

(Course has been unavailable to students since Tuesday, August 18, 2015) IMSE 2110 Homepage Syllabus

- IMSE 2110: Probability and Statistics for Engineers - SS2015 (Conte)
- IMSE 2110 Homepage
- Syllabus
- Learning Modules
- Discussion Board
- Announcements
- Scheduling Final Exam
- Virtual Office
- Mizzou Email
- My Grades
- Blackboard Help
- Tegrity Classes

- COURSE MANAGEMENT
- Control Panel
 - Files
 - Course Tools
 - Evaluation
 - Grade Center
 - Users and Groups
 - Customization
 - Packages and Utilities
 - Help

Syllabus

Build Content Assessments Tools



Syllabus Quiz

When you complete the Syllabus Quiz with the score of 100%, the first two modules in Learning Modules will be released. You can retake it as many times as you need.

This quiz will be opened in a new window.

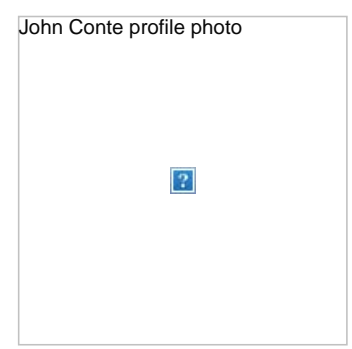


Course Information

Course Title: IMSE 2110 Probability and Statistics for Engineers, Summer 2015

Instructor: John Conte, 214-683-7871214-683-7871

- Class Format:** Fully-Online in Blackboard
- Virtual Office Hours:** Live every Monday and Thursday at 6pm (CDT) using Bb Collaborate. See Virtual Office for more details.
- Contact Preference:**
 - Private Inquiries: 24/7 Mizzou Email ONLY
 - Public Inquiries:
 - Module Q & A forums and general forums in 24/7 via Bb Discussion Board
 - Synchronous Virtual Office hours



Online Course Access

You may access the course via <http://courses.missouri.edu> or <http://bblearn.missouri.edu>. Under course login, select Blackboard and enter your PawPrint. You can use any internet browsers to access the course. (Exception: if you use Internet Explorer 8, you **MUST** enable Compatibility View)

If you have any technical difficulties (e.g. logging in to the course, noting see the course listed, accessing discussion forums, etc.), please contact the *Mizzou IT Help Desk* at 882-5000, helpdesk@missouri.edu. For out-of-area Mizzou Online students, toll-free at (866) 241-5619(866) 241-5619 FREE.



Virtual Office

This class uses Blackboard Collaborate; a real-time, digital learning environment independent of a physical classroom. Students and instructors can participate in distance learning and collaboration regardless of their physical location using their own computer. To fully participate in a Collaborate session, we recommend using a headset with microphone for improved audio quality. A webcam is optional if you want to use video. Many laptops already have built-in webcams so make sure you check before purchasing a webcam. Even if your laptop does have a built-in microphone you may still wish to purchase a headset.

- [Equipment needed for Blackboard Collaborate](#)
- [Clearing your Java and browser cache](#)
- [Troubleshooting Blackboard Collaborate Audio Issues](#)



Course Description and Rationale

This course is designed to introduce engineering students to Engineering Statistics. The content follows closely a popular Engineering Statistics text but the topics emphasized in the course are those commonly covered in the American Society for Quality certifications for Quality Engineer and Six Sigma Black Belt. The topics in the course will also prepared the student for the NCEES Fundamentals of Engineering Exam topics of Probability and Statistics and Quality Engineering.



Course Objectives

After completing this entire course, you should be able to:

- Explain the role that statistics plays in engineering
- Illustrate data in an effective manner
- Differentiate the Normal, Student-t, Chi-squared, and F probability distributions
- Differentiate the Binomial, Poisson, and Hyper-geometric probability distributions
- Calculate confidence intervals on point estimates of means and variances
- Construct hypothesis tests about means, difference in means, variances, and proportions
- Construct hypothesis tests on probability distributions using Chi-squared Goodness of Fit tests
- Construct Analysis of Variance studies and Designed Experiments
- Construct hypothesis tests on Linear Regression models
- Create Statistical Process Control (SPC) charts
- Assess Process Capability and Assess Measurement System Assurance



Prerequisite/Technical skills

Prerequisite: Sophomore standing or higher.

Technical Skills: you need to be confident about performing following activities in order to take this course.

- basic algebra
- using handheld electronic calculator
- Bb email communication, use of browser window
- basic exposure to external programs such as spreadsheet, document processing (RTF, Word, PDF)



Textbook Information

Engineering Statistics, 5th Edition, by Douglas C. Montgomery, George C. Runger, and Norma Faris Hubele. Published by John Wiley & Sons, Inc. ISBN 978-0-470-63147-8, print or digital version. This is a required textbook for the course and it will be needed to complete assigned readings and course work. Minitab software examples are presented in many of the lectures but Minitab is NOT required for any of the exercises. Many of the quiz and exam problems require calculations but all of these calculations can be performed with a handheld calculator.

textbook cover



Expectations

Mizzou@Home Coursework:

This course is designed for delivery online, over an eight-week period, and we will cover the same material as in a typical fall or spring semester, which is 16 weeks long. This abbreviated timeline means that you should expect to spend twice as much time per week on this course as you would during a fall or spring semester.

- What to Expect from a Technology-Enhanced Course: This course is designed to meet virtually all time. It is essential that you access the course site Monday through Friday for course announcements, interact in discussion, submit assignments, take online quizzes, etc.
- What the Instructors and Your Peers Expect from You: By enrolling in this course, you have agreed to contribute to weekly discussions by accessing the Discussion Board regularly (2-3 times daily, Monday through Saturday), and to be respectful and responsible in your postings. This will require a team effort, with respect and help for each other, as we build a community of learners. We also expect that you will have a foundational understanding of Internet terms and functions. All general class correspondence should be submitted to the relevant Discussion Board forum; only personal or confidential matters should be directed to the instructor in Bb e-mail.
- What You May Expect from the Instructor: Monitor and facilitate class discussions (Monday through Saturday), respond to private questions within 24 to 48 hours, provide timely feedback on written assignments and projects, and help build a learning community.

Schedules for responding to questions posted in the Q&A forums and the Bb E-mail:

Your questions in the discussion forums posted by 5pm will be answered in the same day after 5pm. The questions posted after 5pm will be answered in the following day.



Weekly Schedules

Your weekly routine: you should expect to log into the course site every day from Monday through Saturday. Two modules are covered each week during the 8-week summer schedule.

Note: The first and second modules in Learning Modules will be released when you complete the syllabus quiz available at the top of the page.

Week #	Date	Mon/Tue	Wed 5 pm	Thur/Fri	Sat 5 pm	Academic Calendar
1	6/8 - 6/13	1: Role of Statistics in Engineering		2: Data Summary and Presentation	Module Check-up 1& 2 Due	
2	6/15 - 6/20	3: Continuous Random Variables		4: Discrete Random Variables- Part I	Module Check-up 3 & 4 Due	
3	6/22 - 6/27	5: Discrete Random Variables- Part II		6: Decision Making for Single Sample on Mean	Module Check-up 5 & 6 Due	6/24: last day to drop without grade
4	6/29 - 7/4	7: Decison Making for a single sample on variance and proportion		8: Decsion Making: Chi-squared Goodness of Fit	Module Check-up 7 & 8 Due	7/4: Independence Day
5	7/6 - 7/11	9: Decsion Making for two samples - part one		10: Decsion making for two samples - part two	Module Check-up 9 & 10 Due	
6	7/13 - 7/18	11.Decsion making for more than two samples		12: Building empirical models	Module Check-up 11 & 12 Due	
7	7/20 - 7/25	13: Design of Engineering Experiments		14: Statistical Process Control	Module Check-up 13 & 14 Due	
8	7/27 - 7/31	15: Process Capability and Measurement System Assurance	Module Check-up 15 Due	Final Exam Proctored		7/31: Summer session ends



Module Check-up

This course uses online tests to assess your comprehension of the learning contents. Tests are timed and the timer will be located in the upper right of your screen. **You may take the test only once. No make-up** is allowed unless you have a legitimate excuse with a proof of evidence. Make sure to plan time for the test in advance so that you can complete the submission within the allowed time. The following are key considerations to successfully completing a test:

- Complete all assigned activities prior to accessing the quiz.
- To ensure Blackboard logs every answer, click the “Save” at the bottom of the page every two or three questions. You must click “ Submit” only when you are done taking the test, in order to have your quiz graded. Bb automatically saves and submits your test by timer after the given minutes of starting the test.
- You **MUST** enable Compatibility View with Internet Explorer 8. A complete list of supported browsers is available [online](#).
- Take the test in a location with a reliable Internet connection, preferably wired although wireless is fine if signal is strong and reliable. Also a good idea to have a backup watch or timer in case the online timer goes out.
- **Enter the test with enough time to complete before the test closes.** For example, if the test is for 35 minutes and closes at 5pm, enter no later than 4:15pm to allow yourself the full minutes before the test closes. If you encounter an Internet or browser disruption, you can reenter the test to continue working, but not if the test is already closed (no longer displayed for entering purposes).
- Keep in mind that it is intended to solve one calculated problem within 4 minutes. It will help you manage the time during the final exam in a timely manner.

Re-grade Request Policy:

You can request the re-grade of your module test within a week of the test end-date if you detect errors that need revision. **ONLY** requests submitted by 5pm on Wednesday and Saturday of the following week (i.e. one week after the test is closed) will be eligible for regrade. Contact the instructor by Mizzou Email for the re-grade request.



Proctored Final Exam

Finals will be conducted as a proctored exam in this course. It is **your responsibility to seek and identify a proctor and site** through Mizzou Online which meet our qualifications. Follow [the guidelines](#) as instructed.

You can pick one of the following dates to arrange your final exam schedule.

- Thursday, July 30, 2015
- Friday, July 31, 2015



Grading Criteria and Scales

Your final grade is accumulative based on the scores of the following activities.

- Introduce Yourself: 10 points
- Course Orientation Quiz: 10 points
- Syllabus Quiz: 15 points
- Practice Quiz: 15 points x 15 modules = 225 points
- Module Check-up 1: 10 points x 1 module = 10 points
- Module Check-up 2 to 15: 25 points x 14 modules = 350 points
- Proctored Final Exam: 400 points
- **Total: 1020 points**
- *Extra credit for Student Feedback Survey participation 10 points*
- *Extra credit: awarded by instructor for participation in Discussion Board, up to 10 points*

Letter Grade	Percentages		
A	90%-100%		
B	80%-89.9%		
C	70%-79.9%		
D	60%-69.9%		
F	0%-59.9%		



Students with Disabilities

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams,

captioning), please register with the [Office of Disability Services](#), S5 Memorial Union, 573- 882-4696/573- 882-4696, and then ask them to notify me of your eligibility **as soon as possible** for reasonable accommodations. For other MU resources for students with disabilities, click on [Disability Resources](#) on the MU homepage.

For more information of disability policies and guidelines, [click here](#).



Online Class Netiquette

Your instructor and fellow students wish to foster a safe on-line learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. You are encouraged to comment, question, or critique an *idea* but you are not to attack an *individual*.

Our differences, some of which are outlined in the University's nondiscrimination statement below, will add richness to this learning experience. Please consider that sarcasm and humor can be misconstrued in online interactions and generate unintended disruptions. Working as a community of learners, we can build a polite and respectful course ambiance.

You should be responsible for your conduct on disseminating copyrighted materials in the online environment. Be advised to fully understand the policy related to copyright.

- [Copyright Crash Course Online Tutorial](#)
- [Copyright for Students](#)



University of Missouri Notice of Nondiscrimination

The University of Missouri System is an Equal Opportunity/ Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age, disability or status as a Vietnam-era veteran. Any person having inquiries concerning the University of Missouri-Columbia's compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans With Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, [Human Resource Services](#), University of Missouri-Columbia, 1095 Virginia Avenue, Columbia, MO 65211, (573) 882-4256/(573) 882-4256, or the Assistant Secretary for Civil Rights, U.S. Department of Education.



Academic Dishonesty

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.



Intellectual Pluralism Statement

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the [Office of Students Rights and Responsibilities](#) or the [MU Equity Office](#) or by email at equity@missouri.edu. All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.



Grievance Policy

Information concerning student grade appeal procedures and non-academic grievances and appeals may be found in the Student Handbook.



Faculty Not Allowing Recording

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may not make audio or video recordings of course activity, except students permitted to record as an accommodation under Section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of class activity are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to



student conduct matters.

Those students who are permitted to record are not permitted to redistribute audio or video recordings of statements or comments from the course to individuals who are not students in the course without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.