Syllabus for
MUS 105 - Introduction to Music Technology
1 Credit hour
Fall 2009

I.   COURSE DESCRIPTION

A survey of concepts, equipment, and techniques associated with the modern electronic studio.
Includes most aspects of MIDI and the use of microphones, speakers, and the mixer board.
Prerequisite: MUS 100 or 101.
Instrument Use Fee: $55

II.   COURSE GOALS

This course is designed to enable the student to do the following:

A.   Learn how to effectively communicate with others in the music field on subjects relating
      to music technology
      1.   Know the vocabulary
      2.   Be familiar with base general concepts on which music technology is built

B.   Recognize the roles of technology in modern music, regardless of musical genre
      1.   Reshaping how music is created
      2.   Reshaping how music is produced
      3.   Reshaping how music is distributed

C.   Get hands-on experience with the tools used in music technology
      1.   MIDI
      2.   Basic sound reinforcement and recording

D.   Learn the trends and directions in technology and explain how these changes are
      affecting personal ambitions of musicians in the music industry.

III. STUDENT LEARNING OUTCOMES FOR THIS COURSE

A.   Terminal Objectives
      As a result of successfully completing this course, the student will be able to demonstrate
      the following:
      1.   Converse intelligently on the subject of music technology by possessing basic
            vocabulary associated with recent technologies
      2.   Discuss how technology is impacting the careers of people in the music industry.

B.   Unit Objectives
      As a result of successfully completing each unit, the student will be able to do the
      following:
      1.   Unit I
            Explain basic information within Music Technology

      2.   Unit II
            Setup and operate a basic sound recording/reinforcement rig including,
            a.   Operation of a mixing board, mics, amplifiers, and speakers

b. Applying EQ, pan, and outboard effects

3. Unit III
Setup and operate a basic MIDI studio including,
a. Operation of MIDI keyboard
b. Operation of computer sequencing program

4. Unit IV
Do basic computer notation

C. Objectives for Students in Teacher Preparation Programs
The Teacher Preparation Program meets the competency-based requirements established by the Oklahoma Commission on Teacher Preparation. This course meets the following competencies: General Competency #6 and Subject Competency #18 Instrumental/General and #19 Vocal/General

This course is designed to help students meet subject competencies:
1. how to recognize, describe, and apply technological developments that affect personal interests in music. (Gen. Comp. 6)
2. ways that new technology is changing the way music is composed, performed, and stored. (Gen. Comp. 6, Subj. Comp. 18 & 19)
3. where and how to find answers to specific problems that can be solved by the efficient use of technological tools. (Gen. Comp. 6)
4. how to design and operate a basic MIDI studio that will allow the musician to apply technology to specific needs and problems. (Gen. Comp. 6, Subj. Comp. 18)
5. the technical information to produce original music via technology. (Gen. Comp. 6, Subj. Comp. 18 & 19)
6. to integrate most components found in music technological systems that allow the flow of data for storage and editing. (Gen. Comp. 6)
7. basic vocabulary associated with the new technology. (Gen. Comp. 6)
8. how to use music files downloaded from internet music pages. (Gen. Comp. 6, Subj. Comp. 18 & 19)
9. basic uses and specific designs for audio recording and sound reinforcement. (Subj. Comp. 18 & 19)
10. The Teacher Candidate will be able to demonstrate the following:
a. successfully complete written exams about various aspects of music technology. (Gen. and Subj. Comp.)
b. work with equipment and the concepts involved doing lab assignments. (Gen. and Subj. Comp.)
c. produce a final project involving some personal manipulation of the elements of music technology. Evaluation will be made by the instructor, with self-evaluation by the Teacher Candidate. (Gen. and Subj. Comp.)
11. Required/Recommended PORTFOLIO ITEM(s) include the following:
A record of the personal project and the results of the evaluation OR professional product created while acting as producer, first, or second engineer. (Gen. and Subj. Comp.)

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IV.   TEXTBOOKS

    A.   Required Materials
        1.   Textbooks
            A personal USB thumb drive (minimum 2G capacity)
            Five (5) blank Digital Audio (or Consumer Audio) CDs
        2   Other
            None
    B.   Optional Materials
        1.   Textbooks
            Rumsey, Francis & McCormick, Tim. <u>Sound and Recording, an introduction</u>.
                Oxford: Focal Press, 2002.
            Mandell, Jim. <u>The Studio Business Book</u>. Emeryville: MixBooks, 1995.
            Passman, Donald. <u>All You Need to Know About the Music Business</u>. New York:
                Simon & Schuster, 2000.
            Post Magazine
            Mac World Magazine
            MIX Magazine
        2.   Other
            None

V.   POLICIES AND PROCEDURES

    A.   University Policies and Procedures
        1.   Attendance at each class or laboratory is mandatory at Oral Roberts University.
            Excessive absences can reduce a student's grade or deny credit for the course.
        2.   Students taking a late exam because of an unauthorized absence will be charged a
            late exam fee.
        3.   Students and faculty at Oral Roberts University adhere to all laws addressing the
            ethical use of others' materials, whether it is in the form of print, video,
            multimedia, or computer software.
        4.   Final exams cannot be given before their scheduled times. Students need to
            check the final exam schedule before planning return flights or other events at the
            end of the semester.
        5.   Students are to be in compliance with university, school, and departmental
            policies regarding Whole Person Assessment requirements. Students should
            consult the WPA handbooks for requirements regarding general education and
            the students' majors.
            a.   The penalty for not submitting electronically or for incorrectly
                submitting an ePortfolio artifact is a zero for that assignment.
            b.   By submitting an assignment, the student gives permission for the
                assignment to be assessed electronically.

    B.   Department Policies and Procedures-See Music Department Student Handbook

    C.   Course Policies and Procedures

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1. Evaluation Procedures
   a. Evaluation/Assessment of Competencies
      - Quizzes / Assignments   30%
      - Notation Project   10%
      - MIDI Midterm Project   25%

      - Mixing Final Exam   10%
      - Mixing Final Project   25%
   b. Grading scale
      - 90% = A
      - 80% = B
      - 70% = C
      - 60% = D
   c. Extra Credit
      Extra Credit may be granted, at the instructor's discretion, to any student **with perfect attendance**. No more than 7% will be granted in any circumstances.
2. ePortfolio Requirements
   a   Finale – Printed notation (Piano score. Ties, rests, key signature, tempo, dynamics, title, repeat and end bar markings are required.)
   b   Performer – Complete MIDI sequence (5 parts with percussion. Pan, volume, quantization and musicality are required.)
   a. Mixing – Audio recording to CD (3 part with EFX.)
3. Other Policies and/or Procedures
   a. Makeup Exams: If any scheduled exam/practicum is missed for any reason, it cannot be made up unless the instructor is notified in advance. Emergencies are the only exception to this rule and will be handled as excused absences. Makeup exams may be oral in nature and may be more detailed than the original exam.
   b. Late Assignments: Late work immediately loses 20% of its value and continues to depreciate 10% for every additional week. Assignments late due to an excused absence must be turned in before class time on the date due. If the absence was unanticipated and deemed excused, then the assignment is due before noon on the next day or first day of the student's return to classes
   c. Office Hours and Lab Help: The professor will be available for consultation during regular office hours. Lab attendants will be available to assist students in the evenings. Neither the professor nor the lab attendants should be considered tutors and will not teach material covered in missed class lectures.

V.   COURSE CALENDAR

Unit 1: History and Overview

Week 1
- A.   In class
    1.   Overview of Music Technology history--Music Creation
        - a.   The introduction of recording technology
        - b.   The introduction of the "synth"
        - c.   Computer revolution
    2.   Overview of Music Technology history--Music Recording
        - a.   The radio and records
        - b.   Multi-track tapes
        - c.   Digital tapes
        - d.   Non-linear mediums
    3.   Overview of technological opportunities/challenges
        - a.   for the modern composer
        - b.   for the modern "sound guy"
        - c.   for the studio owner
- B.   Assignments
    1.   Vocabulary memorization

Week 2
- A.   In class
    1.   Vocabulary Quiz

- B.   Assignments
    1.   Web articles assigned

Unit 2: Sound Mixing, Reinforcement and Recording

Week 3
- A.   In class
    1.   Collect Assignment
    2.   Define and demonstrate sound hardware
        - a.   Mixing board
        - b.   Microphones
        - c.   Amplifiers
        - d.   Speakers
    3.   Respecting equipment principles
        - a.   mics
        - b.   cords
        - c.   speakers
- B.   Assignments
    1.   Read: Sound and Recording, Ch 3, 4
    2.   Project: Finale music notation

Week 4
- A.   In class
    1.   Collect Assignment
    2.   Identification Quiz
    3.   Recording demonstration
        - a.   Volume, Unity and Signal to Noise ratio

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        b.   Bussing
        c.   Recording to CD

  B.   Assignments
      1.   Read: Sound and Recording, Ch 6
      2.   Project: "Record"

Week 5

  A.   In class
      1.   Collect assignment
      2.   Music mix basics
          a.   The "music stage"
          b.   Volume
          c.   Pan
          d.   EQ
          e.   Effects

  B.   Assignments
      1.   Read: Sound and Recording, Ch 12, 13
      2.   Project: "I'm in the Shower!"

Week 6

  A.   In class
      1.   Collect assignment
      2.   Multi-track recording
          a.   Mixer sections
          b.   Pre/Post AUX Sends

  B.   Assignments
      1.   Read: Web article assigned
      2.   Project: "Final Project" (Due Finals Week)

Week 7

  A.   Mixing Practical Exam--15 minute block as set by schedule
      1.   Mixing Practical Final
          a.   Part identification
          b.   Hookup
          c.   Setting levels
          d.   Pan and EQ
          e.   Bussed EFX

  B.   Assignments
      1.   Vocabulary memorization

Unit 3: The Midi Studio

Week 8

  A.   In class
      1.   Vocabulary Quiz
      2.   Define and demonstrate MIDI hardware
      3.   Basic hardware & software overview
      4.   Introduction to *Garageband; Reaper* applications
          a.   Program interface
          b.   Selecting instruments
          c.   Recording notes

B. Assignments
  1. Read: Sound and Recording, Ch 14
  2. Project: "Save!"

Week 9
  A. In class
    1. Basic techniques of sequencing
      a. Metronome
      b. Tracks
      c. Quantization
  B. Assignments
    1. Project: "Sequence and Quantize"

Week 10
  A. In class
    2. MIDI control changes
      a. Key velocity
      b. Volume
      c. Pan
      d. Sustain
      e. Instrument assignments
    3. Introduce MIDI Final Project
  B. Assignments
    1. Project: "MIDI Final Project" (Due Finals Week)

Week 11
  A. In class
    1. Advanced MOTU Performer functions
      a. Digital Audio
      b. Score to Picture

Unit 4: Computer Notation

Week 12
  A. In Class
    1. Creation of Computer Logins
    2. Introduction to Macintosh operating system

  B. Assignments
    1. Project: "Spinning Song"

Week 13
  A. In Class
    1. Collect Assignment

  B. Assignments
    1. Project: "Sonatina in C Major"

Unit 5: New Media

Week 14
  A. In class

        1.   Introduce the Internet
            a.   Material for composer
            b.   Material for performer
            c.   Technical information
        2.   Introduce to Hard-Disk recording
            a.   Show hardware
            b.   Demonstrate non-linear editing
            c.   Demonstrate non-destructive editing
    B.   Assignments
        1.   Reading: POST magazine

Finals Week
    A.   In class
        1.   Collect Mixing and MIDI Final Projects

Course Inventory for ORU's Student Learning Outcomes

Introduction to Music Technology MUS 105
Fall 2009

This course contributes to the ORU student learning outcomes as indicated below:
Significant Contribution – Addresses the outcome directly and includes targeted assessment.
Moderate Contribution – Addresses the outcome directly or indirectly and includes some assessment.
Minimal Contribution – Addresses the outcome indirectly and includes little or no assessment.
No Contribution – Does not address the outcome.

The Student Learning Glossary at http://ir.oru.edu/doc/glossary.pdf defines each outcome and each of the proficiencies/capacities.

OUTCOMES & Proficiencies/Capacities	Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
1 **Outcome #1 – Spiritually Alive** Proficiencies/Capacities				
1A Biblical knowledge				X
1B Sensitivity to the Holy Spirit			X	
1C Evangelistic capability		X		
1D Ethical behavior		X		

OUTCOMES & Proficiencies/Capacities	Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
2 **Outcome #2 – Intellectually Alert** Proficiencies/Capacities				
2A Critical thinking	X			
2B Information literacy	X			
2C Global & historical perspectives		X		
2D Aesthetic appreciation	X			
2E Intellectual creativity		X		

OUTCOMES & Proficiencies/Capacities	Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
3 **Outcome #3 – Physically Disciplined** Proficiencies/Capacities				
3A Healthy lifestyle				X
3B Physically disciplined lifestyle			X	

OUTCOMES & Proficiencies/Capacities	Significant Contribution	Moderate Contribution	Minimal Contribution	No Contribution
4 **Outcome #4 – Socially Adept** Proficiencies/Capacities				
4A Communication skills		X		
4B Interpersonal skills		X		
4C Appreciation of cultural & linguistic differences	X			
4D Responsible citizenship		X		
4E Leadership capacity	X			