

UC Davis  
Graduate School of Management

**MGT 206**  
**Decision Making and Management Science**

Spring 2015

**Instructor:** Elisabeth Finhold

**Lectures:** Classes meet on Thursdays (April 2 – June 11), 12:10 – 3:00 pm

**Room:** GH-2310

**Text:** *Introduction to Management Science*, Fifth Edition, Hillier and Hillier, McGraw-Hill Irwin.

**Course Description:** The course aims at developing decision-making and problem-solving skills, taking a quantitative modeling approach. Spreadsheets are introduced as the primary tool for implementing and analysing the models. Topics include an introduction to optimization (linear programming and non-linear programming, integer linear programming and networks), sensitivity analysis, decision analysis, project management and simulations.

Students should understand how optimization and simulation are used in the process of making decisions. In particular, they should acquire practical skills through active problem-solving in Excel.

**Grading:** Grades will be based on assigned homework, a group project, a mid-term exam and a final exam. Late homework will receive half credit.

## Schedule

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| Date    | Topic                          | Chapter |
|---------|--------------------------------|---------|
| Apr 2   | Modeling Optimization Problems | 1,2,3,4 |
| Apr 9   | Linear Optimization            | 2,3     |
| Apr 16  | Sensitivity Analysis           | 5       |
| Apr 23  | Discrete Optimization          | 7       |
| Apr 30  | Network Optimization           | 6       |
| May 7   | Non-linear Optimization        | 8       |
| May 14  | Mid-Term & Decision Analysis   | 9       |
| May 21  | PERT/CPM                       | 16      |
| May 28  | Simulation                     | 12      |
| June 4  | Team Presentations             |         |
| June 11 | Final Exam                     |         |

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