Evaluations of teaching provide information intended to help improve teaching, and may also be available to assist students in course selection and/or to inform administrative decisions on salary, tenure, and promotion. Specific use of SRT results may vary by campus and/or college as described in relevant university or unit policies.

Resources for Improving Instruction

Tools and tips for improving course instruction can be found on the OMS website (oms.umn.edu/srt), under the faculty section.

Among the available resources is a guide for [connecting your teaching practices with the SRT](#). This guide was created by the Center for Educational Innovation (cei.umn.edu) and provides suggestions for improving instructional practices in relation to SRT items.

About this Report

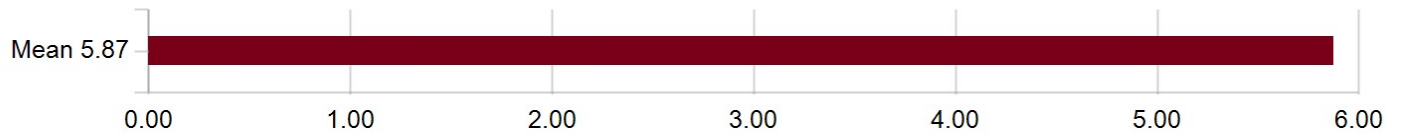
This report contains all ratings provided by the students in your courses who submitted SRT responses. Mean (average) scores are reported as well as the frequency of how often each response was given for each item. Results are provided in the following order:

1. Score graph and frequency graphs for instructor items
2. Score graph and frequency graphs for course items
3. Comments regarding instructor
4. Comments regarding course

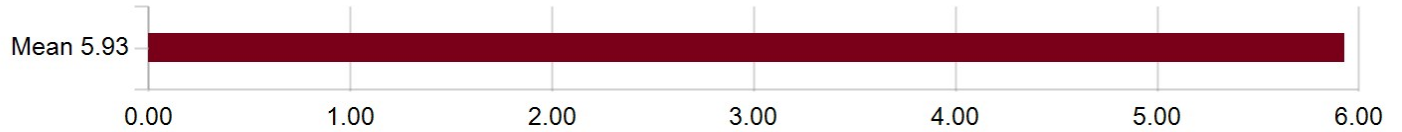
For additional information about evaluation of teaching, please reference the Evaluation of Teaching policy for your campus. The policy for Twin Cities, Crookston, Morris, and Rochester can be found here: <http://policy.umn.edu/education/teachingevaluation>.

Sincerely,
Rebecca Ropers
Vice Provost for Faculty and Academic Affairs

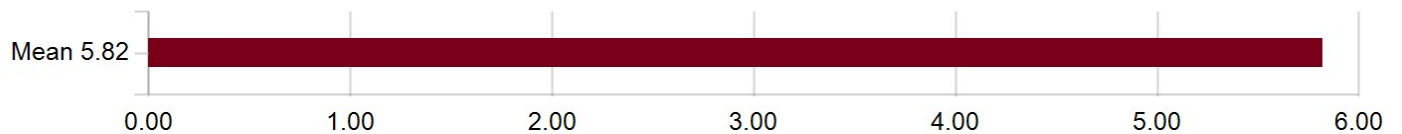
Instructor Items Overall



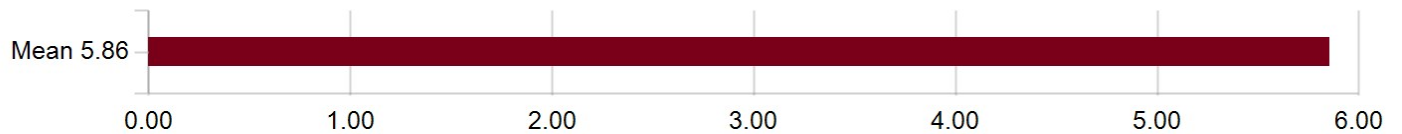
1. The instructor was well prepared for class.



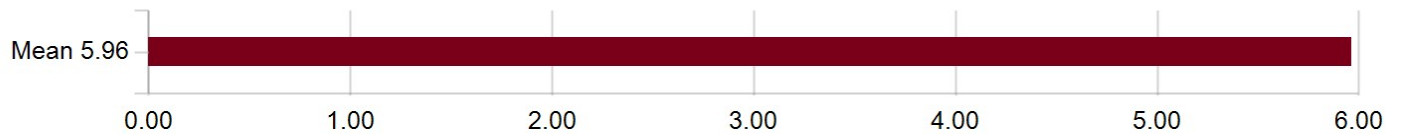
2. The instructor presented the subject matter clearly.



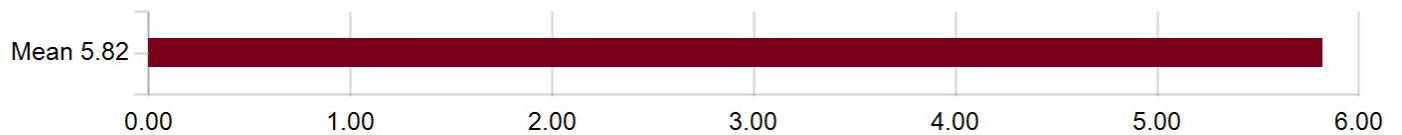
3. Interactions with the instructor helped me learn.



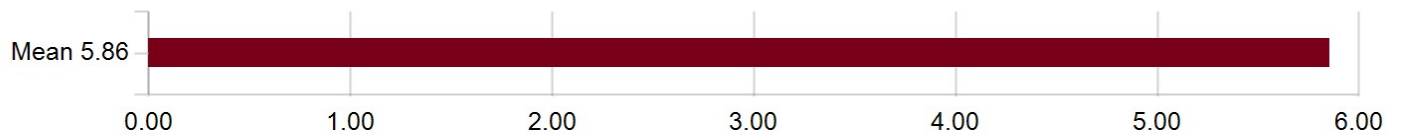
4. The instructor treated me with respect.



5. The instructor provided feedback intended to improve my course performance.

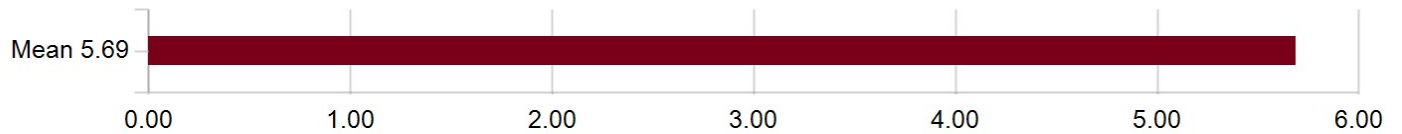


6. I would recommend this instructor to other students.

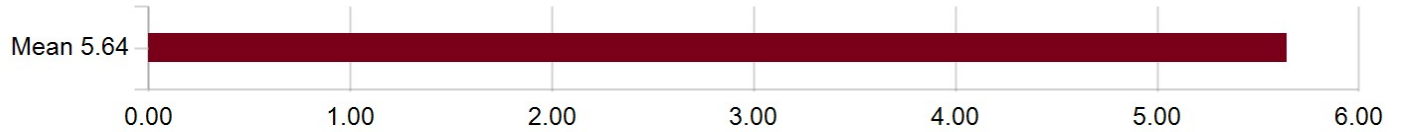


<div>1. The instructor was well prepared for class.</div> <div><div><div>6 Strongly Agree (26)92.86%</div><div>5 Agree (2)7.14%</div><div>4 Somewhat Agree (0)0.00%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.93</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.26</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.93	Median	6.00	Standard Deviation	0.26	<div>2. The instructor presented the subject matter clearly.</div> <div><div><div>6 Strongly Agree (24)85.71%</div><div>5 Agree (3)10.71%</div><div>4 Somewhat Agree (1)3.57%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.82</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.48</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.82	Median	6.00	Standard Deviation	0.48
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<div>3. Interactions with the instructor helped me learn.</div> <div><div><div>6 Strongly Agree (24)85.71%</div><div>5 Agree (4)14.29%</div><div>4 Somewhat Agree (0)0.00%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.86</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.36</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.86	Median	6.00	Standard Deviation	0.36	<div>4. The instructor treated me with respect.</div> <div><div><div>6 Strongly Agree (27)96.43%</div><div>5 Agree (1)3.57%</div><div>4 Somewhat Agree (0)0.00%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.96</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.19</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.96	Median	6.00	Standard Deviation	0.19
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<div>5. The instructor provided feedback intended to improve my course performance.</div> <div><div><div>6 Strongly Agree (24)85.71%</div><div>5 Agree (3)10.71%</div><div>4 Somewhat Agree (1)3.57%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.82</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.48</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.82	Median	6.00	Standard Deviation	0.48	<div>6. I would recommend this instructor to other students.</div> <div><div><div>6 Strongly Agree (24)85.71%</div><div>5 Agree (4)14.29%</div><div>4 Somewhat Agree (0)0.00%</div><div>3 Somewhat Disagree (0)0.00%</div><div>2 Disagree (0)0.00%</div><div>1 Strongly Disagree (0)0.00%</div><div>[Total (28)]</div></div><div>050%100%</div></div> <div><table><tr><th>Statistics</th><th>Value</th></tr><tr><td>Response Count</td><td>28</td></tr><tr><td>Mean</td><td>5.86</td></tr><tr><td>Median</td><td>6.00</td></tr><tr><td>Standard Deviation</td><td>0.36</td></tr></table></div>	Statistics	Value	Response Count	28	Mean	5.86	Median	6.00	Standard Deviation	0.36
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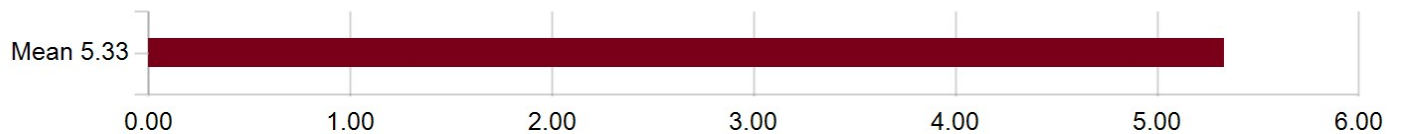
Course Items Overall



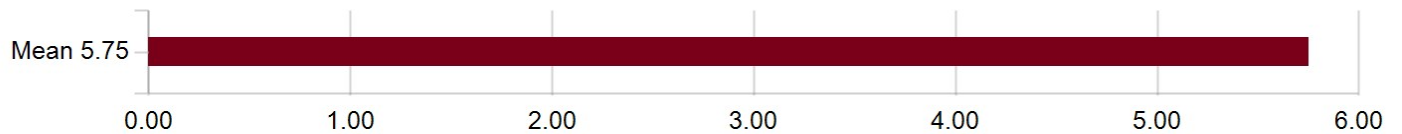
1. I have a deeper understanding of the subject matter as a result of this course.



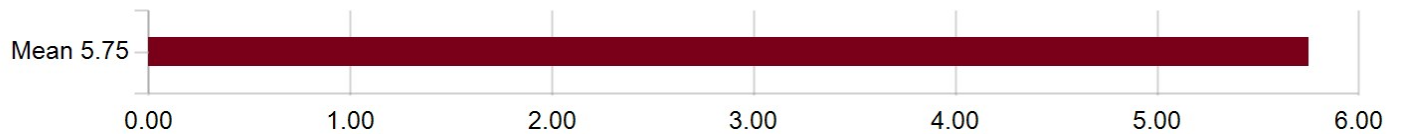
2. My interest in the subject matter was stimulated by this course.



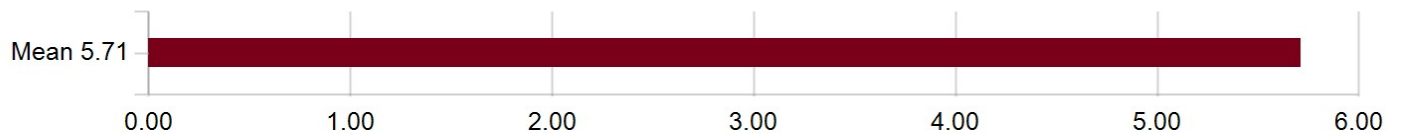
3. Instructional technology employed in this course was effective.



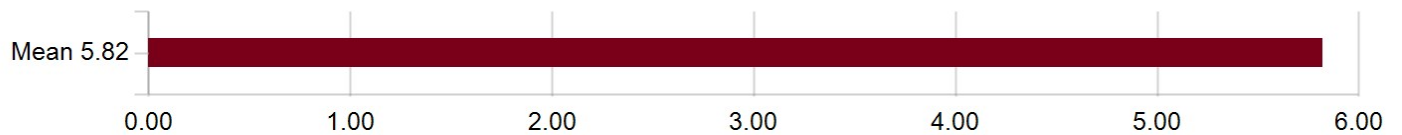
4. The activities in this course supported my learning.



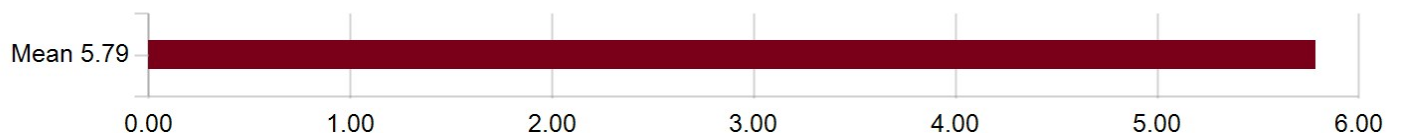
5. The amount of effort needed to be successful in this course is reasonable.



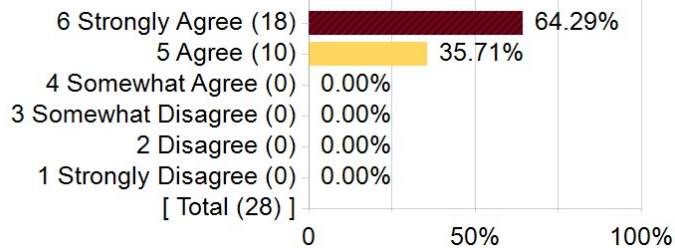
6. The grading standards for this course were clear.



7. I would recommend this course to other students.

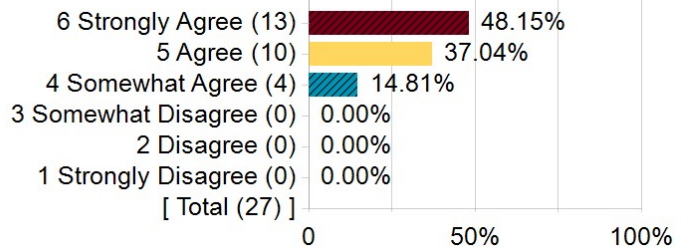


1. I have a deeper understanding of the subject matter as a result of this course.



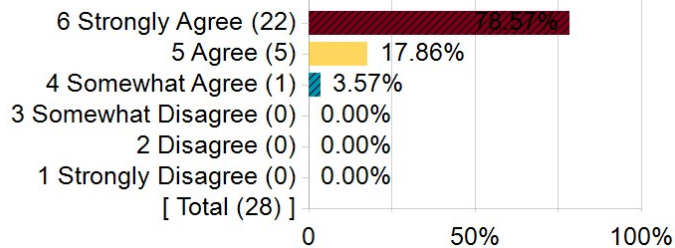
Statistics	Value
Mean	5.64
Median	6.00
Standard Deviation	0.49

2. My interest in the subject matter was stimulated by this course.



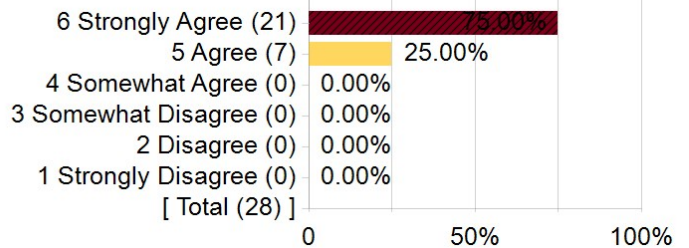
Statistics	Value
Mean	5.33
Median	5.00
Standard Deviation	0.73

3. Instructional technology employed in this course was effective.



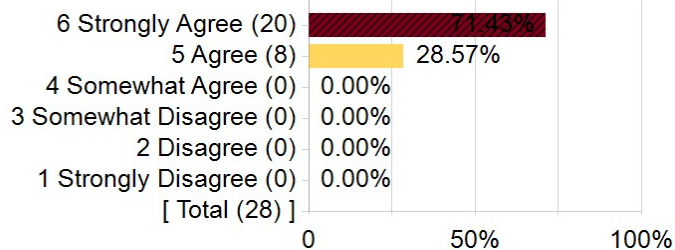
Statistics	Value
Mean	5.75
Median	6.00
Standard Deviation	0.52

4. The activities in this course supported my learning.



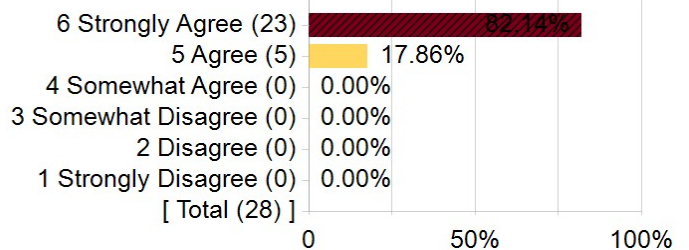
Statistics	Value
Mean	5.75
Median	6.00
Standard Deviation	0.44

5. The amount of effort needed to be successful in this course is reasonable.

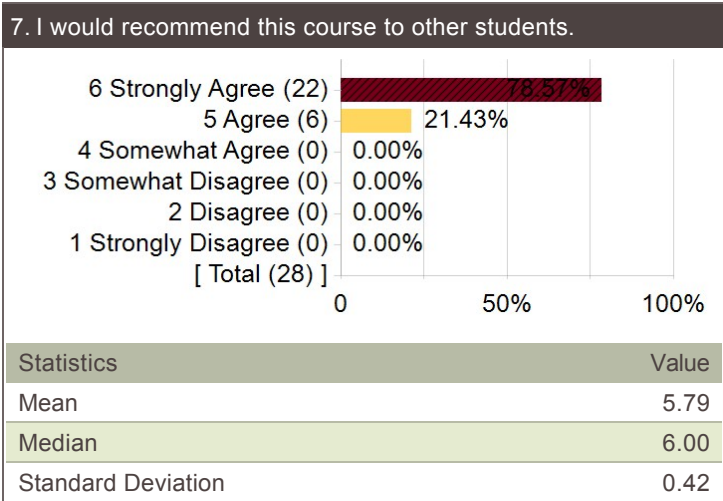


Statistics	Value
Mean	5.71
Median	6.00
Standard Deviation	0.46

6. The grading standards for this course were clear.



Statistics	Value
Mean	5.82
Median	6.00
Standard Deviation	0.39



What did the instructor do that most helped your learning?

Comments
He was very good at providing examples for us to better understand the subject matter, and was good at providing feedback to us on our quizzes and exams.
Vimal Rao is a really good lecturing in presenting matter clearly while keeping the class engaged
Vimal Rao has been one of the best instructors that I have had. He truly cares about helping students understand the material and makes such a welcoming environment. I really appreciated how group oriented the class was. It helped greatly to have that extra support system.
Was super caring and flexible, which made me want to go to class because I was actually treated like a human being.
He accommodated to you learning style and made sure everyone felt like they were capable of doing the material.
Taught the material in class
I think the instructor did really well with being positive and excited about the content. Along with this, the instructor was very flexible. These things helped me because stats is not exactly my favorite thing and I think because of the positive attitude and upbeat nature from the instructor I was able to enjoy the course more and allowing me to learn better.
Vimal was very caring and accommodating, you can tell he actually cares about his students well being and learning. I appreciate his effort of wanting everyone to succeed.
He was very enthusiastic and did not sound annoyed or mad when someone asked a question, even for the easy questions
Vimal was overall just a very caring professor. He was very approachable, and showed that he genuinely cared about our learning. He was happy to go out of his way, both in and out of class, and help me if I didn't understand a topic.
Always related back to related content
Was kind, always ready for class, very helpful when answering questions
We did a lot of group work but the teacher was always willing to explain anything we didn't understand
Vimal was incredibly kind and helpful. He explained the material clearly and taught with enthusiasm.
He would come around and ask if we had any questions. If he heard we were struggling, he would talk over the problems with the whole class.
Was very good at offering help and other resources
He was awesome all semester long. He truly cared about every student and their success not only in class, but in school and life in general.
Wrote a lot on the white board and shared his screen on the TVs, SO helpful and he was very clear and easy to understand
I liked the style of teaching and that he was very easy to talk to and very understanding.
Vimal was really flexible when I had COVID-19 and gave me extra time to complete my assignments. He also applied promptly to emails and answered all of my questions thoroughly.
They simulated the learning of the materials into a basic and proper way for an introductory course. They provided amazing feedback and help while also explaining things very easily
He would go over material more than once to make sure that students understood it. He also would explain why what we are learning is important and why this applies to the real world which I thought was really nice to hear in a math class. He also did a great job of connecting material from one chapter to another and explaining how they overlapped.
Gave very helpful feedback
Was extremely engaged with all students and showed genuine care for our success and well being.
He was always very clear and helpful when I asked questions. I overall loved the way this class was run.
went over questions we had as a class

What suggestions do you have for improving the course?

Comments
I do not have any suggestions. I feel like the course was organized very well and made it a lot easier to understand statistics with Tinkerplots.
None, was an amazing class and an amazing professor. I'm sad I no longer have Professor Rao for a class.
Having more individual work time as well as group work.
I think it may be beneficial to slow things down a little bit. I felt like at some times I was really confused and then we just kept going through the material and it was just continuously confusing.
Nothing!
No suggestions at all. Professor Rao was very kind and a good teacher. Had the answer to everything and even has a great personality. This course is easy to learn on.
Nothing, Vimal taught really well!!
None, I liked it
Maybe a more define structure of what activities needed to be finished outside of class
I do not have any suggestions for improving the course. Vimal was the best professor I have ever had at the U of M!
N/A
N/A
Nope!
I don't have many suggestions, I personally am not a big fan of group work though. I felt that I did better on my own in the exam environments rather than on the group quizzes.
Do more social justice activities. Most of the activities were engaging, but it is more engaging when the topic is relevant and you care about the answer (racial disparities in police stops) as opposed to something silly (kissing preferences).
This course was one of the best courses I've taken at the U. The professor and the TA for this class were by far one of the best ones I've met here.
Honestly nothing. I really enjoyed this course and the format and the teaching.
Have more of an incentive to read the textbook. Felt like it was never really necessary to read it to do well in class
This is more a personal preference, but I would have preferred to hold group quizzes in person rather than over zoom
Given that the tests and quizzes were the only things in the grade book it was frustrating because I did well but not well enough for an A because everything was out of 20 points so all of my 19/20 grades dropped my grade. Also it seems like at the end of the semester they really rushed to get in all of the information but that made it hard to learn when I didn't have as much time to learn it.
keeping groups consistent all semester