BARTON COMMUNITY COLLEGE

**COURSE SYLLABUS**

**Spring 2009**

## GENERAL COURSE INFORMATION

Course Number: PRGM 1035

Course Title: Game Programming and Design

Credit Hours: 3

Prerequisites: PRGM 1030 Java Programming or PRGM 1025 C Programming or PRGM 1005 BASIC Programming

Division/Discipline: Liberal Arts & Sciences/Computer Science

Course Description:

This course is designed for students who have experience in programming and are interested in game development. The course will cover program flow, statements, and functions. The course also covers all the basic functionality of windows, menus, dialogs, icons, graphics, game design, architecture, 2D game engines, game mathematics, data structures, algorithms, and artificial intelligence.

## CLASSROOM POLICY

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The college assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

The College reserves the right to suspend a student for conduct that is detrimental to the College’s educational endeavors as outlined in the College Catalog.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. Learn the rules of, and avoid instances of, intentional or unintentional plagiarism.

Anyone seeking an accommodation under provisions of the Americans with Disabilities Act should notify Student Support Services.

## COURSE AS VIEWED IN THE TOTAL CURRICULUM

This course is an advanced course for the Computer Science program. This course will give the student an opportunity to write programs in a team environment and to apply their skill that they have learned in previous programming courses.

## ASSESSMENT OF STUDENT LEARNING/COURSE OUTCOMES

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Upon completion of this course the student will be able to:

1. Explain Cross-Platform Game Programming
2. Demonstrate Game Theory, Design, and Programming

## COURSE COMPETENCIES

Upon completion of this course, the student will be able to:

1. Getting Started with Dev-C++ and Allegro
2. Explain the Basics graphics Programming with Allegro
3. Writing Your First Game
4. Program the Keyboard, Mouse, and Joystick
5. Basic Bitmap Handling and Blitting
6. Program Basic Sprites: Drawing Scaled, Flipped, Rotated, Pivoted, and Translucent Sprites
7. Program Advanced Sprite: Compiled Sprites, Collision Detection, and Animation
8. Program Tile-Based Backgrounds with Scrolling
9. Create Timers, Interrupt Handlers, and Multithreading
10. Create Vertical Scrolling "Arcade Games"
11. Demonstrate Horizontal Scrolling "Platform Games"
12. Play FLIC Movies

## INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS

## TEXTBOOKS AND OTHER REQUIRED MATERIALS

### REFERENCES

1. **METHODS OF INSTRUCTION AND EVALUATION**

## ATTENDANCE REQUIREMENTS

1. **COURSE OUTLINE**