

Math 4030 SA Probability and Statistics (2024 Spring)

Instructor: [John Kimball](#)

Office: RB 2006

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Lecture (FA): M/T/W/Th/F, 11:30am – 2:30pm in RB 2042

Office Hours: By appointment

Email Communication: When sending emails regarding the course, include course number, your name, and keywords in the subject line. For example, “Subject: Math 4030, John Smith, formula for standard deviation”.

Textbook: Math 4030 SA – 2024, Probability and Statistics for Engineers Course Handbook

Performance Evaluation: Your final grades are calculated from your Assignments, MidTerm Exam and Final Exam marks.

Assignments	MidTerm	Final Exam
10%	30%	60%

Lectures:

1. Will be conducted in-person.
2. It is strongly recommended that you attend all the lectures to maximum probability of success. Students who miss lectures are responsible for obtaining the notes from a classmate.
3. Handouts for the lectures are available in the Course Handbook.

Assignments: There will be short weekly assignments (via WebWork). The due dates are included at the end of the Course Outline (all are due at 11:59pm). Late assignments will not be accepted.

MidTerm Exam: will be held on Monday, June 3rd, 2024 from 11:30am – 1:00pm in AT 2001.

Final Exams: will be held on Friday, June 14th, 2024 from 11:30am – 2:30pm in AT 2001.

Students with Disabilities or Chronic Conditions: Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student’s responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Student Accessibility Services located at SC0003 or by phone: 343-8047.

Tentative Schedule (Subject to Change):

#	Date	Lectures
1	Mon, May 27	Chapter 1 – 2: Definitions, Dot Diagram, Bar Charts, Pareto Chart, Frequency Distribution/Table, Histogram, Stem-and-Leaf Display, Measures of Central Tendency, Measures of Variation.
2	Tues. May 28	Chapter 2 – 3: Measure of Positions, Outliers, Boxplots, Sample Space and Events, Operations of Events, Mutual Exclusivity, Definition of Probability, Counting, Some Elementary Theorems, Chebyshev Theorem.
3	Wed. May 29	Chapter 3-4: Conditional probability, Bayes' Theorem, Random variables.
4	Thur. May 30	Chapter 4: Binomial Distribution, Hypergeometric distribution, Mean and variance of a probability distribution
5	Fri. May 31	Chapter 4: Poisson distribution, Poisson approximate Binomial Distribution, Geometric and negative binomial distribution, Multinomial Distribution.
MT	Mon. June 3	MidTerm Exam , Monday, June 3 rd , 2024, 11:30am – 1:00pm in AT 2001
6	Tues. June 4	Chapter 5: Continuous Distribution Intro, Normal distribution;
7	Wed. June 5	Chapter 5: Normal approximation to binomial, Uniform distribution, Log-Normal distribution, Gamma distribution, Beta distribution, Discrete Joint distribution.
8	Thur. June 6	Chapter 6 – 7: Sample Distribution of mean and variance, Inference Concerning Means, confidence intervals
9	Mon. June 10	Chapter 7 – 8: Hypotheses concerning one mean, inferences concerning two means with both equal and unequal variances.
10	Tues. June 11	Chapter 9 – 10: : Inferences Concerning Proportions and Variances, Confidence intervals, Hypothesis concerning variation, one and two Proportions.
11	Wed. June 12	Chapter 11: Least square method, Simple Linear Regression, Correlation
E	Fri. June 14	Final Exam , Friday, June 14 th , 2024 from 11:30am – 2:30pm in AT 2001

Assignment Due Dates

Assign	Due	Assign	Due	Assign	Due
#1	Fri, May 31 st	#5	Wed, June 5 th	#9	Mon, June 10 th
#2	Fri, May 31 st	#6	Mon, June 10 th	#10	Thurs, June 13 th
#3	Fri, May 31 st	#7	Mon, June 10 th	#11	Thurs, June 13 th
#4	Wed, June 5 th	#8	Mon, June 10 th	#12	Practice