

CSE 4051 Advanced Java Concepts (3 credits)

Primary instructor: Ryan Stansifer

Textbooks and references:

P. van der Linden, Just Java 2 6th edition, SunSoft Press Java Series, Prentice Hall, 2004.
(R)

Course information:

2014–2015 Catalog description: CSE 4051 Advanced Java Concepts (3 credits). Studies core Java and its major class libraries. Includes exception handling, packages, threads, internationalization, building graphical user interfaces, applets, networking, RMI, introspection (Java beans), cryptography and database connectivity. (Requirement: Instructor approval or prerequisite course.) Prerequisites: CSE 2010 or ECE 2552.

Prerequisites by topic: Algorithmic paradigms, efficiency measures, rates of growth, asymptotic behavior, data processing algorithms, graph theory and graph theoretic algorithms, recursion, data structures

Place in program: Advanced elective

Course outcomes & related student outcomes: The student will be able to

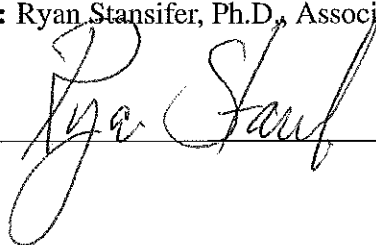
1. Solve significant problems by writing advanced programs in Java. (2: Scientific, computing, and engineering problem solving & 4a: Skillful software construction)
2. Comprehend and use detailed knowledge about programming in Java. (2: Scientific, computing, and engineering problem solving & 4a: Skillful software construction)
3. Understand and use new features of Java. (9: Continually learn)
4. Use Java exception handling, threads, and introspection. (4a: Skillful software construction)
5. Use Java networking, GUI, and JDBC libraries. (4a: Skillful software construction)

Topics covered:

1. The “big” picture, WWW, HTML, and JavaScript (3 hours)
2. Syntax of Java, primitive data types, and wrapper classes (5 hours)
3. Simple programs and the collection classes (5 hours)
4. Classes, abstract classes, interfaces, inner classes, and packages (5 hours)
5. Exception handling, threads, and introspection (5 hours)
6. Networking, RMI, applets, GUI (AWT and Swing), and JDBC (10 hours)
7. Miscellaneous topics: JSP, JNI, internationalization, and security (2 hours)

Approved by: Ryan Stansifer, Ph.D., Associate Professor, Director of Computer Science Programs

Signature: _____



Date: _____

30 Jan 2015