

**Instructor:** Dr. Mary Lynn Reed

**E-mail address:** mlrsma@rit.edu

**Class-time and Location (Lecture):** Tu/Th 2:00pm-3:15pm, GOS-2300

**Dr. Reed's Office Location and phone:** HLC 2530, (585) 475-2163

**Dr. Reed's Office Hours:** See our MyCourses Homepage for the latest!

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**“Recitation”:** In SIS this course is listed as Lecture on Tuesday and Recitation on Thursday. This is an oddity of the RIT scheduling system and is not accurate for the way this course will be delivered. The truth is: this class meets Tu/Th 2:00pm-3:15pm. Both days will involve lecture and occasionally, problem solving activities. There is no formal Recitation period for this particular section of MATH 251.

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**Textbook:** Devore, Jay L., *Probability and Statistics for Engineering and the Sciences*, 9th Edition, Cengage Learning, 2019. This course requires a digital platform called **WebAssign for Devore: Probability and Statistics for Engineering and the Sciences, 9th edition**, from Cengage. WebAssign includes digital learning tools, homework assignments and the electronic version of the book (eBook) for this course. The eBook included in WebAssign is interactive, and you can highlight, makes notes, have text read aloud, etc. To register for your WebAssign course, please follow the directions found here: <https://startstrong.cengage.com/webassign-brightspace-ia-no/>.

**Pre-requisites:** MATH 173 or MATH 182 or MATH 182A.

**Course Description (from official course information sheet):**

This course introduces sample spaces and events, axioms of probability, counting techniques, conditional probability and independence, distributions of discrete and continuous random variables, joint distributions (discrete and continuous), the central limit theorem, descriptive statistics, interval estimation, and applications of probability and statistics to real-world problems. A statistical package such as Minitab or R is used for data analysis and statistical applications.

**Intended Learning Outcomes (from official course information sheet):**

1. Explain the basic definitions, concepts, rules, vocabulary, and notation of probability
2. Demonstrate the necessary skills required to solve problems in probability
3. Explain the fundamentals of set probability, random variables, and probability distributions
4. Apply the basic ideas of probability, descriptive statistics, and interval estimation

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**Time Commitment:** This is a 3-credit hour course. You will have 3 hours in class per week. You should expect to spend roughly 2 to 3 additional hours for each credit hour in this course per week on readings, homework, and study. That's 6-9 hours *in addition* to the 3 hours spent in class. Mileage may vary, of course. You may need more time than this, but you should plan to have at least 9 hours to devote per week, in addition to the time you will spend attending class. **Note:** This paragraph is on the first page of the syllabus for a reason. *Pay attention to it!*

**Course Communications:**

- The best way to get your questions answered in this class will be in class or during Office Hours. Office Hours are times I set aside specifically to answer student questions. It is very hard to navigate course questions via e-mail so make a practice of asking your questions during class or Office Hours.
- If you have something you need to communicate to me via e-mail, the correct way to address me is “Dr. Reed” or “Professor Reed”. I will respond to your email as promptly as possible, Monday through Friday. Emails sent in the evenings may not be read until the next day. Emails sent after 5pm on Friday will likely not get a response until Monday. (I.e., don’t expect immediate responses to e-mails in the last few hours before an assignment is due. There will be ample time for questions in class and during Office Hours as long as you don’t wait until the last minute to begin an assignment.)

**Instructor Remarks:**

- Probability and Statistics are foundational topics for all STEM majors. They are also beautiful mathematical subjects, and I am really happy to be teaching this course. We’re going to have a lot of fun!
- Reading math and statistics books is a skill that requires practice. The good news is that the Devore textbook is well-written and contains a ton of useful examples. Don’t skip the readings! They will be useful in mastering the material.
- We’ll be using the Cengage WebAssign system for homework. The advantage of this system is that you will get instant feedback when doing your homework (versus having multi-day delays for paper-and-pencil assignments). There will also be helpful pointers to the text, and some accompanying videos to assist you. **You do need to purchase access to this system.** Besides the homework platform, you will also get access to the electronic copy of the text. The publisher, Cengage, also offers something called “Cengage Unlimited” which provides access to other Cengage textbooks used in other classes at RIT. So you might find this a cost effective option.

**The Course Assessments** will be:

- **Homework** assignments will (usually) be due on Wednesdays, at 11:59pm (on the WebAssign system). Start working on the homework assignments as soon as the associated material is covered so that you will have time to ask questions in class or during Office Hours. Do not wait until the last minute to start the homework!
  - Math and Stats are not spectator sports. You must do the problems in order to learn the subject.
  - You are allowed to work with your classmates on the Homework assignments, if you like. But be aware of the following:
    - \* Most HW problems involve some randomization of numerical values so you will not have the exact same questions as your classmates.
    - \* The goal of the HW problems is to provide enough practice for you to learn the material. If you don’t do the work yourself on HW, you won’t be prepared for Quizzes and Exams, and you won’t achieve the learning objectives of the course. Don’t cheat yourself!
- There may be a few **Computational Labs** assigned that utilize statistical software. The purpose of these labs is to explore how the course concepts are applied to real-world problems, and to work problems that involve datasets a bit larger than ones found in a typical homework. (These Labs will be treated as additional Homework assignments, and count as part of your Homework grade.)

- **Quizzes** will be delivered on *myCourses*. They will (usually) open on Wednesdays and close on Thursdays at 11:59pm. Once you begin a Quiz you will have 20 minutes to complete it. You are allowed to consult your notes, the textbook, and other class materials but you are **not** to consult with your classmates or other external sources for the Quizzes. (See: RIT's Student Academic Integrity Policy)
- **Two Mid-Term Exams.** More details about the Mid-Term Exams will be provided later in the course. You should work independently on the Mid-Term Exams. Any violation of this will be considered academic dishonesty and RIT's Student Academic Integrity Policy will be enforced. Such violations will receive 0 credit for the Mid-Term Exam and be reported to RIT's Student Conduct Office. Repeated academic integrity violations will result in failure of the course.
- **Final Exam.** This will be a cumulative exam covering the entire course. You should work independently on the Final Exam. Any violation of this will be considered academic dishonesty and RIT's Student Academic Integrity Policy will be enforced. Such violations will receive 0 credit for the Final Exam and be reported to RIT's Student Conduct Office. Repeated academic integrity violations will result in failure of the course.

**Note:** Do **not** submit answers/solutions for HW/Quiz/Exam problems that you do not understand and cannot explain. The Instructor reserves the right to ask students to explain their solutions orally; not being able to explain your answers, and how you obtained them, will result in receiving 0 credit for the HW/Quiz/Exam and be reported to RIT's Student Conduct Office. Repeated academic integrity violations will result in failure of the course.

The relative weights of each of the previous items are listed in the following table:

Course assessment	Weight
Homework	15%
Quizzes	20%
Mid-Term Exams (2)	40% (20% each)
Final Exam	25%

### Grading:

- **Homework Assignments should be completed and turned in on time.** In WebAssign, you will be able to request a 1-day extension (on homework assignments). (*Note: if this 1-day extension privilege is over-utilized it may disappear so only use it if you truly need it.*) Any other extension requests should be directed to the Instructor for approval and will incur a 20% lateness penalty per day.
- **Quizzes will not be available after the due date/time** unless there is an excused absence on record that covers the entire period the Quiz is available.
- If you experience an illness or other hardship during this term, let me know immediately. Any excused absence or lateness must be approved **before** the associated deadline is missed.
- The course grade is assigned using a straight scale (90, 80, 70, 60). I reserve the right to lower the grading scale to your benefit.

## General Policies

**Academic Integrity:** As an institution of higher learning, RIT expects students to behave honestly and ethically at all times, especially when submitting work for evaluation in conjunction with any course or degree requirement. Do not cheat or allow others to cheat from you. Please read RIT's Student Academic Integrity Policy and RIT's Honor Code carefully. They will be strictly enforced in this course.

**Statement on Reasonable Accommodations:** RIT is committed to providing academic adjustments to students with disabilities. If you would like to request academic adjustments such as testing modifications due to a disability, please contact the Disability Services Office (DSO). Contact information for the DSO and information about how to request adjustments can be found at DSO. After you receive academic adjustment approval, please let me know immediately so that we can work out whatever arrangement is necessary.

**Starfish:** This course participates in the RIT Starfish academic alert system, which is designed to promote student success through communication between students, instructors, and advisors. I will send a whole-class status update to all students before the semester midpoint. When I am concerned about an individual student's academic performance, I may raise an academic alert to notify the student as well as their advisor(s). On the other hand, when a student is doing well, I may send a "kudos" message. If you receive an academic alert email, it is your responsibility to contact me as soon as possible to discuss the issue, its potential impact on your success in the course, and identify people and resources to help you move forward. For more information about the Starfish system, visit Starfish.

**Title IX:** Title IX violations are taken very seriously at RIT. RIT is committed to investigate complaints of sexual discrimination, sexual harassment, sexual assault and other sexual misconduct to ensure that appropriate action is taken to stop the behavior, prevent its recurrence, and remedy its effects. RIT's Student Gender-Based and Sexual Misconduct Policy.

**Diversity, Inclusion, and Respect** RIT has put forth Policy P05.0 Diversity Statement for all community members. RIT through its policies and practices is responsible for building an inclusive environment where membership in the community allows for faculty, staff and students to reach their fullest potential, both professionally and personally. RIT is committed to the development, administration and interpretation of policies and procedures in a way that is consistent with our commitment to diversity and is in compliance with federal, state and local laws. RIT's policies and procedures are administered in a way that supports fair treatment for all faculty, staff, students, and the RIT community at large.

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## Mental Health

Many students at RIT face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

Located on the second floor of the August Center building (above the Student Health Center), Counseling and Psychological Services provides confidential and personalized services to meet the mental health needs of currently enrolled, undergraduate and graduate students on the Henrietta campus. Appointments can be made through the RIT Wellness Portal or by calling 585-475-2261. The After-Hours Mental Health Line is 855-436-1245.

If you are experiencing a life-threatening mental health emergency or situation needing immediate response, call 911 or contact Public Safety by calling 585-475-3333 or texting 585-205-8333. Please also consider the National Suicide Hotline (1-800-273-8255) or the Crisis Text Line (text HOME to 741741).

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**Changes to the Syllabus**

*I have provided this syllabus as a guide to our course and have made every attempt to provide accurate information. However, as instructor, I reserve the right to modify this document during the semester, if necessary, to ensure that we achieve course learning objectives. You will receive notice of any changes to the syllabus through MyCourses announcements.*