IT4490 - SOFTWARE DESIGN AND CONSTRUCTION

0. INTRODUCTION TO COURSE

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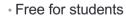trangntt@soict.hust.edu.vn

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Main topics

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

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

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

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

Course Materials

- Lecture notes for students (pdf): Slides in 4-page handouts
- Assignments
- Project descriptions
- Announcements…
- Interaction channels:
  - Facebook group
    - https://facebook.com/groups/tkxdpm.20191
  - https://bitbucket.org/account
    - Add to your project member: trangntt-student

Naming convention

- Naming your project and description
  - FacebookGroup-GroupNo
  - Example: TKXDPM.20191-02

- Monitor?

What is the real software to be built?