

IE 3810: Probabilistic Operations Research
This course is online
Online delivery via posting videos

Fall 2020
Aug 19, 2020 - Dec 11, 2020
12:30 pm - 1:45 pm TR

Instructor Information

Instructor Dr. Amin Khademi	Email khademi@clemson.edu
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Instructor Office Hour

Office hours will be on Wednesday 3:30-5pm each week. I will be available at Zoom at that time period. Zoom meeting link will be available at Canvas.

TA Information

TA Tong Zhang	Email tzhang5@g.clemson.edu
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TA Office Hour

Monday 11:00 am-12:30 pm, Thursday: 2:00 pm-3:30 pm on Zoom.

The Zoom meeting link will be posted under Modules on Canvas - Office Hour.

You can also send email to TA (tzhang5@g.clemson.edu) during the office hour to get quick answer.

Please note that TA will also reply to your questions outside the office hour at her earliest convenience.

Discussion Board:

If you are not able to attend our office hours and you still have questions to ask, please go to Canvas - "Discussions" to ask your questions. Click on the "+ Discussion" button in the upper right, then you could create your questions. The question will be posted to all the class and everyone in our class could answer your question. You are encouraged to answer others' questions and discuss on Canvas. TA will also check the discussion board often and answer your questions.

Grader Information

Grader Collin Seebeck	Email cseebec@g.clemson.edu
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Information about which questions are graded by Tong Zhang and which questions are graded by Collin Seebeck will be announced in Canvas for each assignment and exam.

Course Description

Probabilistic modeling of engineering systems. Topics include calculus-based probability, discrete and continuous time Markov processes, and queuing.

Topics to be covered

Probability and Expectation, Stochastic Processes, Discrete Time Markov Chains, Continuous Time Markov Chains, Poisson Processes, Queuing Theory.

Course Objective

This course introduces basic probability models and common optimization procedures and tools for resolving them. It seeks to provide experience in modeling such systems and experience in applying fundamental optimization techniques.

Prerequisite

MATH-3110 (C or better), IE-3600. This will be strictly enforced.

Required Course Text

Wayne L. Winston, Operations Research: Applications and Algorithms, 4th Edition, Duxbury Press, 2004.

Grade Determination

Item	Percentages
Homework	20% total
Midterm exam	40%
Final Exam	40%

Midterm is on Tuesday October 6, 2020 from 12:30 pm to 1:45 pm; Final exam is on Monday December 7, 2020 from 3pm to 5:30 pm.

Zoom meetings will be scheduled on Canvas for the two exams.

Everyone must join the meeting so that we know you are present and taking the exam. Everyone should open his/her camera before the exam starts and mute the microphone during the exam.

If you have questions during the exam, please only send private messages to TA through Zoom chat.

The exams will be posted under Assignment on Canvas 5 minutes prior to the exam time. You can access to it similar to your homework.

You will have 30 minutes after the exam is finished to scan and submit your exams. Please also submit your exam in a **single .pdf file**.

Please note that we may use "LockDown Browser" or other methods. We will keep you posted.

I do not exempt any students from the final exam. The following percentages will guarantee the corresponding letter grade:

At least	Letter grade
90%	A
80%	B
70%	C
60%	D

Also, there is no negotiation and whatsoever for increasing your grade.

Homework Information

Homework will be assigned on a regular basis and may not be graded in its entirety. You should submit your homework in a **single .pdf** file through Canvas. Detailed problem solutions will be made available after the homework are due. Homework received after the due will be rejected as late.

Academic Integrity

I understand that students may choose to study with other students. It must be understood that the work submitted by each student for homework and exams represents the efforts and work of that student and that the work submitted by groups of students for group assignments represents the efforts and work of the students in that group only. Group assignments will be explicitly identified as such. The Provost has asked that every course syllabus include the following statement:

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

Class Attendance

The course is online and I post two videos each Tuesday and Thursday and there is no class attendance.

However, not keeping up with the course will hurt your grade in a general way. Each student is responsible for all announcements made in the course management system and sent to your Clemson University e-mail account.

Students with Disabilities

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if at all possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

Clemson University Title IX

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Mr. Jerry Knighton is the Clemson University Title IX Coordinator. He also is the Director of Access and Equity. His office is located at 111 Holtzendorff Hall, 864.656.3181 (voice) or 864.565.0899 (TDD).

Specific COVID-19 related information

While on campus, face coverings are required in all buildings and classrooms. Face coverings are also required in outdoor spaces where physical distance cannot be guaranteed. Please be familiar with the additional information on the Healthy Clemson website, such as the use of wipes for in-person classes. If an instructor does not have a face covering or refuses to wear an approved face covering without valid accommodation, students should notify the department chair. If a student does not have a face covering or refuses to wear an approved face covering without valid accommodation, the instructor will ask the student to leave the academic space and may report the student's actions to the Office of Community & Ethical Standards as a violation of the Student Code of Conduct. If the student's actions disrupt the class to the extent that an immediate response is needed, the instructor may call the Clemson University Police Department at 656- 2222.