



Course Information

Course Title	Artificial Intelligence Programming I
Course Prefix, Num. and Title	GAME 2303 - Artificial Intelligence Programming I
Division	Technology & Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Basic techniques in artificial intelligence related to game and simulation programming. Includes knowledge representation and interference techniques, expert systems, path-finding algorithms, and search techniques for problem solving.
Pre-Requisites	COSC 1436
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:2:2
Lab/Other Hours	
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	2
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction):

- Introduction to AI
- AI Based Game Genres
- Movement AI
- Pathfinding
- Decision Making
- Tactical and Strategic AI
- Learning AI
- Board Games
- Execution Management
- Designing Game AI

Course Learning Outcomes:

Learning Outcomes

Upon successful completion of this course, students will:

Describe the theory of probabilistic and logical reasoning; use search, logic, and probability skills in analysis; explain the principles and practice of artificial intelligence; and utilize artificial intelligence techniques in a game and/or simulation program.

Methods of Assessment

All outcomes will be assessed by one or more of the following:

Labs
Programming Projects
Tests and Quizzes
Final Exam

Required text(s), optional text(s) and/or materials to be supplied by the student:

- Artificial Intelligence for Games, 2nd Edition by Ian Millington , John Funge ISBN: 978-0-12-374731-0
- USB Flash Drive
- High-speed Internet Connection

Suggested Course Maximum:

16

List any specific or physical requirements beyond a typical classroom required to teach the course.

- Computer for each student
- Eclipse C++ compiler installed for each student

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Course Requirements

Labs	20-40%
Tests and Quizzes	20-40%
Projects	20-40%
Final Exam	20-40%
Attendance & Participation	0-20%

Grading System

100 -90	= A
89 - 80	= B
79 - 70	= C
69 - 60	= D
59 and below	= F

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core)
No additional documents needed.
- Administrative WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives
- WECM Course**