

Title (Units): SCI7540 NETWORK AND PROJECT MANAGEMENT (2,2,0)

Syllabus Reviewed by: Michael Ng

Prerequisite and Co-requisite: None

Objectives: This subject introduces the fundamental idea, techniques and algorithms for network, transportation, and assignment models, as well as project management.

Calendar Description: This subject introduces the fundamental idea, techniques and algorithms for network, transportation, and assignment models, as well as project management.

References:

- 1) Introduction to Operations Research, by F. S. Hillier and G. J. Lieberman, McGraw Hill 2005, eighth edition.
- 2) Operations Research, an introduction, by H. A. Taha, Prentice Hall, 2003, sixth edition.
- 3) Operations Research: applications and algorithms, by W. L. Winston, Thomson Brooks/Cole, 2004, fourth edition.

Assessment: Continuous assessment (%) and Final examination (%)

Subject Content in Outline:

- A. Network Models (14 hours of teaching)
 - A. Shortest route problems
 - B. Minimum spanning tree problem
 - C. Maximum flow problems

- II. Transportation and Assignment Models (6 hours of teaching)
 - A. Transportation problems
 - B. Transportation simplex methods
 - C. Assignment problems
 - D. Hungarian algorithm

- III. Project Management (8 hours of teaching)
 - A. Critical Path Method
 - B. Time-cost trade-off
 - C. Project Evaluation and Review Techniques