• What is Project Management?
## Engineering Economics

- Money, interest rate, growth
- Cash flow, financial statement
- Risk and uncertainty
- Industry and product life cycles
- Macroeconomics
Engineering Economics

- Microeconomics
- Entrepreneurship
- Tax consideration
- Sensitivity and scenario
- Project management
Project Management

• Time Management?
  • Work to do Sunday evening:
    • Laundry Resource Management
    • Study for test Risk Management
    • Cook and eat dinner
    • Call Mom for her birthday

• Individual and Group
Project Management Issues

- Planning
  - Resource and risk management
- Budgeting (forecasting)
  - Labour and material
- Decision making
  - Alternatives and milestones
- Quality control and certification
  - ISO 9001; CSA
Labour, Equipment and Material Cost

- **Labour:**
  - Wages
  - Salaries
  - Fringe Benefits
  - Learning Curve

- **Equipment:**
  - Capital Cost
  - Operating Costs
  - Buy or Rent

- **Material:**
  - Current
  - Future
## Forecasting with Data

- Graphing, Statistics
- Regression / Curve Fitting
- Correlation
- Time Series Data
  - Moving Average, Smoothing
- Cost Indexes:
  - Consumer Price Index (CPI)
## International Project Issues

- Import Duty
- Taxation
- Measurement unit
- Exchange rate
- Contingency!!!
<table>
<thead>
<tr>
<th>Project Management Tools</th>
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<tbody>
<tr>
<td>• PERT</td>
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<td>• GANTT</td>
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<td>• MS Project</td>
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<td>• CMM</td>
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<td>• Capability Maturity Model</td>
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<td>• Software Development Process</td>
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Microsoft Project

• Project Management tool version 2013
Microsoft Project Visual

Define the Project

Enter project information

This wizard helps you get started with your project.

Enter the estimated date your project will begin:

1/1/2000

Step 1 of 3

Save and go to Step 2

Task Name | Duration | Start
---|---|---
New Product Development Test | 765 days | Mon 1/3/00
Initial New Product Screen | 9 days | Mon 1/3/00
New product opportunity idea | 0 days | Mon 1/3/00
Describe new product idea | 2 days | Mon 1/3/00
Gather information required for new product | 6 days | Wed 1/5/00
Convene opportunity of screen | 1 day | Thu 1/13/00
Decision point - go/no go to | 0 days | Thu 1/13/00
Preliminary Investigation Start | 53 days | Fri 1/14/00
Assign resources to preliminary investigation | 1 day | Fri 1/14/00
Develop preliminary investigation | 5 days | Mon 1/17/00
Evaluate the market | 10 days | Mon 1/17/00
Analyze the competition | 5 days | Mon 1/17/00
Technical Feasibility Analysis | 20 days | Mon 1/24/00
Produce lab scale product | 10 days | Mon 1/24/00
Evaluate internal product | 5 days | Mon 2/7/00
## Project Planning Process

1. Set project start date
2. Set project completion date
3. Identify interim & external milestones
4. List tasks in time sequence order
5. Estimate personnel/resources for each task
6. Determine skill level for each task
7. Determine task dependencies: || or --
8. Determine control and review points
9. Estimate project resource requirements and cost
Project Work Log

Team Number: _______________________

Team Name: _______________________

Work Log Period (dates): _______________________

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<thead>
<tr>
<th>Member Name</th>
<th>Tasks Performed</th>
<th>Hours Spent</th>
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We agree with the information provided here regarding the work performed over the two-week period.

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<th>Signature</th>
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University of Victoria

399 Design/Technical Project I
Project Management