Fall 2012

CEG 4110/6110-01: Introduction to Software Computer Engineering

Nikolaos Bourbakis

Wright State University - Main Campus, nikolaos.bourbakis@wright.edu

Follow this and additional works at: http://corescholar.libraries.wright.edu/cecs_syllabi

Part of the Computer Engineering Commons, and the Computer Sciences Commons

Repository Citation

http://corescholar.libraries.wright.edu/cecs_syllabi/876
Introduction to Software Engineering

Fall Semester, 2012, CSE Dept.

Instructor:

Office: 477 Joshi Engineering Center
Office Hours: T-R 12:00-1:00 or by appointment.
Office Phone: 775-5015
Email: nikolaos.bourbakis@wright.edu

Class Hours: T R 6:30—7:50 P.M., Biological Science, Room 103.

Course Description
This course is concerned with the techniques of designing and constructing large programs. Some of the required basic concepts necessarily have to be developed using small programs as examples. To this extent, we also study programming-in-the-small. The overall objectives are to present an overview of issues in the development of software, to discuss terminology, to illustrate via example case studies, and to give sufficiently detailed advice on how to develop quality software and present a way of communication via UML. Hands-on experience is emphasized through the use of homework and a class project.

Project emphasis is on team-work
• Participate in collaborative design
• Work as a member of a project team
  – If your team falls apart, grades will suffer
• Create and follow a project and test plan
• Create the full range of documents associated with a software product
• Complete a project on time

Project Preliminaries
• Turn in next Tuesday (Sept 6th):
  • 5 names
  • Language of choice (can change later)
    – Should be OO: Java, C++, etc.
    – Must run at WSU (e.g. Unix or PC)

Objectives of the Class
• Appreciate Software Engineering:
  – Build complex software systems in the context of frequent change
• Understand how to produce high quality software within time limits, while dealing with complexity and change
• Acquire managerial knowledge
  – Understand the Software Lifecycle
• Process vs. Product
• Learn about different software lifecycles
• Acquire technical knowledge (main emphasis)

**Tentative Schedule**

- **Introduction**  
  Ch 1
- **Software Lifecycles**  
  Ch 2, Ch 3
- **Requirements**  
  Ch 10
- **Ethics, Project**  
  Ch 1 (1.11)
- **UML, Analysis**  
  Ch 15, Ch 11
- **Object Design**  
  Ch 12
- **Catch up; review**  
  Ch 10-12, 13
- **Implementation**  
  Ch 13 (13.1-13.4)
- **Testing**  
  Ch 6, Ch 13 (13.6-13.11)
- **Structured Analysis**  
  /Design Handouts
- **Maintenance**  
  Ch 14
- **Design Patterns**  
  Ch 14, Ch 8,

**In class midterms**  
1st Oct, and 2nd Nov 2012

**Beginning of the WORKSHOP Project**

**Final**

**Grading**

Grading will be as follows:

- **Homework**  
  10 (1 major homework)
- **Project**  
  40 workshop style
- **Midterms**  
  20
- **Final Exam**  
  30 Presentation + Written Report

*Course grades will be based on the total score as follows. A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: below 60. Grades may be further curved if appropriate.*