

**PROJECT MANAGEMENT IOM455  
SESSION 2  
INTRODUCTION, JANUARY 13, 2010**

**OUTLINE**

- **Questions?**
- **Take roll**
- **Homework – using the assignment manager**
- **Course outline**
- **Projects**

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**Course Outline**

- **Introduction**
- **Project Manager**
- **Organizations**
- **Planning**
- **Budgeting**
- **Scheduling**
- **Resources**
- **Control and Audit**
- **Termination**

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**What is a project?**

- **A temporary endeavor undertaken to create a unique product or service (Project Management Institute)**
- **Attributes:**
  - **Temporary**
  - **Unique**
  - **Done progressively in coordinated steps**
  - **Controlled resources**
  - **Specific Purpose**
  - **Subject to external forces**
- **Examples:**
  - **Develop the Atom Bomb**
  - **Land a man on the moon**
  - **Reduce the cost a printed circuit board**
  - **Install a new garage door in your home**
  - **Destroy German dams in WWII**
  - **Landscape our Sherman Oaks Home**
  - **Plan your wedding**

## Examples of external forces

- **Societal forces**
- **Political forces**
- **Economic forces**
- **Goals of the organization**
- **Personal goals**
- **Contractor's goals**
- **Client's goals**

## **Examples of Roles and Experiences**

- **Working Engineer, Sole contributor – Casting Process for disk read/write head (One year)**
- **Working Engineer, Large development team – Electrical connector for the First transistorized mainframe computer at Burroughs (now Unisys) (2 years)**
- **Working Engineer, 4 person team - connection scheme for a thin film memory (One year)**
- **Working Engineer, main contributor, small team within a large team – cooling system for a mainframe computer (also dissertation) (3 years)**
- **Project manager, small team – Electronic Backpanel for a telephone system (14 weeks)**
- **Unit manager, across departments – MRP software installation (3 months)**

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**Examples of Roles and Experiences (continued)**

- **Working Engineer, sole contributor – writing software for digital plotter (One year)**
- **Researcher, small team – develop new method of making copies (3 years)**
- **Project manager, small team – basic research – electron attachment to dielectrics (3 years)**
- **Project manager, matrix team – acquire new technology (Surface mounted devices) (3 years)**
- **Project manager, sole contributor – consolidation of machine shops in four factories (6 months)**
- **Consultant and developer – MRP system for small company (2 years)**

## What is Project Management?

- “..the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project.” (PMBOK Guide)

## Constraints

- **Three simultaneous constraints that tend to work against each other:**
  - **Budget**
  - **Specification**
  - **Schedule**

## Phases, or life cycle, of a project

- The phases of a project overlap in time
  - Concept
  - Planning
  - Execution
  - Control
  - Termination

## **Which projects get done?**

- **Very necessary ones**
  - **San Francisco Bay Bridge after the earthquake (1989)**
  - **Broken water line to a home (2 years and 30 years ago)**
- **Survivors of filtering processes**
  - **High rate of return**
  - **High powered supporter (the consolidation of machine shops)**
  - **Well suited to other goals**
- **Ones that satisfy a need**
  - **Market demand**
  - **Customer's request**
  - **Technological advance**
  - **Legal requirement**
  - **Social need**

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**Structure of the course**

- **Follows the life cycle of a project**
- **More or less follows the structure of the text**
- **Covers tools and methods as they are required**
- **This course, as all others, has all the earmarks of a project:**
  - **A beginning and an end (01/11/10 – 05/07/10)**
  - **Objectives**
    - » **To learn specific things**
    - » **To earn credits for a class**
    - » **To fulfill a contractual obligation (teach the class)**
  - **Budget (time of students, instructor)**
  - **Unique (to this set of instructor, students, semester)**

avg .8

Std dev = .125

Strategic Management and Selection

- Project Selection Models
  - Non-numerical
  - Numerical
    - Payback Period
    - Average rate of return
    - Discounted cash flow
    - Weighted Scoring models
- Risk Analysis and simulation
- Definitions dealing with attributes of data
- Project portfolio Process

2010 \$1 = \$ .78  
 2012 \$1 = .5  
 .9  
 .7  
 .8

Establish MARR  
minimum attractive  
Rate of Return  
20% to 30%