CSE 1223 (Approved): Introduction to Computer Programming in Java

Course Description

Introduction to computer programming and to problem solving techniques using computer programs; programming lab experience.

Prior Course Number: CSE 201
Transcript Abbreviation: Prgrmng Java
Grading Plan: Letter Grade
Course Deliveries: Classroom
Course Levels: Undergrad
Student Ranks: Freshman, Sophomore
Course Offerings: Autumn, Spring
Flex Scheduled Course: Never
Course Frequency: Every Year
Course Length: 14 Week
Credits: 3.0
Repeatable: No
Time Distribution: 2.0 hr Lec, 1.0 hr Lab
Expected out-of-class hours per week: 6.0
Graded Component: Lecture
Credit by Examination: Yes
Exam Types: Advanced Placement Program, Departmental Exams
Admission Condition: No
Off Campus: Never
Campus Locations: Columbus
Prerequisites and Co-requisites:
Exclusions: Not open to students with credit for CSE 201
Cross-Listings:

The course is required for this unit's degrees, majors, and/or minors: No
The course is a GEC: No
The course is an elective (for this or other units) or is a service course for other units: Yes

Subject/CIP Code: 14.0901
Subsidy Level: Baccalaureate Course

General Information

Not recommended for students planning to continue into CSE 2221

Course Goals

Be competent with using basic coding features provided by high-level imperative programming languages.
Be competent with writing computer programs to implement given simple algorithms.
Be familiar with analyzing simple real-life problems and choosing appropriate algorithms for their solution.
Be familiar with using basic data structures such as arrays in simple programs.
Be familiar with using methods and classes to help produce well-structured programs.
Be familiar with reading and programming for APIs.
Be familiar with designing simple text-oriented user interfaces.

Be familiar with working in a window-based computing environment.
Be exposed to the services provided by an operating system.
Be exposed to the virtual machine model of modern computer systems.
Be exposed to data abstraction concepts and other more advanced programming ideas.

Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Course introduction and basic concepts	2.5		1.0					
Primitive types and expressions; String; basic I/O	2.5		1.5					
Flow of control and Boolean expressions	4.0		2.0					
Defining methods	4.0		2.0					
Arrays	3.0		1.5					
Basic exception handling and standard Java I/O	2.5		1.5					
Classes and objects	6.0		4.0					
Midterm and exam reviews	3.0							

Representative Assignments

Primitive types, assignment, arithmetic expressions, simple I/O
Control structures
Methods
Arrays
Standard I/O
Classes and objects

Grades

Aspect	Percent
Midterm	20%
Final exam	30%
Homeworks	10%
Labs	35%
Class participation	5%

Representative Textbooks and Other Course Materials

Title	Author
Java: An Introduction to Computer Science & Programming (3rd Edition)	Savitch, W.

ABET-EAC Criterion 3 Outcomes

Course Contribution		College Outcome
*	a	An ability to apply knowledge of mathematics, science, and engineering.
	b	An ability to design and conduct experiments, as well as to analyze and interpret data.
**	c	An ability to design a system, component, or process to meet desired needs.

Course Contribution		College Outcome
*	d	An ability to function on multi-disciplinary teams.
	e	An ability to identify, formulate, and solve engineering problems.
*	f	An understanding of professional and ethical responsibility.
	g	An ability to communicate effectively.
	h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
	i	A recognition of the need for, and an ability to engage in life-long learning.
	j	A knowledge of contemporary issues.
	k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

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