

El Camino College COURSE OUTLINE OF RECORD - Approved

I. GENERAL COURSE INFORMATION

Subject and Number:Music 180Descriptive Title:Fundamentals of Electronic MusicCourse Disciplines:MusicDivision:Fine Arts

Catalog Description:

This course provides instruction in the use of synthesizers, Musical Instrument Digital Interface (MIDI), computers, musical acoustics, sound design, and music software. Emphasis is placed on technical, compositional, multimedia technology, and performance skills utilizing digital synthesizers in conjunction with computers and music software applications.

Conditions of Enrollment:

You have no defined requisites.

Course Length:	X Full Term	Other (Specify number of weeks):
Hours Lecture:	1.00 hours per week	ТВА
Hours Laboratory:	2.00 hours per week	ТВА
Course Units:	2.00	
Grading Method:	Letter	
Credit Status:	Associate Degree Credit	
Transfer CSU:	X Effective Date: Prior to J	luly 1992
Transfer UC:	X Effective Date: Proposed	d

General Education: El Camino College:

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1:

Students should be able to compose a composition using the Computer and a specified Industry Standard DAW Software Program. The composition should be based on the elements of the form, style, rhythm, harmony, melody and chord progressions used in commercial and traditional music.

SLO #2:

Student should be able to do a musical analysis of a given composition by ear and using the computer software reproduce and re-arrange the composition with similar instruments and sounds.

SLO #3:

Students will be able to demonstrate an understanding of musical notation and be able to print out a lead sheet of a musical example using a standard music notation program.

- B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)
 - Demonstrate skills operating synthesizers, computers, MIDI, music composition, and effects processors and understand their applications to electronic music. Performance exams
 - 2. Identify principles and define terms related to musical acoustics and instrument design. Essay exams
 - 3. Apply acoustic principles to electronic music, synthesizer programming, and sound design. Performance exams
 - 4. Define concepts and demonstrate techniques related to creative MIDI sequencing. Performance exams
 - 5. Evaluate current equipment and software used in electronic music. Reading reports
 - 6. Summarize the history and development of electronic music and its repertoire. Written homework
 - 7. Analyze and evaluate trends in electronic music, notation, performance, and production software. Objective Exams
- III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lecture	3	I	Overview of electronic music and sound design A. Computers/Music Composition Theory B. Software C. Synthesizers
Lecture	3	II	History and development of electronic music and synthesizers

			A. Early SynthesizersB. Musique ConcreteC. Tape music
Lecture	5	III	Synthesizers and programming functions A. Types of synthesis 1. Analog 2. Digital 3. Hybrid
			 B. Synthesizer components 1. Envelopes 2. Filters 3. Amplifiers 4. Oscillators
Lecture	2	IV	 MIDI A. Language Bits and bytes Hexadecimal numbers B. Programming MIDI channels Ports Program change Continuous controllers System exclusive
Lab	15	V	 MIDI sequencing/Composing A. Functions B. Tracks C. Piano roll editor D. Edit lists E. Quantization F. Looping
Lecture	2	VI	Musical acoustics A. Terminology B. Speed of sound C. Waveform measurement 1. Amplitude 2. Period 3. Wavelength 4. Hertz 5. Phase D. Overtones 1. Harmonic 2. Inharmonic E. Reverberation F. Musical instrument design 1. Source 2. Modifier 3. Controller

Lecture	3	VII	Electronic music equipment, software, and sound design programs A. Effects processors B. Software effects plug-ins C. Sound editing software
Lab	12	VIII	Sound design and audio software A. Creating sound B. Editing of sound C. Sound collage D. Audio looping E. Effects F. Importation 1. DVD 2. Video 3. Film 4. Other software programs
Lab	9	IX	Integration of acquired sequencing, programming, and sound design skills in a final project
Total Lecture Hours		18	
Total Laboratory Hours		36	
Total Hours		54	

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION:

Skills demonstrations

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION:

Using an Industry Standard application such as Reason, Garage Band, Ableton Live, Cubase, and/or Logic, Sequencing/ Composition software, construct a song or songs consisting of 8 or more tracks. One or more tracks may be looped, but at least two tracks must be played through and not looped. Two tracks must have an embedded program change.

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

- 1. Using the provided synthesizer-editing program, construct an original sound that involves the use of the various components of the synthesizer such as envelopes, filters, and low frequency oscillators.
- 2. In the sequencer software program, compose a 3-5 minute work that features the use of MIDI program, volume, and controller changes. Use various parts of the software program such as the piano roll editor. Quantize your performance and use the audio mixer to balance the tracks and perform real time changes of pan and volume.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Quizzes Reading reports Laboratory reports Field work Class Performance Homework Problems Completion Other (specify): Final Project Journal (kept regularly throughout the course)

V. INSTRUCTIONAL METHODS

Demonstration Discussion Guest Speakers Internet Presentation/Resources Laboratory Lecture Multimedia presentations Simulation Other (please specify) Recordings and videos.

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS

Study Required reading Problem solving activities Written work Observation of or participation in an activity related to course content

Estimated Independent Study Hours per Week: 3

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Michael Prager,. <u>"Reason 5 Power The Comprehensive Guide"</u>. 1 ed. Course Technology Cengage, 2011.

Hudson, Frankel, Fein, McCready.. <u>Making Music With GarageBand and Mixcraft</u>. 1 ed. Course Technology Cengage, 2011.

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS Headphones Flash Drive 8 GB

VIII. CONDITIONS OF ENROLLMENT

<u> </u>	Requisites (Course and Non-Course Prerequisites and Corequisites)		
	Requisites	C	ategory and Justification
в.	Requisite Skills		
		Requisite S	ikills
2.	Recommended Preparat	ons (Course and Non-C	ourse)
2.	Recommended Preparati Recommended Pr	ons (Course and Non-C eparation	ourse) Category and Justification
).	Recommended Preparati Recommended Pr Recommended Skills	ons (Course and Non-C eparation	ourse) Category and Justification

E.	Enroliment Limitations	
	Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by Burt Goldstein on 04/01/1986.

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE: 06/17/2019

Last Reviewed and/or Revised by: Jon Minei on 04/29/2019

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