

Department Approval: _____
Date Initial (Department Chair)
Curriculum Committee Approval: _____
Date Initial (Committee Chair)
Faculty Approval: _____
Date Initial (Faculty Secretary - when appropriate)

SCHENECTADY COUNTY COMMUNITY COLLEGE Course Outline

ACADEMIC DEPARTMENT: Mathematics, Science and Technology

PREPARED BY: Don Riggs

COURSE CODE: CIS 133 **COURSE TITLE:** Programming in Java

LECTURE HOURS/WEEK: 3 **LAB HOURS/WEEK:** 0 **CREDIT HOURS:** 3

COURSE PREREQUISITES: CIS129 (Introduction to Programming)

COURSE CO-REQUISITES: None

FINAL EXAM REQUIRED: YES X NO _____

COURSE DESCRIPTION:

This course provides an introduction to object-oriented programming using the Java programming language, with a focus on developing high-quality, functional solutions to problems. Topics include data types, input/output, control structures, GUI interfaces, methods, classes, inheritance, and polymorphism. Students will use computer facilities to complete programming assignments.

STUDENT LEARNING OUTCOMES:

Students who have successfully completed this course will:

- demonstrate the relationships between computers, programming, and programming languages;
- demonstrate an understanding of primitive data types, expressions, strings, and arrays;
- demonstrate and use basic computer language concepts such as program flow, decision structures and loops;
- demonstrate and use core concepts of the Java programming language (classes, objects, methods with parameters, abstract classes, interfaces, inheritance and polymorphism); and
- design, code, debug, compile, and run computer programs using the Java programming language.

RELATIONSHIP TO SCCC'S GENERAL EDUCATION PRINCIPLES:

The purpose of general education is to help students develop a broad cultural and intellectual context for the substantive knowledge and career skills they acquire. To accomplish this purpose, Schenectady County Community College is committed to ensuring that graduates of A.A., A.S. and A.A.S. degree programs will demonstrate the abilities to:

- **Apply logical and critical reasoning in evaluation and problem solving.** Students must use problem solving/analytical skills to plan, design, implement, and modify computer programs.
- **Locate, evaluate and synthesize information from a variety of sources.** Students will identify and use appropriate resources to assist in the completion of computer programs
- **Utilize appropriate computer and technology skills.** Students must use learned computer skills to plan, design, implement, and modify computer programs.
- **Understand the significance and implications of technological developments.** Students will implement current standards and methods when writing computer programs.

INSTRUCTIONAL METHODS:

The instructor may select from, but is not limited to, the following instructional methods: lectures, guest lecture, discussion, assigned reading from the text and/or other sources, and hands-on individual and group programming projects.

REPRESENTATIVE TEXT/S:

Gaddis, Tony, *Starting Out with Java: From Control Structures through Objects*, Addison Wesley (Current edition).

INSTRUCTIONAL TECHNOLOGY/EQUIPMENT /MEDIA:

A computer projection system will be used to demonstrate programs and to show PowerPoint presentations. Students will use computers and appropriate software to complete programming projects.

SUPPLEMENTARY MATERIALS/REFERENCES:

None

EVALUATION METHODS:

A cumulative final exam is required. In addition the instructor may choose from, but is not limited to: graded homework, examinations, quizzes, oral presentations, and/or projects.

SUNY KNOWLEDGE AND SKILL AREA ASSESSMENT PLAN:

N/A

COURSE OUTLINE ATTACHED

COURSE CONTENT OUTLINE

COURSE: CIS133 – Programming in Java

Week 1	Java Fundamentals
Week 2	Decision Structures
Week 3	Loops
Week 4	Methods
Week 5	Files
Weeks 6-7	Classes
Weeks 8-9	GUI Applications
Weeks 10-11	Arrays
Weeks 12	Classes Revisited
Weeks 13	Strings and Wrapper Classes
Weeks 14-15	Inheritance and Polymorphism
Final Week	Final Exam