

Music in Motion: Providing Music Library Support to An Innovative Transdisciplinary Academic Success Cluster at Arizona State University

Dr. Robert Culbertson – Lead Instructor, Physics Department

Dr. Stephen Krause – Ira A. Fulton School of Engineering Dr. Mark Ashbrook – Mathematics and Statistics Department

Dr. Christine Gillette – English Department Dr. Dale Baker – Fulton College of Education

Sandy Skousan – Undergraduate Teaching Assistant, Physics Department

Dr. Christopher E. Mehrens – Head, Music Library

Overview

- Academic Success Cluster:**
Lab Science (4 credits), Math (3 credits), English (3 credits), Integrated Seminar (1 credit)
- Course:**
Open to all freshmen
- Teaching Team:**
Physics, Math, English, Music, Education, Engineering
- Music Library Support:**
Provide Music Instruction, Bibliographic Instruction, and Essential Library Resources to support Learning Outcomes.
Serve as intermediary between the ASU Libraries, the College of Teacher Education and Leadership, and the School of Music
- Music:**
Connect and contextualize content with students' everyday lives
- Inquiry Learning:**
Shift from memorization & algorithmic problem solving
- Hands On**
Engineering design process + instrument fabrication
- Integrated Seminars:**
Wide variety of instruments played by professionals to illustrate historical, cultural and musical origins
- Final Project:**
Design, construct, and demonstrate a musical instrument
- Final Concert:**
Demonstration of and performance on self-constructed instruments

Course Projects and Goals

- Monochord:**
Goal: Construct a single string instrument as a means to discover the principles of the Pythagorean scale
- Guitar Frets:**
Goal: Investigate the fret positions (relative to the bridge) on a guitar; investigate the pitches of fretted strings
- Loudspeaker:**
Goal: Construct a working loudspeaker from a paper plate, magnet, wire, paper, and cardboard as a means of investigating electricity and magnetism.
- PVC Flute:**
Goal: Construct a 6-hole transverse flute from ½-inch PVC pipe for harmonic analysis
- Wind Chimes:**
Goal: Construct a 4, 5, or 6 tube wind chime; student select pitches and design wind chimes to produce them
- Final Project:**
Goal: Design and construct a musical instrument



Integrated Seminars

- Music Notation – History & Practice (Dr. Christopher Mehrens)
- Basic Music Theory (Dr. Christopher Mehrens)
- The Piano (Rick Florence and David Brown, technicians)
- The Organ (Christina Hutten)
- The Harpsichord (Christina Hutten)
- African Drumming (Dr. Mark Sunkett)
- Electronic Music (Dr. Glenn Hackbarth)
- Indian Musical Instruments (Dr. Ted Solis)
- Fender Musical Instruments (Tim Shaw and Dale Curtis)
- Woodwinds and Reeds (Josh Gardner)
- Gamelan (Dr. Ted Solis)

Faculty-Librarian Collaboration

Music in Motion: The Design and Construction of Musical Instruments, is an Academic Success Cluster (ASC) that integrates the physical sciences, mathematics, English Composition and music. The course was originally developed and taught by a *transdisciplinary* team as a means to “enhance technological literacy and to integrate math, science, and technical writing into a contemporary context.”

From its inception, the ASU Libraries were seen as being integral to the learning outcomes of this innovative suite of courses through the provision of liaison services, library resources, bibliographic instruction, and reference services. The music librarian worked closely with the lead instructor in the organization and scheduling of integrated seminars, where a wide variety of instruments were demonstrated by professionals to illustrate scientific, historical, cultural and musical origins. In addition to this, the librarian versed the students, many without music backgrounds, in music notation and basic music theory. The librarian was always present at these sessions giving greater visibility of the Libraries as well as a means to demystify the role information professional and make them more approachable in the future.

In collaboration with the English Professor, the music librarian taught the students how to find information and how to use the library to complete research assignments related to their final projects. Research assignments were formulated with the librarian to take advantage of appropriate and available library resources in a variety of formats (print, electronic, streaming audio, and streaming video). Bibliographic instruction took place in three libraries – the Music Library, the Main Library, and in the Science Library in order to highlight the resources found therein. As with the integrated seminars, the role and importance of the librarian was demonstrated through close interaction with the student participants.

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