Department of Mathematical and Statistical Sciences
Marquette University
Syllabus

Course: MSSC 6010 Probability, Fall 2020	**Office Hours:** TuTh 4–5, 6:15–6:45pm
Time: TuTh 5:00-6:15pm Cudahy Hall 417	**Office:** CU 313 & Teams
Instructor: Daniel B. Rowe, Ph.D.	**E-mail:** daniel.rowe@marquette.edu

Texts: (reference) Casella, G. & Berger, R.L. (2002). *Statistical Inference*, Second edition, Duxbury. ISBN: 0-534-24312-6. Used as a reference and not directly covered.

Grading: A take-home midterm with both pencil/paper and computational components on Oct 24, weekly homework, and a final exam (in class) on Dec 2, 5:45–7:45pm. Homework & Class Participation (30%), Mid-Term Exam (30%), and a Final (40%). Students will be generally be given one week to complete homework. Students will submit homework on the day that it is due. We will go over the homework and you will be given an opportunity to resubmit your homework before the next class. The process of going over homework will be via students volunteering to explain their solution. Students describing their solutions will be the course Homework & Class Participation grade. If there is no volunteer, than a random student will be called upon. If the random student declines to explain their solution, they will lose 5% of their homework grade or 1.5% of their total grade. Grades will be assigned according to the scale:

A	$93.5\% \leq$ grade	A-	$90\% \leq$ grade $< 93.5\%$	B+	$86.5\% \leq$ grade $< 90\%$
B	$83.5\% \leq$ grade $< 86.5\%$	B-	$80\% \leq$ grade $< 83.5\%$	C+	$76.5\% \leq$ grade $< 80\%$
C	$73.5\% \leq$ grade $< 76.5\%$	F	grade $< 73.5\%$	Instructor may favorably adjust.	

Matlab Introduction-Arithmetic and Variables, Arrays and Indexing, Programming, Plotting, Functions and m-files, Importing and Exporting Images

Math Review-differentiation and integration including numerical

Discrete Distributions-properties, expectation, transformation of variable, MGF, Bernoulli, binomial, Poisson, hypergeometric

Continuous Distributions-properties, expectation, moments, transformation of variable, MGF, uniform, beta, normal, chi square, gamma, exponential, student t, F

Estimation & Hypothesis Testing-random samples, likelihood, MLE, LRT

Regression-simple linear, multiple linear

Multivariate Distributions-normal, student t, Wishart, inverse Wishart

Make-Up Policy: There will NOT be any make-up exam. If you have an "unavoidable absence" as defined in the Arts and Sciences Bulletin, the percent of the missed Exam will be added to your Final Exam percentage. Contact me if is University event absence.

Expectations of Academic Honesty: This course will expect all students to follow University and College statements on academic honesty found in the Bulletin. Consequences of failure to follow these policies can range from an F on a test or assignment to removal from the University. If you have concerns or questions on this matter, talk to the instructor for clarification.