

IE 1081—OPERATIONS RESEARCH

Fall 2020

Instructor:	Shan Gong	Time:	Thursdays 8:15am - 11:00am
Email:	shan.gong@scupi.cn	Place:	Rm 4-216
Office:	Rm 4-221		

Course Pages:

- <https://learn.scupi.cn/>

Office Hours:

- Tuesdays & Wednesdays: 3:00 PM – 5:00 PM
- By appointment via Email
- Online via QQ Group: 922789850

Teaching Assistant:

- Victoria Wu
- Contact: 2017141523006@stu.scu.edu.cn
- If you have any question regarding to homework, please contact TA within one week after the homework is returned to you.

Course Description

Operations Research helps in solving problems in different environment that needs decisions. Topics include linear programming, simplex method, duality theory, assignment and transportation problems, network flow problems, linear integer programming, and nonlinear programming. Analytic techniques will be used to solve problems facing business managers in decision environments. 3 Credit Hours.

Prerequisites:

- MATH 0240, MATH 0280, IE 1070

Course Objectives

1. To acquaint students with analytical/OR modeling techniques, and modeling & solution software that can be used to support various optimal decision making.
2. To give students experience in building models, deriving solutions and analyzing results through some case studies and assigned homework exercises.

Applicable ABET Outcomes

1. An ability to apply knowledge of mathematics, science and engineering
2. An ability to analyze and interpret data

3. An ability to identify, formulate and solve engineering problems
4. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Textbook

- Hillier, F.S. and Lieberman, G.J. (2015, 10th Edition), *Introduction to Operations Research*, McGraw-Hill Education, New York, New York, USA.

Assessments

Homework:	30%
Midterm Examination:	30%
Final Examination:	40%
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	100%

Grade

Score	Letter Grade
90.00 – 100.00	A
85.00 – 89.99	A-
80.00 – 84.99	B+
76.00 – 79.99	B
73.00 – 75.99	B-
70.00 – 72.99	C+
66.00 – 69.99	C
63.00 – 65.99	C-
61.00 – 62.99	D+
60.00 – 60.99	D
0.00 – 59.99	F

Class Policy

- Regular attendance is essential and expected.
- Important dates and plans will be announced during class.

Homework and Other Assignments

Homework problems and other assignments will be assigned periodically and are due as stated. Late submission **WILL NOT** be accepted. Submissions must be done on **A4 papers** and **stapled** together at the top left-hand corner. **Students' names and ID numbers** must be listed on the first page.

Exams

There will be two exams (one Midterm and one Final), all are **CLOSED BOOK, CLOSED NOTES, CLOSED COMPUTER**. Students can bring **one** A4 page note and it must be **hand-written** on **two sides** of the paper. It cannot be a photocopy. If you must miss an exam, you **MUST** make alternative arrangements with the instructor before the exam is given. If you miss an exam without prior notification, you will receive a score of **“ZERO”** for that exam except under extenuating circumstances.

Make-Up Exams

Students who have not taken either the midterm or the final exam are **NOT** eligible to take the make-up exam. Make-up exams can only be taken by students who have attained between 50.00% and 59.99% (out of 100%) of the total score. Only 75% of the make-up exam grade can be used to **replace** the final exam grade. Students taking make-up exams can only attain at most a **“D”** grade.

Avoiding Plagiarism

1. Unacknowledged direct copying from the work of another person, or the close paraphrasing of somebody else's work, is called **plagiarism** and is a serious offence, equated with cheating in examinations. This applies to copying both from other students' work and from published sources such as books, reports or journal articles.
2. Paraphrasing, when the original statement is still identifiable and has also no acknowledgement, is plagiarism. A close paraphrase of another person's work must have an acknowledgement to the source. It is not acceptable for you to put together Unacknowledged passages from the same or from different sources linking these together with a few words or sentences of your own and changing a few words from the original text: this is regarded as over-dependence on other sources, which is a form of plagiarism.