New Course Request

Indiana University

IUPUI Campus

Check Appropriate Boxes: Undergraduate credit □ Graduate credit □ Professional credit □

1. School/Division ___ Department Music & Arts Technology 2. Academic Subject Code ___ MUS

3. Course Number N310 (must be cleared with University Enrollment Services) 4. Instructor Rees/Laranja

5. Course Title ___ Music Technology I

Recommended Abbreviation (Optional) ___ Music Tech I

6. First time this course is to be offered (Semester/Year): Fall 2010

7. Credit Hours: Fixed at ___ or Variable from ___ to ___

8. Is this course to be graded S-F (only)? Yes ___ No ___ X

9. Is variable title approval being requested? Yes ___ No ___ X

10. Course description (not to exceed 50 words) for Bulletin publication: P: A210. This is the foundation course to the music technology sequence. It is intended to provide the student with a conceptual understanding of basic hardware and software tools for creating, editing, and recording music. It will also acquaint the student with the nomenclature and techniques of music production.

11. Lecture Contact Hours: Fixed at ___ or Variable from ___ to ___

12. Non-Lecture Contact Hours: Fixed at ___ or Variable from ___ to ___

13. Estimated enrollment: ___ of which ___ percent are expected to be graduate students.

14. Frequency of scheduling: Fall Semester Only. Will this course be required for majors? ___ Yes

15. Justification for new course: ___ New Bachelor Degree Program (BSMT)

16. Are the necessary reading materials currently available in the appropriate library? ___ Yes

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant. ___ No

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

[Signature] Date 5/11/10

Department Chairman/Division Director

Approved by:

[Signature] Date 5/11/10

Dean/Chancellor/Vice-President

Dean of Graduate School (when required)

Chancellor/Vice-President

University Enrollment Services

Date

Date

Date

Date

University Enrollment Services

Final-White; Chancellor/Vice-President-Blue; School/Division-Yellow;
Department/Division-Pink; University Enrollment Services Advance – White
Music Technology 1  
6 Credit Hours (Course N310)  
Syllabus

Course Description: Pre-requisite: A210

This course is the foundation course to the music technology sequence. It is intended to provide the student with a conceptual understanding of basic hardware and software tools for creating, editing, and recording music. It will also acquaint the student with the nomenclature and techniques of music production.

Topics include the history of music and sound technology, working with music hardware and software that are industry standard for live and recorded musical production, digital signal processing (DSP), and production of combined, MIDI, audio loops and acoustic instrument multi-track recording, mixing and mastering. Class sessions will involve lectures, class discussions, and exercises. Students will work individually and on group projects, many of which will be presented for class discussion. Exams will also be used to assess students’ understanding and ability to discuss the course material.

Course Objectives/Outcomes
At the conclusion of this course, students should be able to:

• Summarize the evolution of music technology since the early part of the 20th century; (PUL 1e; NASM 18)
• Understand the basic roles and functions of hardware and software employed in music technology; (PUL 1e; NASM 17)
• Define the fundamental acoustic characteristics for studio monitoring; (PUL 1e; NASM 17)
• Identify microphones and their proper usage; (PUL 1e; NASM 18)
• Understand components of the signal path for recording; (PUL 1e; NASM 18)
• Properly set up and conduct a recording session for live performance; (PUL 1e; NASM 18)
• Properly set up and conduct a studio session; (PUL 1e; NASM 18)
• Evaluate the acoustical features of audio quality involved with microphone usage, mixing, and mastering of musical instruments; (PUL 1e; NASM 18)
• Identify different types of studios and make purchasing decisions for equipment on a budget; (PUL 1e; NASM 18)
• Be able to record multiple instruments, mix and master the file to industry standards; (PUL 2b, 3b; NASM 29)
• Be able to incorporate new and emerging technology (e.g., iPod, iPhone, iTouch, virtual musical instruments and recording environments) into studio operations; (PUL 1e; NASM 18)
• Understand the recording studio culture, production process, and direction of musical talent required for a successful recording session, and; (PUL 1c; NASM 18)

Required Textbook:
Title: Audio in Media, Ninth Edition
Authors: Stanley R. Alten
Publisher: Michael Rosenberg

Suggested Readings:
Various readings as assigned by instructor from trade and professional journals and books.
Equipment Needed:
A portable storage device with a minimum of 40 gigabytes or CD-R disks with hard cases (about 40);
High-quality headphones with a 1/8" plug and ¼" adapter and full-ear closed-back design (In-ear MP3-player style headphones are not acceptable);
Soldering iron and solder;
Cable and XLR connector, and;
Permanent marker.

Software Used: Cakewalk Sonar, and Sony Sound Forge, in addition to other music software including Reason and Pro Tools LE.

Class Policies and Expectations:
Class Format and Participation. The course will be a mixture of demonstration, discussion, critiques, and hands-on experiences. Much of the class time will be spent developing materials and applying concepts individually or in groups. You will share the results of your efforts with the class through project demonstrations and presentations.

Projects
There are six projects to be completed over the course of the semester. Each project contains a blend of theory and practice.

Course Schedule of Assignments

Due Week 2     Project 1: Cable Construction
For this project, the students will learn how cables function in a music technology lab. This project will include an introduction to cable soldering, in which the students will have to make their own microphone cable.

Due Week 5     Project 2: Hooking Up the Music Technology Lab
Students will learn and understand the functions of a studio mixer. Reading signal flow and understanding the functions of a basic generic broadcast console will be the focus of the project. Students will learn to read and explain a mixer schematic and they will hook the cables to properly route the system for a given studio connection. The instructor will dictate its configuration and the students will connect the equipment. Students will successfully feed the signal through the desired path and document each step of what they went through to achieve the desired outcome. This project also includes the use of a MIDI control surface to record in multi-track software.

Due Week 7     Project 3: Audio Techniques Management
Students will learn about microphones for this project. It focuses on type of microphone and microphone placement according to specific performance situations. They will properly mike multiple instruments and record them for this project. Use of DSP techniques will be discussed and student will implement them to get the best sound (e.g., equalization, reverberation). This project will be divided into studio sessions of six instruments. Students will also mix and master the file.

Due Week 10    Project 4: Technology Studio Design Project
Students will gather background information on recording studio design and will develop a proposal for building a studio. Included they will explain the functions of the studio and will document the functionality of the equipment. Students will generate an invoice with prices for all equipment based on an instructor-created budget. They will be required to make drawings of the studio and to be prepared to justify its design and equipment. Students will be presenting their studio designs in class.
Due Week 13  Project 5: Online Music Technology Project – For this project, Students will interview an expert in the music technology field about a piece of equipment for use in the studio. This Podcast will be uploaded to the IU iTunes site. Included in this project, students will produce an intro song with a VO introducing the Podcast show.

Due Week 16  Project 6: Combo Session – Students will record three songs from an instrumental combo using music technology techniques discussed in the course. Students will record electric or acoustical bass, drums, guitar/or piano, and a solo instrument (including voice).

Grading and Assessment
Grades will be determined by the following:

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<tr>
<th>Activities</th>
<th>Percentage</th>
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<tr>
<td>Audio Projects</td>
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<tr>
<td>Final project</td>
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<td>Midterm Exam</td>
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<td>Attendance and participation</td>
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Grades are based on points as indicated below:

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<th>Points</th>
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<td>93-100</td>
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<td>87-89</td>
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<td>59 and below</td>
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