UMBC UGC New Course Request: MUSC 419: MIDI Technology in the Recording Studio

Date Submitted: 9/28/2018 Proposed Effective Date: Spring 2019

	Name	Email	Phone	Dept
Dept Chair or UPD	Dr. E. Michael Richards	emrich@umbc.edu	53064	Music
Other Contact				

COURSE INFORMATION:

Course Number(s)	MUSC 419
Formal Title	MIDI Technology in the Recording Studio
Transcript Title (≤30c)	MIDI Technology in Rec Studio
Recommended Course Preparation	MUSC 318 OR permission of the instructor
Prerequisite **NOTE:** Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	MUSC 318 OR permission of the instructor
# of Credits Must adhere to the UMBC Credit Hour Policy	3
Repeatable for additional credit?	Yes X No
Max. Total Credits	6 This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.
Grading Method(s)	Reg (A-F) X Audit Pass-Fail

PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences.**):**

This course explores the history and evolution of Musical Instrument Digital Interface (MIDI) systems and their applications in the professional recording studio. The history of electronic music production and various types of synthesis including FM, LA, additive, and subtractive will also be studied. Students will produce multiple MIDI projects throughout the semester, and will gain experience using various MIDI controllers, including the Avid S6.

RATIONALE FOR NEW COURSE:

a) Why is there a need for this course at this time?
The rapid advancement of MIDI technology in the recording studio has undergone a profound resurgence, particularly in the past 5 years. To help equip our students for this, a course that focuses on these aspects of music technology is critically needed.

b) How often is the course likely to be taught?
We envision this course being offered every Spring semester.

c) How does this course fit into your department's curriculum?
This course will be inserted as an elective for majors in the B.A. in Music Technology curriculum, with an eye towards making it a requirement when we perform our next curriculum revision.

d) What primary population will the course serve?
The primary population that this course will serve will be at the undergraduate level, particularly late-year sophomores or juniors in the music technology B.A. major

e) Why is this course offered at the level chosen?
It is an intermediate to advanced course, and fits logically within (and alongside of) our other courses at the 400 level.

f) Explain the appropriateness of the recommended course preparation(s) and prerequisite(s).
The prerequisite of MUSC 318 is appropriate because at that point in the curriculum, the student will have fundamental knowledge of studio hardware, software, and basic recording studio technology with respect to signal flow. The course content in this proposed course fits logically within the framework of the student's development at that point in the curriculum, and it enables the student to integrate the knowledge and skills mastered in this class to the rest of the Music Technology curricular sequence.

g) Explain the reasoning behind the P/F or regular grading method.
The regular grading method will be employed in this course because it will enable course components to be weighted toward a student's final grade. The aforementioned projects will carry significant weight in the course, followed by periodic, regular exams, midterm examination, final examination, and overall course participation.

h) Provide a justification for the repeatability of the course.
This course could be repeated and still remain a unique learning experience because the projects are ever-changing and in a large part, student directed and conceived. Also, if a student were to repeat the course, the instructor would have the option to build on, refine, and continue work begun in a previous course offering.

ATTACH COURSE SYLLABUS (mandatory):

Course Syllabus:

Date Prepared: September 21, 2018
Prepared by: Dr. Todd A. Campbell
Office: PAHB 137
Email: toddc@umbc.edu
Phone: 570-380-4345
Office Hours: As posted or by appointment
Department: Music
Course Title: MUSC 419: MIDI Technology in the Recording Studio
Credit Hours: 3
Prerequisites: MUSC 318 or permission of the instructor

Course Description:
This course explores the history and evolution of Musical Instrument Digital Interface (MIDI) systems and their applications in the professional recording studio. The history of electronic music production and various types of synthesis including FM, LA, additive, and subtractive will also be studied. Students will produce multiple MIDI projects throughout the semester, and will gain experience using various MIDI controllers, including the Avid S6.

Course Learning Outcomes and Competencies:
Upon successful completion of this course, each student will:
- develop knowledge of important events in the history of electronic music.
- develop an understanding of the current state of the art in electronic music.
- develop knowledge of the contributions made by electronic music pioneers including but not limited to Edison, Stockhausen, Theremin, Moog, Russolo, Schaeffer, and Babbitt.
- understand and apply knowledge of FM, LA, subtractive, and additive synthesis.
- develop knowledge of the MIDI 1.0 Specification and all subsequent addendums.
- develop knowledge of influential synthesizers of modern electronic music including but not limited to the ARP 2600, Moog Multimoog, Yamaha DX-7, Roland D-50, and Fairlight.
- understand the differences between MIDI production and digital audio.
- demonstrate a working understanding of MIDI production techniques using Pro Tools, Max/MSP, and Reason in the production of professional-level projects.
- demonstrate understanding of signal flow in a MIDI studio and system interconnects.
- demonstrate an understanding of MIDI sequencing in both hardware and software contexts.
- demonstrate an understanding of groove tools including humanize, quantize, beat slice and warp.
- demonstrate an understanding of the Propellerhead Rewire protocol.
- demonstrate an understanding of MIDI Controller theory and best-practices with the Avid S6.

Course Topics:

NOTE: please see the course schedule at the end of this syllabus for a complete week-by-week outline

- How is MIDI different from Digital Audio?
- The MIDI 1.0 Specification and Addendums
- MIDI Hardware and System Interconnects
- MIDI Sequencing / Digital Audio review
- Sampling - hardware and software
- Groove Tools
- Editor / Librarians - history and the current state of the art
- Multimedia and the Web
- MIDI's role in automation
- How to transfer MIDI tracks to audio tracks using Rewire
- Understanding and interpreting the MIDI Implementation chart
- The Avid S6 as a MIDI controller and control surface
- Future applications of MIDI

Methods:

- Readings from required texts and materials
- Class Lecture
- Class projects and demonstrations in the MIDI lab and Studio
- Student projects
- Class quizzes and exams
- Final project demonstrating the use of the software, hardware, and techniques covered

Class Materials that you will need:

- Flash drive / Hard Drive for project backup
- Blank CD-Rs
- Sharpies

Evaluation Procedures:

- Class participation
- Student projects
- Written quizzes / exams
- Written assignments
- Final Project

Textbook and Other Materials:

1) David Miles Huber. The MIDI Manual, Third Edition. Boston: Focal Press, 2007.
2) Robert Guerin. MIDI Power!: The Comprehensive Guide 2nd Edition. Washington: Alfred Music, 2010.
3) Handouts as distributed by the instructor.

Supporting Materials:

- W. Sear, The New World of Electronic Music (Alfred Pub. Co., 1972)
- F. Rumsey, Desktop Audio Technology: Digital And MIDI Principles (Focal Press, 2006)
- C. Middleton, Creating Digital Music and Sound (Focal Press, 2006)
- F. Smith, The Experiencing of Musical Sound (Gordon and Breach, 1979)
- T. Holmes, Electronic and Experimental Music: Pioneers in Technology and Composition (Media and Popular Culture) (Routledge, 2002)
- M. Vail, Vintage Synthesizers: Pioneering Designers, Groundbreaking Instruments, Collecting Tips, Mutants of Technology (Miller Freeman Books, 2000

Attendance / Participation Policy: Regular, prompt attendance is ***crucial*** to your success in this class. Attendance will be taken at the start of every class. Please make every effort to arrive on time. You are allowed to miss one class without penalty. Beyond that, each class missed that is not due to an excused absence will result in a 10% drop in your final grade. Excused absences include illness (documentation is required), family death/illness (documentation is required), or approved co-curricular activities (documentation is required). Participation in this class will take many forms. At the least, questions, topical comments and quality projects are expected and encouraged. Instructor discretion is reserved for the participation portion of the final grade. In the case of borderline grades, in-class participation will be used as an indicator.

Assignment Policy: Reading assignments are listed in your course outline. I expect you to have the reading assignment for each week completed ***before*** class meets. Written assignments and projects that pertain to the readings and to the class topics will be handed out in class. Due dates for each assignment will be clearly stated on the assignment. When completing these assignments, you MUST use a word processor. Written assignments will assess your mastery of the reading and lecture material. Written examinations will give you the opportunity to demonstrate mastery of the concepts covered in your reading, in class lecture, and in demonstrations. Quizzes may be unannounced and/or announced at the discretion of Dr. Campbell. A large amount of handouts will be distributed in class. It is to your advantage to procure a three ring spiral notebook with pockets to keep this information organized.

Gadget Policy: During class, all portable devices - iPods, cell phones, PSPs, etc., **MUST BE PUT AWAY**. Phones must be set to airplane or vibrate. If you must take a call, please quietly step outside so as not to disrupt class. **Texting during class is NOT allowed**. Headphones must **NOT** be worn during class - no matter how small.

Classroom Behavior: If you are creating a disruption in class, you will be asked to leave.

Student Disability Services (SDS)

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADAAA of 2009, and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow students to have equal access and inclusion in all courses, programs, and activities at the University.

If you have a documented disability and need to request academic accommodations, please refer to the SDS website at sds.umbc.edu for registration information and to begin the process, or alternatively you may visit the SDS office in the Math/Psychology Building, Room 212. For questions or concerns, you may contact us through email at disAbility@umbc.edu or phone (410) 455-2459.
If you require accommodations for this class, make an appointment to meet with me to discuss your SDS-approved accommodations.

Academic integrity statement:
By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory."

The UMBC Undergraduate Student Academic Conduct Policy can be found here:
http://oue.umbc.edu/ai/

Grading Policy:
Late assignments and/or projects will have a severe amount of points deducted.
Make-up tests and quizzes will not be given unless advance notice is given.
All work must be word-processed; no handwritten assignments will be accepted.

Grading Scale:
Written Assignments.....10%
Group Presentations.....20%
Midterm Examination.....15%
Final Examination.....20%
Attendance / Participation.....15%
Final Project.....20%

The following scale will be used for the grading process. There is no curve. You will receive the grade earned and there will be no extra credit.

A 96%+	**B 84%+**	**C 72%+**	**D 60%+**
A- 92%+	**B- 80%+**	**C- 68%+**	**E 59%**
B+ 88%+	**C+ 76%+**	**D+ 64%+**	

MIDI and Electronic Music Production Course Outline Spring 2019

Dr. Campbell reserves the right the alter this outline as the semester progresses

Week	Topics to be covered	Reading Assignments (Huber)	Reading Assignments (Guerin)
Week 1	What is MIDI? MIDI 1.0	Chapter 1 pp. 1 - 12 Chapter 2 pp. 13 - 46	Chapter 1 pp. 1-22
Week 2	MIDI 1.0 continued	Chapter 2 pp. 13 - 46	Chapter 2 pp. 25-54 Chapter 3 pp. 57 - 81
Week 3	Electronic Music - an overview of influential composers and performers The Hardware	Chapter 3 pp. 47 - 100	Chapter 4 pp. 83-100 Chapter 11 pp. 265-290
Week 4	Electronic Music - an overview of revolutionary electronic instruments Electronic Instruments	Chapter 4 pp. 115 - 135	Chapter 12 pp. 291-306
Week 5	Sequencing Introduction to Reason	Chapter 5 pp. 101 - 140	Chapter 7 pp. 161-182
Week 6	The Rewire protocol with Reason and Pro Tools Digital Audio Production	Chapter 6 pp. 141 - 188	Chapter 8 pp. 183 - 214
Week 7	Groove Tools and Techniques	Chapter 7 pp. 189 - 206	Chapter 9 pp. 215-242 Chapter 10 pp. 245-264
Week 8	Editor / Librarians Multimedia and the Web	Chapter 8 pp. 207 - 224 Chapter 10 pp. 225 - 246	
Week 9	Mixing and Automation	Chapter 12	

		pp. 271 - 308	
Week 10	Mixing and Automation, continued	Chapter 12 pp. 271 - 308	
Week 11	Studio Tips and Tricks	Chapter 13 pp. 309 - 334	
Week 12	The MIDI Implementation Chart	Appendix A pp. 335 - 340	
Week 13	MIDI Controllers and the Avid S6		Chapter 5 pp. 101-130
Week 14	MIDI Controllers and the Avid S6		Chapter 6 pp. 131-160
Week 15	Final Project Presentations		
Finals Week	Final Examination: Date and Time TBA		