CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

ACADEMIC SENATE

GENERAL EDUCATION COMMITTEE

REPORT TO

THE ACADEMIC SENATE

GE-015-156

MU4171 – Theory, History, and Design of Musical Instruments

General Education Committee Date: 03/01/1017
Executive Committee
Received and Forwarded Date: 03/29/2017
Academic Senate Date: 04/05/2017
First Reading
04/26/2017
Second Reading
BACKGROUND:
This is a new course in the Music Department for the semester calendar. This course was originally submitted for GE Area B5, but was changed to GE Area C4 during the review cycle.

RESOURCES CONSULTED:
Faculty
Department Chairs
Associate Deans
Deans
Office of Academic Programs

DISCUSSION:
The GE Committee reviewed the ECO for this course and found it to satisfy the GE SLO’s and other requirements of GE Area C4.

RECOMMENDATION:
The GE Committee recommends approval of GE-015-156, MU4171 – Theory, History and Design of Musical Instruments for GE Area C4 (See attached ECO).

MU - 4171 - Theory, History, and Design of Musical Instruments
C. Course - New General Education* Updated

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<tr>
<th>College/Department</th>
<th>Music</th>
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<tr>
<td>Semester Subject Area</td>
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<td>C/S Classification</td>
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To view the General Education SubArea definitions, click [http://www.cpp.edu/~academic-programs/scheduling/Documents/Ch.3-GeneralEducationProposals.pdf](http://www.cpp.edu/~academic-programs/scheduling/Documents/Ch.3-GeneralEducationProposals.pdf).

**I. Catalog Description**
II. Required Coursework and Background

**Prerequisite(s)**
Complete GE requirements for area A, and lower division Area C courses (C-1, C-2, C-3).

**Corequisite(s)**
III. Expected Outcomes

List the knowledge, skills, or abilities which students should possess upon completing the course.*

Students will evaluate and analyze how sound is produced by musical instruments according to several classification systems, such as Hornbostel-Sachs.

Students will evaluate and analyze the measurement of sound in different tuning systems.

Students will articulate, compare and contrast various ways that humans ascribe meaning to musical instruments and practices by examining diverse examples of human society, life, and expression.

Students will design, build, compose for and perform on at least one instrument, with written rationale and discussion of their creative process.

If this is a course for the major, describe how these outcomes relate to the mission, goals and objectives of the major program.
This course is listed as a GE synthesis class because the student will draw from many disciplines, learning basic concepts and applying these to the research, design, construction, and performance of a musical instrument. Students will be required to integrate concepts from across disciplines (musicology, ethnomusicology, archaeology, anthropology, music performance, music education, music therapy, math, engineering, and business). An understanding of these concepts will be represented in creating a new instrument (research, design, build), composing for and performing on this instrument, and writing an essay that explains the research behind this instrument.

GE Program Learning outcomes applicable to this class and how the class activities relate to them is below.

I. Acquire foundational skills and capacities.
a. Write effectively for various audiences.

b. Speak effectively for various audiences.

c. Find, evaluate, use, and share information effectively and ethically.

d. Construct arguments based on sound evidence and reasoning to support an opinion or conclusion.

(Class discussions and short essay reflections on readings assigned, and the research involved in the instrument building project)

(Analyzing instrument models, designing and building one’s own instrument. Building a monochord and an electronic theremin instrument with an Arduino kit.)

II. Develop an understanding of various branches of knowledge and their interrelationships.

b. Analyze major literary, philosophical, historical or artistic works and explain their significance in society.

(Historically influential instrument classification systems and music treatises will be read, analyzed, and discussed.)

c. Analyze the concepts, theories, and methods pertaining to cultural, economic, historical, political, or social institutions.

(Historical, political, and social institutions will be analyzed in the overview of the field of ethnomusicology and through readings and discussions about classification and tuning systems. Cultural, economic, and ecological principles and institutions will be analyzed by means of case studies and discussions about diverse roles musical instruments occupy in societies, as well as issues pertaining to sustainability, how instruments are built, and out of which materials.)

d. Integrate concepts, theories, and examples from more than one field of study to identify problems, draw conclusions, and construct original ideas.

(Students will be required to integrate concepts from across disciplines (musicology, ethnomusicology, archaeology, anthropology, music performance, music education, music therapy, math, engineering, and business). These will inform students’ final essays and production of an original musical instrument or adaptation of an existing instrument.)

III. Develop social and global knowledge.
a. Analyze the historical development of diverse cultures and the role they play in shaping core institutions and practices of individuals and societies.

*Through case study examination of specific cultural protocols surrounding instruments, and the significance of the musical practices within the cultures, students will discuss how those practices are reflections of other aspects within the culture*

b. Apply principles, methods, value systems, and ethics to social issues confronting local and global communities.

*Class activities and assignments covered during weeks 4-5 [material culture], week 8 [modifying instruments, especially for people with physical handicaps], week 9 [sustainability of materials used to construct instruments], and weeks 10-11 [storing and displaying instruments].*

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<th>Course Outcome</th>
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IV. Instructional Materials

Provide bibliography that includes texts that may be used as the primary source for instruction, and other appropriate reference materials to be used in instruction. The reference list should be current, arranged alphabetically by author and the materials should be listed in accepted bibliographic form.


To view the mapping, click https://www.cpp.edu/~academic-programs/Documents/GE%20SLO%20Mapping.pdf


Faculty are encouraged to make all materials accessible. Indicate with an asterisk those items that have had accessibility (ATI/Section 508) reviewed. For more information, http://www.cpp.edu/~accessibility

V. Minimum Student Material

List any materials, supplies, equipment, etc., which students must provide, such as notebooks, computers, internet access, special clothing or uniforms, safety equipment, lockers, sports equipment, etc. Note that materials that require the assessment of a fee may not be included unless the fee has been approved according to University procedures.
VI. Minimum College Facilities

List the university facilities/equipment that will be required in order to offer this class, such as gymnastic equipment, special classroom, technological equipment, laboratories, etc.

Minimum College Facilities*  “Smart classroom” (capability of showing videos and films, sounds system for audio playback, Internet access)

VII. Course Outline

Describe specifically what will be included in the course content. This should not be a repetition of the course description but an expansion that provides information on specific material to be included in the class, e.g. lecture topics, skills to be taught, etc. This should not be a week-by-week guide unless all instructors are expected to follow that schedule.

Course Outline*  Week 1-2: Introduction & overview of organology, classification systems of musical instruments

Suggested readings or excerpts from: Kartomi, Nettl

Week 3: Tuning systems, measuring sound and instruments, build a monochord

Suggested readings or excerpts from: Adkins, Ellis, Lehman, Marcus, McGarry, Provine, Stock
Weeks 4-5: Material culture, instruments/artifacts, and their cultural meanings

**Suggested readings or excerpts from:** Hill/Chaumeil, Barber/Sánchez/Olvera, and Stökli/Both.

example: protocols for handling and interacting with instruments and their cultural significance/origins.

Weeks 6-7: Designing instruments, luthierie/building instruments, commercial instruments

**Suggested readings or excerpts from:** Ledang

Week 8: Repairing and modifying instruments

**Suggested readings or excerpts from:** Armstrong

examples: making instruments accessible to those with orthopedic differences

Week 9: Materials and sustainability

examples: substituting materials due to sustainability or endangered resources issues, impact on trade, costs;

**Suggested readings or excerpts from:** Both Titon articles

Weeks 10-11: Archives and museums, storing and displaying instruments, assessing and appraising instruments; departmental service to help staff technician with instrument collections

**Suggested readings or excerpts from:** Seeger

Week 12: Amplifying and recording instruments

Weeks 13-14: Electronic instruments and sound applications ("apps"), Arduino theramin

Week 15: Composing music for new instruments, presentations of instrument projects and performances
VIII. Instructional Methods

Describe the type(s) of method(s) that are required or recommended for the instruction of this course (lectures, demonstrations, etc.). Include any method that is essential to the course, such as the use of particular tools or software.

**Instructional Methods**

Classes will be taught via lecture, classroom discussion in large and/or small groups, and will include a variety of media formats. Discussions will center on assigned readings about special topics and issues for each week. Hands-on experiences with musical instruments will be used whenever possible.

IX. Evaluation of Outcomes

Describe the methods to be used to evaluate students' learning, i.e. written exams, term papers, projects, participation, quizzes, attendance, etc.

Evaluation of students will be based on the following:

- Engaged participation in class discussions, drawing from reading materials and class lectures (this is measured with discussion rubrics and reporting-out summaries from small group discussions)
- Short essay responses to assigned readings
- A written midterm exam covering topics like classification systems in organology.
- A comprehensive final project and essay that will be approved by the instructor. The project will include researching, designing, and creating an instrument or an alteration of an instrument, and writing an essay about their creation or development. Essays will be submitted in stages (proposals, drafts) for feedback. For the project and essay, the student will synthesize and analyze ideas and issues discussed throughout the term, as well as demonstrate the student’s comprehension of musical instruments through the creation and performance of a sound-producing device. Depending on the class-size, students may work in small groups or ensembles.
Discuss how these methods may be used to address the course and program outcomes, as appropriate. Include or attach a matrix to align the evaluation methods to the outcomes.

Evaluation of students will be based on the following:

- Engaged participation in class discussions, drawing from reading materials and class lectures (this is measured with discussion rubrics and reporting-out summaries from small group discussions)
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<tr>
<th>Outcome Product</th>
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<th>GE 1c</th>
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If this is a general education course, discuss how these methods may be used to address the associated GE Learning Outcomes listed below. Include or attach a matrix to align the evaluation methods to the outcomes.

Evaluation of students will be based on the following:

- Engaged participation in class discussions, drawing from reading materials and class lectures (this is measured with discussion rubrics and reporting-out summaries from small group discussions)
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The relationship of these methods/products to the expected GE outcomes is included in the matrix below.

In addition to the information contained in the matrix, students will be asked to submit pre- and post-class answers to the following question:

“Based on what you know now, in your opinion, what are we able to understand about human culture and our world from musical instruments?”

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<tr>
<th>Outcome</th>
<th>Product v</th>
<th>GE 1a</th>
<th>GE 1b</th>
<th>GE 1c</th>
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X. **This OPTIONAL Section is for describing Course/Department/College specific requirements.**

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