The principles of project management, largely developed and tested on engineering projects, are being successfully applied to projects of all sizes and types within the business world. Furthermore, the role of project management in a cross section of applications such as information technology, product development, and construction is now emphasized. This course addresses the fundamental principles of project management, and the tools and techniques at our disposal to help achieve our goals. Topics covered include: project definition and start up; project attribute estimation; planning and scheduling; resource selection and allocation, implementation; post-project evaluation; project management as a career; skills and knowledge required by professionals, including decision-making and resource allocation appropriate to project phases; integration with other disciplines, including accounting and finance. The Microsoft Project software tool will be introduced for project scheduling and management.

**Course Objective**

This course deals with the decisions and actions related to planning, organizing, leading, and controlling programs and projects. Students are expected to gain a comprehensive understanding of:

- Strategy, organization and leadership in managing projects:
- Processes, methods & systems used to plan, schedule and monitor projects
- The application of these project management tools and techniques in a diversity of fields such as new product and process development, construction, information technology, health care, and applied research.

Learning will be through lectures, project/case studies, and written and oral reports by student groups on project management approaches and issues. Upon successful completion of this course, the student will have the necessary knowledge to:

- Assist the Project Officer assigned to a project in developing a project plan, scheduling activities, tracking progress, preparing status reports and managing changes.
• Perform the duties of a project analyst trainee in a corporate Project Management Office.

• Plan and manage a small project as project manager.

**Course Materials**


• **Supplementary Reading List**:


• **Project Management Glossary**: Students can quickly find the definitions of concepts in Project Management from the following resources:


  **Note**: Microsoft Project Professional 2007 (Trial Edition) is included on the CD-ROM in the back of textbook. The trial period (120 days) is long enough to use the product during the class period. One may notice that only Microsoft Project Professional 2003 was installed in our lab; this mismatches the trial version that you may use after classes. Since the two versions have no big difference, the mismatch should not largely impact your learning. Nevertheless, I strongly encourage you to use a computer provided by Lingnan University in library or a lab.

**Mark Distribution**

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<tr>
<td>Class Participation</td>
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<tr>
<td>“Conveyor Belt Project” MS Project Assignment</td>
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<td>Course Project/Case</td>
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<td>Final Exam</td>
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“Conveyor Belt Project” MS Project Assignment

This assignment is designed to reinforce the project management process concepts presented in the lectures. The students will use Microsoft Project to complete each of the first five parts to the overall Conveyor Belt Project assignment (provided by the textbook in Appendix 2 on pp. 558 – 564).

The five parts of this project exercise are described in the textbook. Mark distribution for the five parts is scheduled as follows:

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Each Part will be assigned as a separate take-home assignment as indicated in the Section—Course Outline (Tentative). Each student has at least one week to complete his/her response for each part.

Project and Group Presentation

Each student will participate in one group which will be formed by the students rather than the instructor. Each group is managed by a leader who is selected by the group members. The leader is expected to report the member list and send the project report and presentation slides to the instructor. The group presentation is expected to take place in the last three classes. Each group is responsible to select a project topic from the project book [8] and other books in references, or any other suitable source (e.g., Internet [see “Some Internet Project Resources” below]).

Some Internet Project Resources


Course Schedule (Tentative)

Introduction to Project Management

- **Jan. 23 & 25:** Chapters 1 and 2.
  - Introduction: Modern Project Management; Organization Strategy and Project Selection; Portfolio management.
Project Planning & Scheduling

- **Feb. 15 & 20**: Chapters 4 and 5.
  - Estimating Project Time and Costs (I): Guidelines for time, costs and resources;
  - Applications of MS Project Professional 2003.

- **Feb. 22 & 27**: Chapters 5 and 6.
  - Project Plan: Project network (AOA vs. AON); Critical Path Method (CPM); Lag relationship.
  - Applications of MS Project Professional 2003.
  - Lab session (on Feb. 27): Project construction with lag relations.
  - MS Project Assignment I: Conveyor Belt—Part 1.

- **Feb. 29 & Mar. 5**: Chapter 7 and Appendix 7.1.
  - Risk Management: Identification, assessment; Responses; Contingency planning, Funding and Time buffers; PERT.

- **Mar. 7, 12 & 14**: Chapter 8.
  - Scheduling Resources: Project constraints, Allocation; Resource-constraint scheduling; Critical-chain approach.
  - MS Project Assignment II: Conveyor Belt—Part 2.

- **Mar. 19, 26 & 28**: Chapter 9.
  - Reducing Project Duration: Rationale and options; Project cost-duration graph; Constructing cost–duration graph; Cost vs. Time.
  - Applications of MS Project Professional 2003.
  - MS Project Assignment III: Conveyor Belt—Part 3.
• **Apr. 2, 9, 11 & 16:** Chapter 13.
  
  – Progress and Performance Measurement and Evaluation: Project control process; Monitoring time performance; Integrated information system; Status report and Monitor progress; Earned-value analysis.
  
  – Applications of MS Project Professional 2003.
  
  – Formation of student groups for project study.
  

• **Apr. 18 & 23:** Chapter 10.

  – Leadership: Managing vs. Leading a project; Social network building; Ethics and project management; Qualities of effective project manager.
  
  – MS Project Assignment V: Conveyor Belt—Part 5.
  
  – Presentation slides and project report is due on April 25.

• **Apr. 25, 30 & May 2:** Group Presentations.

• **Final Examination** (TBA).

**References**


