

North Hennepin Community College

CSCI 1130: Introduction to Programming in Java (CS0)

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 0

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:

This course requires all four of these prerequisite categories

1. Any one of these six groups
 1. All of these three groups
 1. Any one of these seven
 - A score of 50 on test Accuplacer College Level Math
 - A score of 1 on test Exempt from taking Math placement test
 - A score of 22 on test ACT Math
 - A score of 1158 on test MN Comprehensive Assessment Math
 - A score of 1 on test Developmental Course Transfer Waiver-Mat
 - MATH 0970 - Bridge to College Algebra (Minimum grade: 1.67 GPA Equivalent)
 - MATH 0980 - Pre College Algebra (Minimum grade: 1.67 GPA Equivalent)
 - And
 2. Any one of these nine
 - A score of 1 on test Exempt from taking Reading placement tes
 - A score of 78 on test Accuplacer Reading Comprehension
 - A score of 21 on test ACT Reading
 - A score of 1 on test Developmental Course Transfer Waiver-Rdg
 - A score of 1047 on test MN Comprehensive Assessment Reading
 - ADEV 0952 - College Reading and Learning Strategies II (Minimum grade: 1.67 GPA Equivalent)
 - ADEV 1950 - Reading Texts Critically
 - A score of 250 on test Accuplacer NG Reading
 - A score of 250 on test Accuplacer NG COMP Reading
 - And
 3. Any one of these nine
 - A score of 1 on test Exempt from taking Reading placement tes
 - A score of 1 on test Exempt from taking English placement tes
 - A score of 78 on test Accuplacer Reading Comprehension
 - A score of 1 on test Developmental Course Transfer Waiver-ENG
 - A score of 21 on test ACT Reading
 - A score of 18 on test ACT English
 - A score of 250 on test Accuplacer NG Reading
 - A score of 250 on test Accuplacer NG COMP Reading
 - ENGL 0990 - Gateway Composition
 - Or
 2. A score of 108 on test Accuplacer ESL Reading Skills
 - Or
 3. EAP 0930 - Academic Reading and Study Skills (Minimum grade: 1.67 GPA Equivalent)
 - Or
 4. EAP 1230 - College Reading and Studying Skills
 - Or
 5. A score of 1 on test Exempt from taking Reading placement tes
 - Or
 6. A score of 1 on test Developmental Course Transfer Waiver-Rdg
 - And
 2. One of these two
 - A score of 115 on test Accuplacer ESL Sentence Meaning
 - EAP 0900 - College Vocabulary Development
 - And
 3. Any one of these three
 - A score of 83 on test Accuplacer ESL Listening
 - EAP 0980 - Academic Listening and Speaking (Minimum grade: 1.67 GPA Equivalent)
 - EAP 1280 - Listening and Speaking for College Success
 - And
 4. Any one of these three
 - A score of 4 on test ESOL Essay Writing Test Scores
 - EAP 0960 - Academic Writing Skills Development (Minimum grade: 1.67 GPA Equivalent)
 - EAP 1260 - College Writing Skills Development (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: None

This course provides an introduction to the Java programming language and its foundational topics. In this course students will explore fundamental programming and computing concepts with a focus on problem solving, algorithm development and implementation. Topics included are: data types and memory concepts, arithmetic operators and mathematical expressions, conditional statements, repetition, arrays, methods and the basics of object-orientation.

B. COURSE EFFECTIVE DATES: 07/02/2018 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Topics include: algorithm design and use in problem-solving, common programming structures (sequence, conditional and repetition statements) and their use in algorithms, data types, operators, operands, introduction to Boolean algebra, methods, basic array operations and algorithms, security, privacy, ethics, digital systems evolution and impact on society and the economy.

D. LEARNING OUTCOMES (General)

1. Describe algorithms and their role in solving problems. (ELO # 1, 2)
2. Develop algorithmic solutions using appropriate programming structures (ELO # 1, 2)
3. Express algorithms using pseudocode, flow-charts or other design notation. (ELO # 1, 2)
4. Demonstrate knowledge of common algorithms (ELO # 1, 2)
5. Demonstrate the ability to select an appropriate algorithm for solving a problem. (ELO # 1, 2)
6. Implement algorithms with a high-level programming language and provide simple documentation. (ELO # 1, 2)
7. Use Boolean expressions. (ELO # 2)
8. Describe the Von Neumann architecture and interaction between the processor and memory. (ELO # 1, 2)
9. Explain the role of the operating system in a digital system. (ELO # 1, 2)
10. Explain security and privacy threats and describe measures to prevent them. (ELO # 1, 2, 4)
11. Describe the evolution of digital systems and their past, present, and potential future impact on human society. (ELO # 1, 4)

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

1. Knowledge of Human Cultures and the Physical and Natural World --Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
4. Integrative and Applied Learning; Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.