CSC407S / 2103S
ECE450S
Software Architecture & Design
(ECE: Software Engineering II)

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Office hours: Thursdays 10:00 – 11:30
(or by appointment)

My Qualifications

• B.Sc. / M.Sc. / Ph.D. in CS (UofT)
  – Specializing in Software Engineering
    • Visual Architecture Description Languages
  – Major projects: MiniTunis, OOT, Polyx,
    CE 68000 Kernel, PUMA robot arm controller

• Industry Experience
  – 2 years architecting C++ at IBM Toronto Labs
    • C++ development environment
    • C++ & OODB across groups in Toronto, Texas, & Tokyo
  – 5 years architecting C++ at Algorithmics
    • >1MLoc C++ program, CORBA, RDBMS, Java, Web, …
    • 10 related products, multiple releases of each
    • VP, Software Dev., managing team of >100, revenues >$80M/yr.
  – Ongoing Consulting
    • Architecture reviews
Learning to Design/Architect Software

- Formal (book) knowledge (20%)
- Experience (80%)
  - Characteristics:
    - Large system (> 300 KLoc)
    - Arms-length folk trying to get work done using it
    - Associated revenue stream
    - Maintenance of multiple releases over several years
      - Understand the mistakes that are made and try to fix them

Grades

- Term (60%)
  - Assignment 1 (15%)
    - OOA (5%)
    - OOD + OOP (Java) (10%)
    - doc + UML + working Java
  - Assignment 2 (25%)
    - OOD + OOP (Java) w/ patterns
  - Assignment 3 (20%)
    - Systems architecture
    - Diagrams and written English
- Final Exam (40%)
  - open book (but it won’t help)
- Final Grade
  
  rawGrade = exam * 0.4 + term * 0.6;
  return (exam < 40% ? min(49%,rawGrade):rawGrade);

CS Grad Students: more info later

Late policy: see info sheet

Work alone
Texts

- Design Patterns
  - Gamma, Helm, Johnson, & Vlissides
- Acquire some book on
  - Object Oriented Analysis
  - UML for OOA and OOD

Resources

- Home page
  - Handouts, lecture notes, links
- Newsgroup
  - ut.cdf.csc407h
- Office hours
  - Mine
  - TAs
Tutorials

• Each Friday, starting Jan.18
  – Assignments to rooms/groups will be posted
  – Grad students:
    • Meet with me in PT266 this Friday (Jan.11) at noon.
• Worked-out examples
• Group discussion
• Discussion of assignments
• Individual TAs will mark your assignments

Computing

• Assignments require
  – Written documentation
  – Printed Java code
  – UML diagrams
  – Other diagrams
• Any computer w/ Java (any jdk)
  – I use Microsoft Visio for UML and other diagrams, and
    Word for docs. Use what you want.
# Topics

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