

# **MUS115: Fundamentals of Music and Sound Design Summer 2016**

## **Prerequisites:**

None

## **General Information:**

Class Schedule: M – W 9:00pm – 10:40pm  
Class room: Da Vinci  
Professor: Steven Saulls  
Contact: (425) 629-5022 – [ssaulls@digipen.edu](mailto:ssaulls@digipen.edu)  
Class web page: Moodle  
Office Hours: M-W 12:00-1:00 pm

## **Description**

This course offers an introduction to the fundamentals of music and sound design, and an overview of the production of music and sound for animation, film, and video games.

## **Course Objectives and Learning Outcomes**

Awareness and understanding of tempo and timing in music and dialog are essential to the production of effective animation. The study of music and audio fundamentals enables animators and game developers to explore the relationship between time and motion, and to express their ideas to the composers and sound designers who produce soundtracks.

By the end of this course you will:

1. Learn the art of active listening: the ability to discern what you hear.
2. Be familiar with the terminology of music and sound design, and be able to use these terms to describe music and sound.
3. Know the fundamentals of music and be familiar with a wide variety of musical styles.
4. Understand the basic concepts and terminology of analog and digital audio recording.
5. Be acquainted with the methods, equipment, and software used to create soundtracks for animation, film, and video games.
6. Produce a basic soundtrack for an animation and game project.

## **Textbooks**

Texts: None

## **Other Course Materials**

Available for download on Moodle:

*MuseScore 2.0.3*

*Audacity 2.1.2*

Provided by DigiPen:

*Mixcraft 7*

*DigiPen Zero Engine*

### **Outline and Tentative Dates**

| Week | Dates         | Topics   |
|------|---------------|--|
| 1    | May 2-5       | The Art of Sound Design and Digital Audio: sound design; listening; the development of an animation soundtrack or game audio; animation sound design discussions; the properties of sound; the process of hearing sound; analog to digital conversion; types of waveforms; and creating music with a WAV editor. |
| 2    | May 9-13      | The Fundamentals of Music: Part I: melody: the foreground of music; notation of pitch; scales and modes; the major scale and (natural) minor scale; rhythm; time signatures; the qualities of melody; melodic structure; and creating/editing a melody with a score editor.                                      |
| 3    | May 16-20     | DAW Basics, Building An Arrangement, Mixing, and Exporting Audio; DAW basics: exploring the DAW's production software's interface: creating music with clips and loops; navigating a project; building an arrangement; looping and positioning clips and loops; mixing; and exporting audio.                     |
| 4    | May 23-27     | The Fundamentals of Music: Part II and Game Audio: intervals; creating ambient music with intervals; game audio; the Zero Engine's audio component; and implementing game audio.   |
| 5    | May 23-June 3 | Microphone Recording, Editing, Audio Signal Processing, and SFX: microphones (mics); mic recording; sound effects; film soundtrack analysis; creating names, directories, and subdirectories for SFX; creating Foley; storytelling with SFX; spotting music and sound effects.                                   |
| 6    | June 6-10     | Animation and the Implementation of Music and SFX: a brief history of animation; music and SFX cue sheets; animation walk cycle; animation soundtrack composition; creating, importing/spotting music and sound effects; and advanced sound design techniques.   |
| 7    | June 13-17    | Musical Instruments and Instrumentation: musical instruments and musical character through instrumentation.  |
| 8    | June 20-24    | Digital Audio Recording, Harmonic Composition, and Recording MIDI: recording a single track; preparing the track for recording; adjusting the recording level; recording your performance; recording additional takes; punching in and out;  |

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|    |                  | changing metronome settings; definition of composition; creating chord progressions; voice leading; MIDI; virtual instrument tracks (MIDI tracks); plugins; and step input.   |
| 9  | June 27 - July 1 | Loops, Ambient Sound, Layers, Music Cues, Stems, Horizontal Re-Sequencing, and Vertical Re-Orchestration: loops; creating loops; ambient sound; creating ambient loops; creating ambient loops with music; adding music to ambient loops; music cues and stems; horizontal re-sequencing and vertical re-orchestration.   |
| 10 | July 4-8         | The Musical Elements and Musical Styles: Part 1: keys and tonality; key signatures; musical elements; characteristics of musical keys; musical elements; animation analyses for musical elements; musical style; the Medieval period; the Renaissance period; the Baroque era; the Classical era; the Romantic era; and the modern era: the 20 <sup>th</sup> Century. |
| 11 | July 11-15       | Musical Styles: Part 2 - Popular Music: general characteristics; early sacred music; early folk music; composed vernacular music; black vernacular music; blues; American musical theatre; jazz; modern folk music; country music; rock and pop music; film music, video game music; and musical styles of other cultures (world music).                              |
| 12 | July 18-22       | Final Exam  |

### **Grading Policy**

The student's final course grade will be calculated based on an average of the accumulated scores from all home assignments, midterm, and final exam. Check Moodle for updates on your current course grade.

### **Standards**

Your final grade for the course will be calculated according to the breakdown listed above. When assessing the quality of your work, the following standards will apply:

- A: The work is outstanding and exceeds professional standard on all levels.
- B: The work meets a professional standard on most levels.
- C: Average student work.
- D: Substandard work, although it shows some understanding of the basic principals.
- F: Unacceptable work.

### **Attendance**

Attendance is essential to the successful completion of this course. Students are responsible for all material presented in class. Understanding of material presented in class is required in order to complete the quizzes, midterm, and final exams; this material may not be available elsewhere. If you are unable to attend a class it is your responsibility to arrange for someone to take notes for you. Students are encouraged to meet with the instructor during office hours to review material covered in class.

**Late Policy**

All work will be due at the beginning of class either on Moodle or in class. Late work will not be accepted.

**Homework Assignments and Projects**

Homework assignments will be posted regularly on the course web page, and will be due on a weekly basis.

**CLASSROOM RULES**

- 1) No Internet use (including Facebook, flash games, web browsing).
- 2) No snacks in classrooms. Drinks must be in a sealed, Melvin-Approved container.
- 3) During lecture, remove headphones.
- 4) Headphones on during lessons and activities.
- 5) All audio content must royalty free and G rated.
- 6) Always follow the instructor's directions step-by-step together as a group followed by concentrated individual work.
- 7) Be respectful of school property and fellow classmates' work environment.

**Academic Integrity Policy**

Academic dishonesty in any form will not be tolerated in this course. Cheating, copying, plagiarizing, or any other form of academic dishonesty (including doing someone else's individual assignments) will result in, at the extreme minimum, a zero on the assignment in question, and could result in a failing grade in the course or even expulsion from DigiPen.}

**Disability Support Services**

If students have disabilities and will need formal accommodations in order to fully participate or effectively demonstrate learning in this class, they should contact the Disability Support Services Office at (425) 629-5015 or [dss@digipen.edu](mailto:dss@digipen.edu). The DSS Office welcomes the opportunity to meet with students to discuss how the accommodations will be implemented. Also, if you may need assistance in the event of an evacuation, please let the instructor know.