

COURSE SYLLABUS

INFO 5100 – APPLICATION ENGINEERING AND DEVELOPMENT

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COURSE OBJECTIVES:

This course aims to use modern software engineering concepts towards teaching Java programming. The applied nature of this course focuses on leveraging latest toolchains and software libraries to help find solutions for real world problems. This course teaches Java programming language concepts at basic and advanced level. The students learn to apply the knowledge by solving various class exercises and a final project.

TOOLS:

Java

TENTATIVE TOPICS:

- Introduction
- Installation and IDE
- Programming Basics
- Object-Oriented Programming
- Java Data Structures
- Advanced Java
 - Multi-threading
 - File I/O
 - Serialization
 - Regular Expressions
 - Lambda
 - Generics
 - NIO
 - HTTP Client
 - Concurrency
- JavaFX
- Design Patterns
- Java Cryptography
- XML and JSON processing

GRADING

Coursework will be weighted as follows:

- Research Report: 70%
- Class Participation: 10%
- Quizzes: 20%

CLASS POLICIES:

- Punctuality, attendance and class participation are essential for success. If a student must miss a class for a valid reason, he/she should make arrangements ahead of time to complete the assignment and turn it in on time.
- All quizzes are open notes, open computer. Quizzes include questions requiring the student to have a good understanding of the software and concepts taught in class.
- Make-ups will only be given under extenuating and unavoidable circumstances. The student is responsible for informing the instructor prior to missing a class or an exam.
- Students should feel free to exchange ideas with each other. However, some effort through internet research is expected to solve various technical issues during class exercises.

TEXT BOOKS:

None

PLAGIARISM POLICY

When there is evidence that a student has committed plagiarism, copied the work of others, allowed others to copy their work, cheated on an exam, altered class material or scores, or has inappropriate possession of exams, or sensitive material, the incident will be investigated. The consequences for academic dishonesty are severe and that will include a straight F in the course with the potential for dismissal.