North Hennepin Community College

CSCI 1035: Introduction to Computer Programming with Games

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:
This course requires both of these prerequisite categories
1. Any one of these five
   - Algebra College Level
   - Placement into MATH 1150
   - MATH 0970 - Bridge to College Algebra (Minimum grade: 1.67 GPA Equivalent)
   - MATH 0980 - Pre College Algebra (Minimum grade: 1.67 GPA Equivalent)
   - MATH 1150 - College Algebra (Minimum grade: 1.67 GPA Equivalent)

   And
2. One of these two groups
   1. Both of these groups
      1. Any one of these three
         - Reading College Level
         - Reading at College Level
         - ADEV 0952 - College Reading and Learning Strategies II (Minimum grade: 1.67 GPA Equivalent)

         And
      2. Any one of these five
         - Writing College Level
         - Placement into ENGL 1201
         - ENGL 0950 - Preparation for College Writing II (Minimum grade: 1.67 GPA Equivalent)
         - ENGL 0990 - Gateway Composition
         - ENGL 1201 - College Writing I (Minimum grade: 1.67 GPA Equivalent)

      Or
   2. All of these four groups
      1. One of these two
         - Placement into EAP 1230
         - EAP 0930 - Academic Reading and Study Skills (Minimum grade: 1.67 GPA Equivalent)

         And
      2. One of these two
         - Sentence Meaning at College Level
         - EAP 0900 - College Vocabulary Development

         And
      3. One of these two
         - Placement into EAP 1280
         - EAP 0980 - Academic Listening and Speaking (Minimum grade: 1.67 GPA Equivalent)

         And
      4. One of these two
         - Placement into EAP 1260
         - EAP 1260 - College Writing Skills Development (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: None

This is an introductory computer programming course. The students will engage in hands-on implementation of games and simulations in a graphics-enhanced development environment. The students will learn how to transform game scenarios into algorithms and programs, create user interfaces, and incorporate multimedia. Basic computer skills are necessary for success in this class.

B. COURSE EFFECTIVE DATES: 05/25/2010 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. In this course students will:
   learn how to clearly express a logical game plan (scenario) in writing (algorithm);
2. apply higher-order problem-solving skills and modeling strategies to game development;
3. learn the foundation of data abstraction, modeling and processing;
4. create game scenarios and project plans;
5. learn how to implement decision making in computer programs;
6. familiarize themselves with a simplified development environment;
7. learn the approach to controlling movements in simulation;
8. create realistic flying, collisions, gravitation simulations, modeling physical world in algorithms;
9. gain experience in detecting and correcting programming errors;
10. create classes and objects and express them in computer language.

D. LEARNING OUTCOMES (General)

1. Formulate the algorithm for solving problems (Program goal B).
2. Translate algorithms into working programs using a simplified development environment, giving attention to details of the programming life cycle. (Program goal D).
3. Apply higher-order thinking and analysis process to abstracting the involved data (Program goal B).
4. Introduce the concept of efficient user experience (Program goal A)

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted