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## • Future

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## Goals

- Learn and apply:
  - effective software development practices
  - focusing on:
    - team project
    - design
    - tools
    - practicality
  - topics:
    - software process
    - OOAD and UML
    - user interface design
    - requirements
    - testing
    - design patterns & principles
    - refactoring

## Software Craftsmanship

- Personal responsibility:
  - for your work and professional development
  - how to solve problems
    - curiosity and continuous self-learning
    - experience, learning from mistakes
    - prototype, experiment, diversify
    - initiative, creativity, innovation, discipline
  - honest, realistic, ethical

## Other SE Topics

- Concepts for another time:
  - project management
  - quality control, inspections, reviews
  - metrics and estimation
  - architectural styles
- aspect-oriented programming (AOP)
- formal methods, model checking
- software evolution, maintenance, reengineering
- service-oriented systems, cloud computing

## CMPUT 410

- Web-Based Information Systems:
  - Internet and Web technologies
  - Web application design
  - Web search and mining
  - Web security
- HTTP, HTML, CSS, JavaScript, PHP, XML, Ajax
- SOAP, UDDI, WSDL, REST

## CMPUT 401

- Software Product Management:
  - agile process, project management, quality
  - 5-6 member team project
  - different project topics
  - outside customers
  - negotiated scope
  - diverse implementation technologies

## CMPUT 302

- Intro to Human Computer Interaction:
  - user-centered design
  - human factors, perception, cognition
  - user experiments
- advanced user interfaces

## Best Jobs

- CareerCast rating:
  - #1 : software engineer
  - #2 : mathematician
  - #3 : actuary
- #200 : temporary, unskilled laborer
- based on income, working environment, stress, physical demands, and job outlook

## Top IT Jobs

- Global Knowledge study:
  - network administrator
  - database administrator
  - software engineer
  - information systems auditor
  - computer forensics
  - IT security manager
  - virtualization engineer
  - project manager
  - voice specialist

## IT Skills Most Needed

- ComputerWorld annual survey:
  - programming and application development
  - project management
  - help desk / technical support
  - networking
  - security
  - data center
  - Web 2.0
  - telecommunications
  - business intelligence
  - collaboration architecture
  - business acumen and communication skills

## IT Skills for 2020

- ComputerWorld article:
  - analyzing data
  - understanding risk
  - mastering robotics
  - securing information
  - running the network



## Course and TA Evaluations

- Statement of purpose:
    - “The University of Alberta would appreciate your careful completion of this questionnaire. The results help instructors and departments or faculties to initiate constructive change in curriculum and instruction. In addition, the results are one important factor in decisions affecting the career of your instructor. The numerical summaries for the ten questions listed are available through the Student’s Union and the Graduate Students’ Association.”
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