Syllabus: MU 4414—Recording Arts, Spring 2013

Lab: Tuesday *or* Thursday, 8:10 – 9:00 am
Lecture: Tuesday *and* Thursday, 9:00 – 9:50 am
Music Technology Lab, Butler 208 (primary class meeting place)
Recording Studio, Butler 263 (via 262, Steadman Upper Lobby)

INSTRUCTOR: **Dr. David B. Wetzel** *(Instructor of Record for this course. Only the Instructor of Record may issue a grade)*
Email: dwetzel@mansfield.edu; **Phone:** (570) 662-4728
Office: Butler G7 (office hours: TBA)
Course Web Site: http://mansfield.desire2learn.com
Pre-requisites: MU 3313 Electronic Music (waived by permission)
Credits: 3

Course Description

Seminar in digital audio workstation (DAW) recording: emphasis will be placed on sound recording, editing, and mixing processes through hands-on experience. Students will collaborate to produce high-quality recordings within several musical genres.

The purpose of this course is to prepare musicians with an interest in technology to make high quality recordings using a wide array of tools and techniques. No specific prior mathematics or engineering training is required. Students should have a basic understanding of digital audio, MIDI, and electronic music sequencing techniques.

Class will meet on Tuesday and Thursday mornings from 8:10 – 9:50 am. Class sessions are split into a "lab" portion from 8:10 – 9:00 and a "lecture" from 9:00 – 9:50 am. Students will attend the lab portion one day per week (either Tuesday or Thursday) in order to concentrate on hands-on activities in a smaller group setting. All students enrolled in MU 4414 are required to attend the "lecture" on both Tuesday and Thursday from 9:00 – 9:50.

STUDENT LEARNING OUTCOMES (SLO)

MU4414 Recording Arts is part of a sequence of courses required for the Bachelor of Music with Emphasis in Music Technology. As such, the student learning outcomes for this course align with specific SLOs for the program:

Program-level SLOs: References to Student Learning Outcomes for the BM with an Emphasis in Music Technology Program:

- Students will demonstrate experience and expertise in music technology hardware and software for recording, editing, mixing, applying audio effects, MIDI sequencing, and notation.
- Students will demonstrate broad knowledge of the music industry.

Course-level SLOs: References to Student Learning Outcomes for MU 4414 Recording Arts

The following SLOs for this course support progress towards the program-level SLOs outlined above. Upon successful completion of this course, students will be able to:

1. Evaluate equipment and technologies for use in recording
2. Apply fundamental concepts of acoustics and digital audio to the recording process
3. Use microphones and advanced recording equipment effectively in musical projects
4. Use Digital Audio Workstation (DAW) software for recording and non-linear audio editing
5. Edit, mix, and prepare digital audio files for client delivery
6. Employ effective techniques for independently managing complex recording projects

Core Content & Objectives

Throughout this course you will gain recording skills for diverse situations through hands-on exercises, group discussion, short homework assignments, and individual or group projects. A detailed list of activities, assignments, and due dates will be available on the course website in *Desire2Learn* (D2L).

Content Area (topics we will cover)	**Learning Objectives** (course activities)
Digital Audio Theory	• Choose appropriate file formats for recording and project delivery (SLO 2)
Studio Equipment	• Differentiate between standard audio cables and connectors (SLO 1) • Differentiate between standard hardware components in a recording system (SLO 1) • Set up and troubleshoot a recording system (SLO 1-4)
Session Management	• Set up DAW session files for various recording situations (SLO 4) • Document a recording session or project (track lists and proposals) (SLO6)
Microphones	• Choose appropriate microphones based on technical specifications (SLO 3) • Choose appropriate microphone placements for various recording situations (SLO 3)
Basic Acoustics	• Set up a recording or mixing space for optimal acoustic balance (SLO 2) • Set appropriate recording and listening levels (SLO 2)
Live Recording	• Record in stereo using standard miking strategies (SLO 3) • Record to eight or more tracks simultaneously (SLO 4) • Record "overdubs" and "punch-ins" in a multi-track session (SLO 4)
MIDI Recording	• Input MIDI data using physical controllers (keyboards, etc) (SLO 4) • Synchronize MIDI tracks with recorded audio tracks (SLO 4)
Media Transfer	• Record to digital media from archival sources (tape, LP, etc) (SLO 4)
Editing	• Perform basic linear and non-linear edits on digital audio (SLO 5)
Basic Mixing	• Balance output levels and pan assignments for a multi track audio project (SLO 5) • Mix a multi-track project to two tracks for final mastering (SLO 5)
Mastering/Delivery	• Format digital audio for delivery via physical media or Internet (SLO 5) • Convert mix files to standard formats for use in multimedia (SLO 5)
Career Development	• Create and present a digital portfolio of sample work (SLO 6) • Write coherent summaries of techniques and tools used in this course (SLO 6)

Course Expectations (How to Do Well in this Course)

- ***Commit your time.***
- ***Show up and do the homework.***
- ***Take charge of your learning.***

Commit your time. Students will be expected to spend quality (and *quantity*) time each week preparing for class. Studio time will be available for project work and homework assignments. Reading assignments must be completed *before* class. All homework assignments will have firm deadlines and are to be submitted online (unless otherwise indicated). In most cases, assignment will be reviewed in class.

Show up and do the homework. Students are expected to complete all lab exercises, including individual and group tasks. Homework assignments will give you an opportunity to apply concepts covered in lectures and labs. Several independent projects will be assigned throughout the semester allowing students to explore specific techniques in more depth. Independent projects will require advance planning, organization of materials, and some creativity. Class discussions on various techniques and student projects will help keep the class abreast of various discoveries made, pitfalls encountered, and solutions devised by fellow students. The midterm exam will test knowledge of material covered in lectures and readings from the first half of the semester, but will require independent research as well. The final exam is a cumulative presentation of your work for this course in an online portfolio format. Each student is enrolled in the course web site on D2L (mansfield.desire2learn.com) and will be required to log in regularly in order to access assignment info and reading materials, submit homework, and participate in online discussions or group projects. Specific readings and assignment details will be available via D2L.

Take charge of your learning. Studio recording and production is a field in which everyone is self-taught to a high degree. I will expect you to use the available resources to their fullest potential and to seek out additional resources on your own. Manuals are available for all software and hardware used in this class. More information is available in books, magazines, and online sources. I will expect you to read the appropriate manuals before asking me to trouble-shoot for you. All students will be responsible for backing up and maintaining copies of their own work. All equipment will fail at some point.

Materials

This course will make extensive use of information and exercises found in the required textbooks and reserve readings. You are expected to acquire your own books and to study them diligently. Supplemental readings and activities will be drawn from primary sources, such as technical manuals and interviews with prominent studio artists and producers, as well as from the myriad tutorials and articles freely available online.

Required Textbooks:

- Bartlett, Bruce and Jenny Bartlett (2012). Practical recording Techniques, 6th edition. Burlington, MA: Focal Press

Required Digital Media:

- USB flash drive, 2 GB or higher (get 2 and use one as a backup!)
- Blank CD/DVD media
- Reliable Internet access for D2L and other required online activities

Recommended/Reserve Readings and Listening (subject to change):

- Owsinski, Bobby (2005). *The Recording Engineer's Handbook*. Boston: Thomson Course Technology
- http://booksite.focalpress.com/Bartlett/companion_audio_files.php passcode: BART898DFA9P
- Thompson, Daniel M. *Understanding Audio: Getting the Most out of Your Project or Professional Recording Studio.* Boston: Berklee Press, 2005.
- Digidesign and Frank D. Cook. *ProTools 101: Version 8 Official Courseware*. Thomson Course Technology. 2009.
- Technical manuals and user guides for all studio equipment and software (PDF).
- Additional readings TBA (available through Library eReserves and/or via D2L).

Attendance

Students must attend class and arrive on time. Absences due to illness, serious mitigating circumstances, professional commitments, university-approved activities and the like will be excused with proper documentation. To be excused from class, a student must satisfy the requirements for an excused absence as outlined in current university policy, or must obtain special approval from the instructor *in writing (typically by email)*. Students who miss class for any reason will be responsible for obtaining information covered in missed lectures and for completing any make-up work on their own time. Coming to class more than ten minutes late, or by less than ten minutes three times during the semester, will count as an absence. Unexcused absences will be considered in the grading process.

Academic honesty

Academic honesty is critical to the value of your learning experience and your professional development. Mansfield University strives to maintain an ethic of student leadership through character, scholarship, culture, and service. Therefore, in this class, it is expected that you will do your own work, credit others for their contributions, and play a helpful role in enabling learning by others. Acts of academic dishonesty will not be tolerated and may carry severe penalties.

Acts of academic dishonesty include: plagiarism, cheating, sabotage, taking advantage of resources without proper authorization (such as **pirated software or music**), claiming credit for the work of others, and failing to appropriately cite sources. In cases where academic dishonesty is suspected, the student will be confronted. Sanctions for academic dishonesty are largely at the instructor's discretion

and may affect individual assignment grades or final grades for the course, depending on the situation and the seriousness of the infraction. Particularly serious offences may have ramifications beyond this course.

Assignments and Activities

Students will complete lab exercises, short homework assignments, a series of independent projects, a midterm exam, and a final portfolio for presentation at the end of the semester. Participation in class activities and discussions is essential. Detailed assignment instructions and grading criteria will be posted on Blackboard.

Class discussion & participation. Class discussions will be based on reading assignments, lab activities, student experiences, and current events related to sound recording. Students should come to class prepared, having done the assigned reading and ready to ask or answer reasonable questions. Students are encouraged to pursue readings outside those that are assigned.

Lab exercises. Each week, students will participate in hands-on activities related to subjects covered in the weekly lectures and presentations. Assessment is pass/fail, based on participation.

Homework. Students will demonstrate their skills and mastery of key concepts through short homework assignments to be done outside of class. These assignments will generally relate to a single audio production concept or studio task. They won't be hard, but they will demonstrate competence.

Independent projects. Students will produce several independent recording and editing projects using professional DAW software. Projects will include recording in stereo, recording solo instruments, recording live to multi-track, overdubbing, and recording and editing a radio advertisement.

Midterm exam. The midterm exam will encompass material covered in the first half of the semester. A series of short essay questions will require independent research and critical thinking on issues related to choices of microphones, microphone placement, studio equipment, digital audio theory, and basic acoustics.

Final portfolio and presentation. Students will prepare examples of their work for inclusion in an online portfolio. This portfolio will be presented to the class at the final exam period, and will be subject to peer evaluation. Details and instructions will be available on D2L.

Grading

Students will be evaluated on the basis of their work in this class. This includes preparation for and participation in class discussions, lab exercises, homework assignments, exams, presentations, and independent projects. Letter grades will be given for the following class activities (overall grade weights are assigned by category):

Assignment	Weight
Lab Participation & Attendance	10%
Homework	40%
Independent Projects	30%
Midterm Exam	10%
Final Portfolio & Presentation	10%

Lab activities are graded as pass/fail (either you demonstrate competency or you don't). Exam essays, homework, and independent projects will be given letter grades according to the following criteria:

Letter	%	GP	Criteria
A	95 – 100%	4.0	**Excellent**. Well-prepared and thorough. Shows creativity, diligence, or insight beyond the basic requirements
A-	90 – 95%	3.7	
B+	87 – 90%	3.3	**Good**. Meets basic expectations. Demonstrates a basic understanding of the material, perhaps with minor flaws
B	84 – 87%	3.0	
B-	80 – 84%	2.7	
C+	77 – 80%	2.3	**Fair**. Completes the assignment, but demonstrates a less-than-firm grasp of the material; missing elements; multiple technical errors; uninspired
C	74 – 77%	2.0	
C-	70 – 74%	1.7	
D+	67 – 70%	1.3	**Poor**. Demonstrates a lack of effort or understanding of the material. Multiple errors, missing elements, or failure to follow assignment instructions
D	64 – 67%	1.0	
D-	60 – 64%	0.7	
F	< 60%	0.0	**Fail**. Missing, incomplete, plagiarized, clueless or incoherent

Late work: Late work may be accepted at the instructor's discretion given a reasonable excuse by the student for missing a deadline. Accepted late homework is subject to an automatic penalty of one grade letter. However, late homework or projects will not be accepted more than two weeks past their due date.

Do-overs. Assignments for which a student has received a grade of C or lower may be re-submitted pending approval by the instructor.

Final Grade determination: Scores for homework and assignments provide a base-line score on which your final grade is based. Several factors may have an effect on your grade in "post production."

Circumstances	Consequences for the final grade
Outstanding class participation	Raise by one-half letter grade
Poor participation, routinely unprepared, unprofessional or disruptive behavior	Lower by one to one-half letter grade
Unexcused Absences:	Reduction in letter grade for unexcused absences:
2 unexcused absences:	1 letter grade
3 unexcused absences:	2 letter grades
4+ unexcused absences:	**Fail the course**
Acts of academic dishonesty, plagiarism, or grossly unprofessional conduct:	Determined according to the instructor's discretion and/or current university policies regarding student conduct

Exceptionalities

Any students with documented psychological or learning disorders or other significant medical conditions that may affect their learning should work through Mr. William Chabala in our Counseling Center (662-4798; wchabala@mansfield.edu) to provide me with the appropriate letter so that I may serve their particular needs more effectively. If you have an exceptionality that requires class or testing accommodations, Mr. Chabala will work with us to identify and implement appropriate interventions

Facilities

The Steadman Theatre control room houses a 24-track, high-resolution Digidesign/Avid ProTools HD-Accel system featuring 128kHz/24-bit ADCs, ICON D-Command console, an Apple Mac Pro computer, and professional-grade monitoring systems (Genelec & Adam active monitors). Tie lines connect the control room to the Steadman Theatre stage with 24 microphone inputs and outputs for headphone or talk/listen-back on stage. The studio is equipped with linear 2-track recorders (CD-RW,

DAT). The Digiserver enables project delivery over secure Internet connections to other ProTools studios worldwide. Music production software includes ProTools 8 (for HD Accel) with multiple plug-ins for dynamic processing, pitch correction, and mastering. For electronic music scoring, the studio is equipped with Reason (softsynth/sampler/ sequencer), and Sibelius (score notation/publishing). A wide array of microphones (Earthworks, AKG, Neumann, Beyerdynamic, Rode, Mojave, etc.) and options for connecting additional sound sources and instruments makes the recording possibilities nearly endless.

The Steadman Theatre side booth ("Studio B") houses a Mac mini running ProTools 9 software and a Mackie Onyx/Blackbird 8-channel firewire recording interface. A Zoom R-24 portable 8-channel workstation/USB interface is also available for mobile and location recording.

The Music Technology Lab includes 16 Apple iMac workstations available to students, running Pro Tools LE, Digital Performer, Peak, Reason, Sibelius, Finale, Ableton Live, Max/MSP, and assorted utilities and supporting programs. Each workstation includes a Digidesign MBox 2 audio interface and a Korg XP5 keyboard synthesizer.

Course Calendar:

Detailed reading assignments, lab exercise, homework, project descriptions, due dates, external links, and additional notes will be available on the course web site via Blackboard. The following is a broad outline of the topics to be covered week-by-week during the semester. This calendar is subject to change at the instructor's discretion.

Week 1 (January 29 & 31) – Syllabus and course/studio overview
Week 2 (February 5 & 7) – The recording chain: transducers, pre-amps, converters, and recorders
Week 3 (February 12 & 14) – Pro Tools orientation and DAW session setup
Week 4 (February 19 & 21) – Microphones
Week 5 (February 26 & 28) – Digital audio recording theory
Week 6 (March 5 & 7) – Applied audio theory
Week 7 (March 12 & 14) – Recording in stereo

- Midterm exam (online – *due before spring break*)

SPRING BREAK
Week 8 (March 26 & 28) – Recording individual instruments
Week 9 (April 2 & 4) – Multi-track recording
Week 10 (April 9 & 11) – Recording overdubs
Week 11 (April 16 & 18) – MIDI recording
Week 12 (April 23 & 25) – Archival media transfers
Week 13 (April 30 & May 2) – Basic Editing
Week 14 (May 7 & 9) – Basic Mixing & Delivery formats
FINAL EXAM (Tuesday May 14 @ 8:30 am): Portfolio presentations