

Probability and Statistical Inference for Computing Systems Syllabus Spring 2026

Instructor Information

Instructor Name: Tsui, Man Cheung

Office: Robinson Hall, Room 228B

Office Hours: Tuesday 4 PM–6 PM & Wednesday 5 PM–6 PM, or by appointment

Email: tsui@rowan.edu

Course Information for Section 4

Website for Notes and Problems: <https://manctsui.github.io/2026s/2290/>

Website for grades: <https://canvas.rowan.edu/courses/7926843>

Meeting Times: Mondays & Wednesdays 9:30AM–10:45AM in Robinson 324

Optional Textbook:

[ES] Larson, Farber, *Elementary Statistics* (any edition)

[PS] Starnes, *The Practice of Statistics* (any edition)

[P] Walpole, Myers, Myers, *Probability and Statistics for Engineers and Scientists*

Course Description: This objectives of this course are to serve as an introduction to the concepts of probability; probability models; random variables, expected value and variance; and the concepts of descriptive statistics and statistical inference. All Computer Science majors will take this new course, so we will draw from examples relevant to their major when possible.

Tentative Schedule of Topics

1. Descriptive statistics: types of data data visualization, numeric summaries
2. Design of studies: observational studies, experiments
3. Probability: basics, combinatorics, Venn diagram, conditional probability, Bayes' Theorem
4. Random variables
5. Normal distribution, Law of Large Numbers, Central Limit Theorem
6. Confidence intervals for population mean and population proportion
7. Hypothesis testing for population mean and population proportion
8. Linear regression, correlation, inference for linear regression

Grades

Your course grade is given by $0.05a + 0.1b + 0.25d + \sum_{i=1}^3 0.2 \max(c_i, d)$, where $a, b, c_i, d \in [0, 100]$:

| Grade | Category | Date |
|-------|-------------------------------|----------------------------------|
| a | Homework (lowest two dropped) | Hand in Wednesdays with the quiz |
| b | Quiz (lowest two dropped) | Wednesdays near end of class |
| c_1 | Exam 1 | Wednesday, February 19, 2026 |
| c_2 | Exam 2 | Wednesday, March 18, 2026 |

| Grade | Category | Date |
|-----------------------|-------------------------|--|
| <i>c</i> ₃ | Exam 3 | Wednesday, April 16, 2026 |
| <i>d</i> | Final Exam (cumulative) | Wednesday, May 6, 2026 at 10:15AM–12:15PM |

Cheatsheets — three detached sheets of A4 paper (8.3 × 11.7 inches) are allowed on quizzes and exams. You can write, type, print, put images on the front and back. No books. No electronic devices (calculator, phone, etc.).

Make up exam and quiz is normally not allowed. A missed test or quiz may be excused if the student gives sufficient verifiable evidence of acceptable extenuating circumstances. Unexcused missed exams or quizzes will result in a grade of zero. Students must bring their Rowan ID card to all exams.

Student Accommodation Policy

Your academic success is important. If you have a documented disability that may have an impact upon your work in this class, please contact me. Students must schedule their exams in the **Testing Center** if they are eligible to receive extra time per their accommodations and wish to use this accommodation for a given assessment. Students **must provide** documentation of their disability to **Accessibility Services** in order to receive official University services and accommodations. Accessibility Services can be reached at (856) 256-4259 and is located in the Office of Accessibility Services in Savitz Hall, Suite 237. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations.

See <https://confluence.rowan.edu/display/POLICY/Accommodation+Policy> for the full policy.

Classroom Behavior Policy

Please behave.

See <https://confluence.rowan.edu/display/POLICY/Classroom+Behavior> for the full policy.

Academic Integrity Policy

Familiarize yourself with Rowan University's Academic Integrity Policy, including the types of violations and subsequent penalties. Violations of the academic integrity policy include plagiarism, which occurs when copying information or ideas from published and unpublished sources without correctly citing the source. Accessing prohibited resources during assignments, receiving unauthorized assistance, and posting course materials online are all considered violations. Students committing any act of academic dishonesty may fail the assignment, fail the course, or face other sanctions. Work with your instructor on any questions regarding how academic integrity applies in a given course or assignment and please review the resources available at go.rowan.edu/academicintegrity. Ensuring that your learning is genuine is the key to your future success and your integrity.

See <https://confluence.rowan.edu/display/POLICY/Academic+Integrity+Policy> for the full policy.

Laptop Computers in the Classroom (Mobile Device Policy)

Permissible unless it distracts other students or the instructor.

See <https://confluence.rowan.edu/display/POLICY/Mobile+Electronic+Device+Policy> for the full policy.

University Attendance Policy

University policy requires students to regularly attend class.

See <https://confluence.rowan.edu/display/POLICY/Attendance+Policy> for exceptions and the full policy.

Title IX- Sexual Harassment/Sexual Assault and Sex Discrimination Reporting

Rowan University is committed to ensuring a safe and productive educational environment for all students. Title IX makes it clear that sexual misconduct and harassment based on sex is a Civil Rights offense subject to the same kinds of accountability and support applied to offenses against protected categories such as race, national origin, etc.

University faculty and staff members must report any sexual misconduct or harassment to the University's Title IX Coordinator to provide the appropriate resources and support options. Please report any incidents of sexual misconduct and harassment via the linked Student Sexual Misconduct/Title IX Reporting Form (https://cm.maxient.com/reportingform.php?RowanUniv&layout_id=17)

As your professor, I am required to report any incidents of sexual misconduct and harassment that are directly reported to me or of which I am made aware. See Rowan's Title IX Sexual Harassment/Sexual Assault Policy and Student Sexual Misconduct and Harassment Policy.

Pregnant & Parenting Students:

Rowan University does not discriminate against any student based on pregnancy or related conditions. The Title IX Coordinator can coordinate specific actions to prevent sex discrimination and ensure a student's equal access to Rowan's education programs and activities. If you are a pregnant or parenting student, please contact the Title IX Coordinator for additional information and resources.

Contact Information:

- Title IX Coordinator: Brandy Bennett, Office of Student Equity and Compliance
- Location: Hawthorne Hall, 856-256-5440
- Email: TitleIXCoordinator@rowan.edu
- Website: To learn more about Title IX, go to Title IX Regulations & Sexual Misconduct (<https://sites.rowan.edu/osec/ix-reporting1.html>)

Discrimination and Harassment Reporting and Title VI

Rowan University prohibits discrimination under the University's Policy Prohibiting Discrimination in the Workplace and Educational Environment

(<https://confluence.rowan.edu/display/POLICY/Policy+Prohibiting+Discrimination+in+the+Workplace+and+Educational+Environment>). Please report any incidents of discrimination and harassment via this linked Reporting Form for Discrimination/Harassment/Retaliation (https://cm.maxient.com/reportingform.php?RowanUniv&layout_id=16).

As your professor, I must report any incidents of discrimination and harassment directly reported to me or of which I am made aware. To learn more about Title VI, go to Reporting Student Discrimination, Harassment and Retaliation (<https://sites.rowan.edu/osec/discrimination-harassment-retaliation.html>).

Please see the available resources below:

- **Confidential Resources:**

- The Wellness Center, Winans Hall, 856-256-4333, www.rowan.edu/wellness

- **Non-Confidential Resources:**

- Office of Student Equity and Compliance, Hawthorne Hall, 856-256-5830.
- Rowan University Police Department, Bole Annex, 856-256-4911.