

IT4490 - SOFTWARE DESIGN AND CONSTRUCTION

0. INTRODUCTION TO COURSE

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2

Main topics

- Software Development Process
- Object-Oriented Analysis and Design
- Modular Design Principles
- Design Patterns
- Automation Unit Testing
- Techniques for Effective Programming

3

Programming language/tools

- Software design tool: Astah
 - Free for students
- Programming language: Java
- IDE: Eclipse
- Version control: Bitbucket
- Test framework: JUnit
- Architectural model / pattern: 3 tiers / MVC



4

Assessment

- Mid-term score: 40%
 - Homework/Project
 - Work in groups, but individual score
 - Reward or Punish
 - Quizzes/Exercises/Attendance at class: ± 1
- Final score: 60%
 - Exam

5

Text books

- [SW-Design] D. Budgen. *Software Design, 2nd Edition*. Addison-Wesley. 2004.
- [OO-Design] Cay Horstmann. *Object-Oriented Design and Patterns*. John Wiley & Sons, Inc. 2006
- [PRAG-Prog] Andrew Hunt and David Thomas. *The Pragmatic Programmer*. Addison-Wesley, 2000.
- [JAVA-Eff] Joshua Bloch. *Effective Java, 2nd ed.* Addison-Wesley, 2008
- [TESTING] Boris Beizer. *Software Testing Techniques*, 2nd Edition. International Thomson Computer Press

6

Course Materials

- Lecture notes for students (pdf): Slides in 4-page handouts
- Assignments
- Project descriptions
- Announcements...
- Interaction channels:
 - Facebook group
 - <https://bitbucket.org/account>
 - Add to your project member: trangntt-student

7

Naming convention

- Naming your project and description
 - FacebookGroup-GroupNo
 - Example: TKXDPM.20181-02
- Monitor?

8

What is the real software to be built?

