CIS 17 Course Outline as of Fall 2001

CATALOG INFORMATION

Dept and Nbr: CIS 17 Title: JAVA PROGRAMMING
Full Title: Java Programming
Last Reviewed: 1/24/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	0	14	Lab Scheduled	0
		Contact DHR	3.50		Contact DHR	61.25
		Contact Total	5.50		Contact Total	96.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 166.25

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	CIS 54.11

Catalog Description:
Object-oriented programming principles, Java language constructs, the Java Developer's Kit class libraries, multi-threading, networking, GUI development, applets and applications.

Prerequisites/Corequisites:
Completion of CIS 10A (formerly CIS 10, BDP 10) OR CIS 20A.

Recommended Preparation:
Completion of CIS 58.51A (formerly CIS 84.42A) or CIS 58.31A (formerly CIS 84.44A) and eligibility for ENGL 100 or ESL 100.

Limits on Enrollment:

Schedule of Classes Information:
Description: Intended for students with previous programming experience. Topics include Object-oriented programming principles, Java language constructs, the Java Developer's Kit, class libraries, multi- threading, networking, GUI development, applets and applications. (Grade Only)
Prerequisites/Corequisites: Completion of CIS 10A (formerly CIS 10, BDP 10) OR CIS 20A.
Recommended: Completion of CIS 58.51A (formerly CIS 84.42A) or CIS 58.31A (formerly CIS

84.44A) and eligibility for ENGL 100 or ESL 100.
Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Transferable	Effective:	Summer 1996	Inactive:
UC Transfer:	Transferable	Effective:	Spring 2000	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Students will:
1. Evaluate the rationale of the Java language.
2. Contrast Java and C++.
3. Design programs using object-oriented methods.
4. Create software using an integrated development environment.
5. Integrate the Java class libraried with the construction of new classes.
6. Test the efficiencies of multithreaded applications.
7. Construct graphical user interfaces.
8. Compare local I/O facilities with networking in Java.
9. Evaluate, compare and contrast four design patterns.

Topics and Scope:

1. Objected-oriented programming principles
   A. Encapsulation
   B. Inheritance
   C. Polymorphism
2. Comparison with C/C++
   A. Global variables
   B. Pointers
   C. Memory allocation
   D. Header files
   E. Preprocessor
3. Java language constructs
   A. Types
   B. Operators

C. Flow Control
D. Classes
E. Packages and interfaces
4. JDK class libraries
A. .lang
B. .io
C. .util
D. .net
E. .awt
F. .applet
5. Threads and synchronization
A. Thread priorities
B. Synchronization
C. Messaging
6. Networking
A. Sockets for clients
B. Sockets for servers
C. URL connections
7. GUI development
A. Components
B. Layout manager
C. Menu container
8. Applets
A. HTML interface
B. Parameters
C. Initialization
D. Graphics
9. Applications
A. Parameters
B. Initialization
C. I/O

Assignment:

Complete Sun Microsystem's HTML-based Java tutorial. Develop several applets and applications.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Exams	Problem solving 25 - 60%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

PROGRAMMING	Skill Demonstrations 20 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
"Java 1.1: The Complete Ref. 2nd Edition", by Naughton & Schildt - Osborne/McGraw-Hill 1998