

**Syracuse University**  
**Department of Mathematics**  
**MAT 525: Mathematical Statistics**  
**Term 2 2017-18**

Instructor	William Volterman
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Lectures	TH 12:30 pm – 1:50 pm CARN 110
Office Hours	W 9:00 am – 12:00 pm CARN 316A or by appointment
Text Book	Probability and Statistics (4th Edition) <i>Morris H. DeGroot and Mark J. Schervish</i> ISBN-10: 0321500466 ISBN-13: 978-0321500465

**Prerequisite:** Calculus and MAT 521 or equivalent. A good understanding of calculus will be necessary to perform well in this course.

**Goals:** The course will discuss statistical estimation and hypothesis testing. Point estimation will be taught with discussion on efficiency. Interval estimation and hypothesis testing will be discussed focusing on the likelihood ratio test. Goals of this course would be to understand basic ideas of statistical inference (estimation and testing), to learn theoretical basis of fundamental inferential procedure, and to apply them in real data analysis.

The learning outcomes as stated in the catalogue are as follows.

Estimation and confidence intervals, normal distribution and central limit theorem, testing hypotheses, chi-square, t, and F distributions, least squares, regression, and correlation.

**Software:** You will need a calculator for the course. No specific calculator is required.

**Academic Integrity:** Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. Syracuse University students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term checkin on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level.

For more information and the complete policy, see <http://academicintegrity.syr.edu>

**\*Important Message\*** The instructor(s) and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their email and course website during the term and to note any changes.

I.e., everything in this outline (or posted online) is subject to change.

**Grading Scheme:** The grading scheme is tentatively as below. Dates will be announced later. Alternative grading schemes may be considered. There are no make ups. If something is missed with legitimate reason and proof, the marking scheme will be adjusted accordingly.

- Assignments: 25%
- Midterm Tests: 30%
- Exam 45%

**Grade Conversion Chart:** Note that the following grade conversion chart is used for this course. This may be different from your other courses.

Grade	F	D	C-	C	C+	B-	B	B+	A-	A
Score	0-59	60-69	70-72	73-76	77-79	80-82	83-86	87-89	90-92	93-100

**Attendance:** Attendance in classes is expected in all courses at Syracuse University. It is a federal requirement that students who do not attend or cease to attend a class to be reported at the time of determination by the faculty that the student never attended or stopped attending the class. Faculty should use Early-Semester Progress Reports and Mid-Semester Progress Reports in Orange SSuccess to alert the Registrar and Financial Aid Office. For more information visit: <http://registrar.syr.edu/faculty-staff/non-attendance/>

Excuses for class absences for medical reasons will be given only if such absences are advised by a health care provider at the Health Center, based on clinical findings and prescribed treatment recommendations. Excused notes will not be given solely to confirm a visit to the Health Center. For complete details on excuse notes, visit: <http://health.syr.edu/faqs/index.html>

**Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) located at 804 University Avenue, third floor or go to the ODS website at <http://disabilityservices.syr.edu> and click current students tab to register on-line. You may also call 315.443.4498 to speak to someone regarding specific access needs. ODS is responsible for coordinating disability-related accommodations and will issue Accommodation Letters to students as appropriate. Since accommodations may require early planning and are not provided retroactively, please contact ODS as soon as possible.

Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. My goal as your instructor is to create a learning environments that are useable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, I invite you to meet with me to discuss additional strategies beyond accommodations that may be helpful to your success

**Religious observances policy:** SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class.

**Key dates:** See the Academic Calendar for important dates during the term

<http://syracuse.edu/registrar/acadcalendars/acadd12017-18.pdf>

- First day of classes: **January 16<sup>th</sup>**
- Financial deadline to drop class: **February 6<sup>th</sup>**
- Academic drop deadline: **February 6<sup>th</sup>**
- Withdrawal deadline: **April 17<sup>th</sup>**
- Last day of classes: **May 1<sup>st</sup>**