

**JOLIET JUNIOR COLLEGE  
DEPARTMENT OF COMPUTER INFORMATION  
AND OFFICE SYSTEMS**

**COURSE SYLLABUS**

<b>Course Prefix and Number</b>	GAME 207
<b>Course Title</b>	Digital Sound for Computer Games
<b>Curriculum</b>	Computer Information & Office Systems
<b>Lecture</b>	4
<b>Lab</b>	0
<b>Credit Hours</b>	4
<b>Prerequisites</b>	GAME 211, and CIS 130 or CIS 236, or consent of department.

Catalog Description

This course introduces the student to the basics of digital sounds. Course topics include the study of digital sound compression, game audio design patterns, music sequences for games, and sound APIs

Course Objectives: See attached.

Prepared by:

Reviewed by:

H. Low  
Dept. of CIOS  
5/05

Revised 2/07

Ram Raghuraman  
Department Chairperson      Date

## STUDENT MATERIALS

### A. Textbooks:

Title: Beginning Game Audio Programming

Author: Mason McCuskey

Publisher: Premier Press, 2003, ISBN: 1-59200-029-0

Title: Game Audio Programming

Author: James Boer

Publisher: Charles River Media, 2002, ISBN: 1584502452

### B. Other Required Materials      None

#### Student Evaluation (Type of Grading)

##### A. PROJECTS

Students will be expected to develop several audio projects.

##### B. PAPERS (no. of pages, expository writing done outside of class required and graded in addition to essay examinations):

None.

##### C. EXAMS AND WHAT TYPE:

Quizzes and Exams

# JOLIET JUNIOR COLLEGE COURSE SYLLABUS

## JOLIET JUNIOR COLLEGE

Course Prefix and Number: GAME 207 Title: Digital Sound for Computer Games

Week	Unit, Topic, Class Activity (Indicate approximate time allotment for each topic/unit)	Comments
1	Introduction to audio file types	
2	Design Theory	
3	Basics of WAV, MP3 and WMA playback	
4	Introduction to Direct Audio	
5	Using your system's MIDI with audio	
6	Using Ogg Vorbis for playback	
7	Creating static audio files	
8	Midterm exam and midterm project	
9	Creating dynamic audio files	
10	Learn how to program in OpenAL	
11	Learn the benefits and how to program in 3D Sound	
12	Audio Visualization	
13	Study the use of 3D techniques	
14	Apply 3D techniques with the use of EAX and ZoomFX	
15	Apply 3D techniques with the use of MacroFX	
16	Final Project	

## OBJECTIVES

1. The student will learn how to create and save WAV and MP3 audio files.
2. The student will learn how to apply filters and effects to their audio files.
3. The student will understand how and why dynamic audio files are necessary.
4. The student will use an audio visualizer to understand the importance of tonality.
5. The student will write audio files in various proprietary languages.