

**Course Number:** CIS 265

**Course Title:** Software Project Management

**Number of Units:** 4

**Schedule:** Three hours of lecture and one hour of discussion per week.

**Prerequisite:** CIS 260

### **Catalog Description**

Methods and procedures for managing a software development project. Includes notions of project planning; time, cost and resource estimation; project organizational types, staffing (team assembly) and training considerations, leading and motivating computer personnel, and methods for monitoring and controlling the progress of a project. Quality management and risk assessment are considered. Case Studies of successes and failures will be studied.

### **Expanded Description**

1. Software Development Contracts and Other Legal Issues
2. Variations on a Waterfall Theme
3. Project Teams
4. Principles of Managing Software Engineers
5. Large Projects
6. Software Project Management in a Client/Server Environment
7. Project Management Methodologies
8. Project Support Functions
9. Software Development Standards
10. Project Scheduling
11. Test Planning
12. Estimates
13. Education
14. Managing Risks
15. Managing Problems

### **Course Objectives and Role in Program**

This course will view software engineering activities from a management perspective centering on the software development process. We will view the process in terms of its constituent tasks, focusing on the flow of information and interconnection between tasks. Our approach is in contrast to the traditional software engineering course (such as the prerequisite for this course) that focuses on the techniques employed to accomplish technical activities. We will also consider social and environmental factor. The knowledge of software project management plays an important role in almost all software development projects (including practicum and Masters project) students develop for courses in the program.

### **Learning Outcomes**

At the end of this course students will

- Be familiar with terminology used in this topical area

- Have read and analyzed important historical and current literature addressing software project management
- Be able to construct and represent a software life cycle for an organization or project
- Understand factors that contribute to successful project management
- Be able to plan a software development project
- Be able to recommend an effective project organizational strategy for a specific development project
- Be able to effectively monitor a software development project
- Be able to perform a software project risk assessment
- Understand the relationships between software development activities / organizations and other activities / organizations within the enterprise
- Understand social and environmental factors that contribute to or hinder software development activities.

### **Method of Evaluation**

Student learning will be evaluated on the basis of

- Completeness and quality of a term project developed in several stages.
- Grade on midterm examination
- Grade on final examination
- Class participation.

The weight assigned to each element of evaluation will be determined by the instructor of the course on the first day of the class.

### **Required Textbook**

- *“On Time Within Budget: Software Project Management Practices and Techniques”*, 3<sup>rd</sup> edition, by E. M. Bennatan, Wiley, 2000
- Journal articles of historical or current importance and other material will be provided by the instructor

### **Recommended References**

- *“Software Engineering Project Management”*, by Richard H. Thayer (Editor), Winston W. Royce, Edward Yourdon, IEEE Computer Society, 1997
- *“Project Management : Best Practices for IT Professionals”*, by Richard Murch, Prentice Hall PTR, 2000
- *“Productive Objects: An Applied Software Project Management Framework”*, by R.J. Muller, Morgan-Kaufmann Publishers, 1997.
- *“Project Management: A Systems Approach to Planning, Scheduling and Controlling”*, by H. Kersner, Van Nostrand Reinhold, 1997

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