

analysis of simulation results.

Teaching Materials and Resources

1. Texts and main documents
 - Cloud and Rainey (1998). Applied Modeling and Simulation. McGraw-Hill.
 - Law and Kelton (1999). Simulation Modeling and Analysis. McGraw-Hill.
2. Documents and recommended information
 - Sokolowski and Banks (editors), 2009, Principles of Modeling and Simulation, Wiley. (This book is available from Amazon.com.) It is only a recommendation as no assignments will require this text.

HOMEWORK: Reading assignments will be made daily, and **homework exercises will be assigned every day in the classroom and/or on the course web site.** Collaboration on homework is encouraged, and questions are always welcome in class and outside of class. Although, if you work on the homework with other students, don't submit work that is not yours. Homework submissions that are absolutely identical will receive zero credit. Homework must be submitted at the beginning of the class. **Late homework will not be accepted, unless a justified excuse is validated.**

EXAMINATIONS & QUIZZES: There will be a midterm exam and a final exam. All exams are closed book without the aid of calculators. The midterms will be given during the regular class and will cover material incrementally through the semester, and the final exam will be materials over the second half of the course. **There will be no make-up exams or quizzes given for any tests in this course.** A missed exam probably will prevent you from passing unless you have approval from your professor before the exam because of an extreme emergency.

Attendance in the lectures and the quizzes are a factor in grading. They will not be announced in advance, and they will be given randomly. The quizzes will cover material discussed in the current and very recent lectures.

GRADING: Your grade will be determined according to the following distribution. (Part of the homework grade may be based on work done in class.):

- | | |
|----------------------------|--------|
| Homework & Quizzes | - 10%, |
| Attendance & Participation | - 10%, |

Project -	- 20%,
Midterm	- 30%,
Final Examination	- 30%.

Tentative grading criterion:

A = 80-100	C = 40-49
B+ = 70-79	D+ = 30-39
B = 60-69	D = 20-29
C+ = 50-59	F = Below 20

ACADEMIC INTEGRITY: The use of unauthorized material, communication with others during an examination or quiz, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination quiz, or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing score on the paper. It is particularly important that you are aware of and avoid plagiarism, cheating on examinations and quizzes, fabricating data for a project assignment, submitting a paper to more than one professor, or submitting work authored by anyone but yourself. Violations will result in penalties, which may be severe such as resulting in a failing grade in the course, and will be reported to the Office of Student Conduct. If you have doubts about any of these policies, you must confer with the professor.

RETENTION OF PAPERWORK: Graded paperwork, if not distributed to a student in class, will be available, during regular university office hours, in room SC3-R3/1 the days following its availability in class.

IMPORTANT DATES

Classes begin Monday	Monday 20 August 2018
Mid-term examination	Monday 16 - Friday 22 October 2018
Classes end	Monday 7 December 2018
Final examination	Tuesday 11- Friday -21December 2018

In addition to modifications of the proposed schedule, it may be necessary to make some other adjustments in the syllabus during the semester. The syllabus posted on the course website is the updated syllabus.

PROPOSED SCHEDULE as of 22 August 2018

You should expect that there might be changes to the schedule as the needs of the students in this class evolve. You are expected to study the reading assignments carefully before the class meetings.

Teaching plan

Week	Topic	Hours			Teaching methods/ multimedia	Instructor
		Lecture	Laboratory	Self-study		
25 Aug	Introduction of course discipline and class orientation. What is Modelling? What is simulation?	2	0	4	Active lecture	Assoc. Prof. Wannapong Triampo
1 Sep	What is Modelling? What is simulation?	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
8 Sep	Real world vs. model world	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
15 Sep	Real world vs. model world	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
22 Sep	Continuous, and discrete models	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
29 Sep	Continuous, and discrete models.	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
6 Oct	Computational simulation	2	0	4	Group discussion Active lecture	Assoc. Prof. Wannapong Triampo
13 Oct	Computational simulation	2	0	4	Project based learning	Assoc. Prof. Wannapong Triampo
20 Oct	Midterm examination					
27 Oct (to be made up)	Computational simulation	2	0	4	Project based learning	Assoc. Prof. Wannapong Triampo
3 Nov.	Monte Carlo method	2	0	4	Active Lecture, Game-based	Assoc. Prof. Wannapong

Week	Topic	Hours			Teaching	Instructor
					learning	Triampo
10 Nov.	Monte Carlo method	2	0	4	Active Lecture, Game-based learning	Assoc. Prof. Wannapong Triampo
17 Nov	Numerical methods	2	0	4	Active Lecture, Group discussion	Assoc. Prof. Wannapong Triampo
24 Nov	Numerical methods & visualization	2	0	4	Active Lecture, Group discussion Project based learning	Assoc. Prof. Wannapong Triampo
1 Dec.	Analyses of simulation results.	2	0	4	Active Lecture	Assoc. Prof. Wannapong Triampo
8 Dec.	Analyses of simulation results.	2	0	4	Active Lecture, Project-based learning	Assoc. Prof. Wannapong Triampo
15 Dec	Final examination					
	Total hours	30	0	60		