**IE 450 PROJECT PLANNING AND MANAGEMENT**
**2017-2018 Fall**

**Instructor:** Halil POSACI
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**Office Hours:** On demand

**Mission of the Course**
The mission of this course is to introduce the quantitative aspects of the body of knowledge in project management. Emphasis is given to implement quantitative techniques already acquired in other courses. An overview of project management process is provided. Project selection models are covered. Deterministic and stochastic project scheduling methods are investigated. Resource constrained project scheduling methods are covered. Cash flow analysis, financial modelling and progress and cost control of projects are studied together with uncertainty and risk analysis. Real life applications from various sectors will be presented to support in-class instruction.

**Grading**
| | |
|---|---|
| Participation | 5% |
| Team Projects | 30 % |
| Midterm Exam | 30 % |
| Final Exam | 35 % |

**Attendance and Participation**
Attendance will be taken during the lectures, but will not be graded. Participation into discussions in class is expected and will be taken into account in grading. Also workshops and assignments will be taken into consideration.

**Team Projects**
In Team Projects you will be solving project scheduling problems as a team of 5. MS Project software will be employed.
1.  Define multi-disciplinary groups of 3-5 students in 2 weeks
    a.  Teams should be of the same section.
    b.  There should be at least one IE, EEE, ESE in your group
    c.  Each group should be able to bring at least one computer to the class
2.  Install MS Project on your (or project team) computer(s).
    https://e5.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?ws=44b496ae-799b-e011-969d-0030487d8897&vsro=8
    (See Res. Asst. Caner Kıvanç Hekimoğlu for license)
3.  Define your own Project (a realistic or imaginary project)
4.  Start working on your project in MS Project lab sessions

**Disclaimer:**
The instructors reserve the right, when necessary, to alter the grading policy, change examination dates, and modify the syllabus and course content. Modifications will be announced on Lectures. Students are responsible for the announced changes.

**Weekly Program:**

| Week | Topics |
|------|--------|
| 1 | **Introduction to Project Management (PM)**<br>Discussion of Syllabus<br>What is Project? Why Project Management?<br>Project Life Cycle, the Project Manager. An overview of overall Project Management. PM in practice, some examples |
| 2 | **Introduction to Project Management (PM)**<br>Project Organization: Structure and Culture Defining Projects: Project Scope, Priorities, WBS<br>**(Defining student project groups)** |
| 3 | **Project Selection**<br>Economic analysis of projects (Net Present Value Analysis, Rate of Return, Payback) |
| 4 | **Project Planning & Modelling**<br>Terminology, Gantt Charts, Project Network Representation (AoA, AoN), Generalized Precedence Relationships (GPRs), |
| 5 | **Project Scheduling**<br>Critical Path Analysis CPM  (deterministic) and Applications with MS Project |
| 6 | **Project Scheduling cont.**<br>Critical Path Analysis PERT (probabilistic) and Applications with MS Project |
| 7 | **Project Scheduling cont. (MIDTERM WEEK)**<br>General Precedence Relationships (GPRs) and REVIEW |
| 8 | **Project Scheduling cont.**<br>Time-Cost Trade-offs (Reducing the project duration, Crashing) |
| 9 | **Project Scheduling cont.**<br>Resource Constrained Project Scheduling and Applications with MS Project |
| 10 | **Project Scheduling cont.**<br>Resource Leveling and Applications with MS Project |
| 11 | **Project Implementation and Control**<br>Progress and Performance Measurement and Evaluation: Project Control Process. Applications with MS |
| 12 | **Group Project Presentations** |
| 13 | **Group Project Presentations** |
| 14 | **Review Lecture** |

**Recommended Textbook:**

- Jack R. Meredith, Samuel J. Mantel, Project Management A Managerial Approach, Wiley
- Shtub, J. F. Bard, S. Globerson, Project Management: Processes, Methodologies, and Economics, Pearson Prentice Hall, Upper Saddle River, 2005.
- H. Kerzner, Project Management: A Systems Approach to Planning, Scheduling and Controlling, Wiley, New York, online 2013.
- PMBOK Guide V.6, Project Management Institute (PMI.org(.tr))
- Microsoft Project 2013-2016, Paul E. Harris