

# EMIS 7361

## Computer Simulation Techniques

### Class Syllabus

George Spiride

# Presentation outline

---

- Logistics
  - Class syllabus
- Introduction to Computer Simulation
- Systems/Models/Computer Simulation
- Simulation Illustration
- Simio terminology
- Homework 1

# Instructor information

- Instructor: Dr. George Spiride

- Address:

- Department of Engineering Management, Information and Systems
    - Southern Methodist University
    - 6425 Ownby Drive, Room 356
    - Dallas, TX 75205
    - Phone: 214-768-1100
    - Fax: 214-768-1112

- Email: [gspiride@lyle.smu.edu](mailto:gspiride@lyle.smu.edu)

- Phone: (972) 672 3524

# Basic information

---

- Course days  
Tue/Thu 5pm-7:10 Junkins 101  
SMU campus
- Office hours  
After class  
By appointment

# Syllabus

- Textbook (Required):

- David Kelton, Jeffrey S. Smith, David T. Sturrock:  
"Simio & Simulation: Modeling, Analysis, Applications"  
ISBN-10: 1492116424
- Simio software – low cost student edition  
(download from [simio.com](http://simio.com))

- Textbook (Reference, not Required)

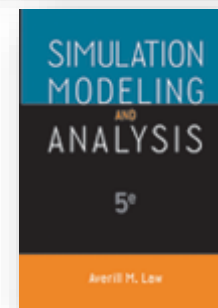
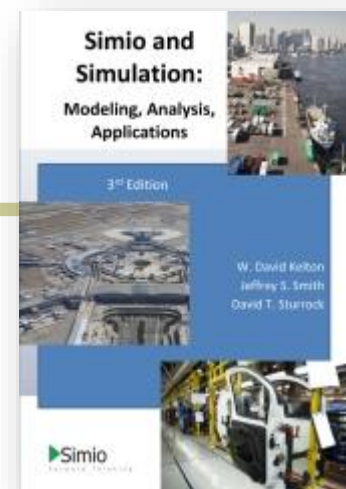
- Averill Law, *Simulation Modeling and Analysis*, Fifth Edition  
McGraw-Hill, 2015, 804 pages

- Course description

- Introduction to the modeling and analysis of discrete systems using simulation. Emphasizes model construction and the use of a simulation environment for hands on modeling.

- Prerequisites:

- Some programming ability
- Introduction to probability or statistics.



# Syllabus – continued

- **Course goals**

- Gain an understanding of basic simulation and modeling techniques
- Hands-on utilization of simulation software to build and analyze various types of simulation models
- Familiarization with using simulation as a problem-solving tool
- Understand basic rules for designing a simulation experiment and how to analyze results of simulation runs.
- Successfully apply simulation and modeling techniques learned in class to investigate design choices or recommendations that would result in productivity gains for an organization

# Syllabus – continued

	<	LetterGrade	>=
• Class interaction	100%	<b>A</b>	97%
– Group projects – 3 projects	97%	<b>A-</b>	94%
• Results presented and discussed in class	94%	<b>B+</b>	89%
• Audience provides feedback to presenters	89%	<b>B</b>	84%
– Homework – 6 sets overall	84%	<b>B-</b>	79%
• Exams	79%	<b>C+</b>	74%
– Midterm	74%	<b>C</b>	69%
– Final exam	69%	<b>C-</b>	64%
• Grading	64%	<b>D+</b>	59%
– 20% Midterm	59%	<b>D</b>	54%
– 20% Final exam	54%	<b>D-</b>	49%
– 30% Homeworks	49%	<b>F</b>	0%
– 30% Projects			
• Notify me in advance if you must miss an exam or cannot meet the deadline for projects or homeworks. No exam/hw/project make-up is accepted without prior approval.			

# Syllabus -- continued

---

- Department Contact:
  - *Department Chair*: Sila Cetinkaya,
    - Phone: 214-768-1772
    - E-mail: [sila@lyle.smu.edu](mailto:sila@lyle.smu.edu)
  - *Administrative Assistant*: Tammy Sherwood,
    - Phone: 214-768-1100
    - Email: [tsherwoo@lyle.smu.edu](mailto:tsherwoo@lyle.smu.edu)



# Syllabus -- continued

- **Disability Accommodations:**
  - Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or visit <http://www.smu.edu/alec/dass.asp> to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements.
- **Religious Observance:**
  - Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)
- **Excused Absences for University Extracurricular Activities:**
  - Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)
- **Attendance**
  - Will monitor attendance for undergraduate students

# Syllabus -- continued

- Additional information
  - Case studies and additional material will be used.
  - Grade contests/questions
    - Tests/Homework – contact the instructor ASAP
  - I expect that any sources or additional material used to answer homework questions will be cited appropriately.
  - Certain assignments will require you to work as a group. You've probably used this setting before in other classes
  - Group projects results are summarized in presentation format which is then delivered in class. A portion of the class participation grade is directly linked to these presentations
- Plan to use Canvas to distribute lecture note and general content management
  - Canvas password now is the same as your Access.SMU password
  - Let me know if you have difficulties in accessing lecture notes

# Online Lecture Access

- Online download will be the primary media delivery method.
  - DVD will only be available as an option for those with extreme difficulty on a case by case basis.
  - Most lectures will be available for students to download the same day (at the end of the day).
- Please use this delivery mechanism and let me know if you have any issues.
- Recommendations for in-class students:
  - Please put cell phones away from the desk or turn it off during the lecture.
  - This includes *Text messaging* and *vibrate mode* as it interferes with the sound systems.

# Syllabus -- continued

- Distance education students
  - Homework assignments follow the same schedule as in-class students, unless otherwise noted
  - Schedule exams for the same date as in-class students.
  - Please plan in advance for the exam dates given in the syllabus.
  - If your site offers a facility for taking a proctored exam, it is your responsibility to make the necessary arrangements so it can be used.

# Questions

---

- Do you have any questions

# Outline

---

- What is Simulation?
- Why Simulate?
- Simulate What?
- Systems/Models/Computer Simulation
- Simulation Illustration
- Simio terminology
- Homework 1