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Revised 4/22/2009

UNDERGRADUATE CURRICULUM PROPOSAL COVER SHEET

RECORDS

Title of Proposal - Must begin with Department Abbreviation:

MUS Proposal: MUS 3700 Electronic Music revision

Check One: [X] Full Proposal or [] Information Item

Effective Date for Curricular Offering: Fall 2012

FROM: Lee D. Harris Music, Fine Arts Center 308, 425-4601, Lee-Harris@utc.edu

(proposal originator: include spokesperson's name, department, office number, telephone, e-mail)

Does this require new resources from the originating department or other department? No
Please include an explanation if yes.

Faculty of the originating department approved this proposal on November 1, 2011 (date),
by a vote of 14 aye votes; 0 nay votes; 0 abstentions; 1 eligible voting members absent.

The following have examined this proposal:

Dept Head/Director: Lee D. Harris [Signature] 11/1/11 [X] Approve [] Neutral [] Disapprove*

College Curriculum Committee Date: _____ Vote: _____ Signature of Chair: _____

Spokespersons for Affected Departments:

Table with 5 columns: Printed Name, Department, Signature, Date, Approve, Neutral, Disapprove*. Contains three empty rows.

Dean/Director: [Signature] 11/1/11 [X] Approve [] Neutral [] Disapprove*

University Registrar: Linda Orth [Signature] _____ [] Comments

Provost/Representative: J Sanders [Signature] 11/1/11 [X] Approve [] Neutral [] Disapprove*

Lab/studio fee requested: []

Provost: Phil Oldham [Signature] _____ [] Approve [] Disapprove*

*Those who disapprove may attach an explanation

Table with 3 columns: ACTIONS on this proposal, Curriculum Committee, Faculty Senate. Includes rows for Date considered, Vote of the body, Accepted as information item, Approved as submitted, Approved with amendments, and Signature of Chair.

12.020-UG

Electronic Music

MUS 3700-0, CRN: xxxxx

Time TBA Room FACT 307

Credit: 2 hours

Instructor: Dr. Jonathan B. McNair, Office FACT 304

Office phone 425-4679

e-mail Jonathan-McNair@utc.edu

Office Hours: As posted or by appointment.

COURSE SYLLABUS

This is essential information, and should be read carefully and kept in a notebook with other class materials!

Required Text:

Holmes, Thom. **Electronic and Experimental Music: Technology, Music, and Culture.** Routledge; 4th edition (© 2012). ISBN-10: 0415896363

Recommended: Nahmani, David. **Apple Pro Training Series: Logic Pro 9 and Logic Express 9.** Peachpit Press; (© 2009). ISBN 0321636805

A USB flash drive for class projects.

Pre-Requisite: MUS 3050 and MUS 1320 keyboard proficiency, or department head approval.

Attention: If you are a student with a disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) and think that you might need special assistance or a special accommodation in this class or any other class, call the Office for Students with Disabilities at 425-4006, come by the office - 102 Frist Hall or see <http://www.utc.edu/OSD/>

If you find that personal problems, career indecision, study and time management difficulties, etc. are adversely affecting your successful progress at UTC, please contact the Counseling and Career Planning Center at 425-4438 or <http://www.utc.edu/Administration/CounselingAndCareerPlanning/>.

Course catalog description. An introduction to the history, literature, and composition of electronic and electro-acoustic music. Terminology for digital and analog synthesis, sampling, and sound processing; basics of digital recording and editing; basics of digital synthesis; listening to and discussion of significant works in the electro-acoustic literature; composition of electro-acoustic music. On demand. *Pre-requisites:* MUS 3050 and MUS 1320 keyboard proficiency; or approval of department head.

Course objectives.

- (1) An overview of the development of electronic and electro-acoustic music since around 1900, along with significant works and composers in this genre.
- (2) Acquiring appropriate terminology to discuss this genre.

- (3) Development of basic skills in audio recording (microphones, mixers, recording systems); sound processing; sound reinforcement; and MIDI/Audio station set-up.
- (4) Development of basic skills in digital sound synthesis and sound manipulation.
- (5) Composition of brief original works using electronic and electro-acoustic sound resources and appropriate software.

Attendance policy: This course will be taught with a “hands-on” approach. Therefore, attendance is absolutely crucial. Two **unexcused** absences will result in the final course grade being reduced by 5 percent; 4 unexcused, grade reduced by 10 percent, and so forth.

Make-up policy. In cases of illness or emergency which may cause a student to miss an exam, a make-up exam will be given. If these conditions cause a student to be late with a project, the project will be accepted within 5 – 7 days of the original due date with no penalty. Exams missed without good reason may not be made up. Projects that are simply not finished by the due date will be accepted up to one week after the due date for a reduced grade.

UTC Online (Blackboard) will be used as a course enhancement and communication tool. You will be expected to check the UTC Online course pages regularly, and check your UTC e-mail regularly.

Evaluation. Grades will be calculated from the total accumulated points out of total possible points. Attendance, as previously stated, can be a factor. Perfect attendance and regular class participation could push a borderline grade up to the next level. More detailed Project guidelines will be available in class as needed.

- (1) One multi-track sequencing/loop/audio track project (10 %).
- (2) One digital audio directed project involving some editing (15 %).
- (3) One creative free composition using digital (and analog if desired) electronic/electro-acoustic resources (25%)
- (4) Two (2) written/listening exams (30 %).
- (5) Real-time skills demonstrations for software programs and workstation set-up (20 %).

A = 93 – 100%; B = 85 – 92; C = 77 – 84; D = 68 – 76; 67 and below = F.

Tentative class schedule: subject to change to meet the needs of the class.

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|--------|---|
| Week 1 | Lecture, demonstration. Historical overview of electrical and electronic instruments. Analog synthesis terminology and overview. Hands-on experience with analog synthesizer. Brief examples of music using electronic instruments and techniques. |
| Week 2 | Textbook ch. 1. Introduction to Logic audio workstation software. Hands-on practice with MIDI keyboards and connecting MIDI instruments to a computer. Discussion of music utilizing electronic musical instruments and techniques, from the Theremin and Ondes Martino through <i>Musique Concrète</i> . |
| Week 3 | Text chapter 2. Logic software continued. First Project assigned. Discussion of music from <i>Poème Electronique</i> and the early electronic music studios in Cologne (Stockhausen) and Milan (Berio). More on analog terms and techniques and tape-recorder techniques. Computers as generators of musical data (Xenakis). |

- Week 4 Text chapter 3. Audio basics: Microphones, mixers, cables, recording devices, analog-digital conversion; using computers as recording and editing devices. (Audacity, possibly other software). Discussion of music using tape delay techniques of early Minimalism (Steve Reich) and experimentalists such as Alvin Lucier.
Project 1 due.
- Week 5 Textbook chapter 4. Logic software continued, digital audio editing and effects part 1. Overview Project 2. Music from the RCA Mark II Synthesizer, the Moog and Buchla synthesizers.
- Week 6 Text chapter 5. Further information and guidance on Project 2, with hands-on practice of audio recording and editing. Effects processing part 2. Electro-acoustic music of the later 1960s and 1970s for solo instrument and (electronic) tape by Mario Davidovsky.
- Week 7 Review, practice, and **Terms and Software skills exam 1** on things learned so far. Project 2 check-in.
- Week 8 SPRING BREAK.*
- Week 9 Text chapter 6. Digital synthesis instruction and practice. Frequency modulation synthesis. The MIDI Protocol. Music from the 1980s using digital synthesis. **Project 2 due.**
- Week 10 Text chapter 7. Digital synthesis continued. Overview, free creative composition project. MIDI continued. Wave-table synthesis.
- Week 11 Text chapter 8. Digital sampling. Composition project check-in. Hands-on practice in techniques and software. Music of the 1990s. Granular synthesis.
- Week 12 Text chapter 9. Software-based synthesis and effects. C-Sound. Overview of software packages such as **Reason; Cubase; Sonar; Digital Performer; Ableton Live.**
- Week 13 Text chapter 10. Music since 2000. The “*new musique concrete*” with the availability of extensive sample libraries on disk, and software programs such as Logic and Pro-Tools. Max/MSP overview.
- Week 14 Wrap-up and review. Project check-in. Hands-on practice and software skills check.
Final exam Creative free composition project due.

Additional resources:

Kirn, Peter. **Digital Audio**. Peachpit Press, California. © 2006.
ISBN 0-321-30460-8

Dvorin, David. **Apple Pro Training Series: Logic Pro 9 Advanced Music Production**. Peachpit Press, California. © 2010. ISBN-10: 0321647459

Cipriani, Alessandro. **Electronic Music and Sound Design - Theory and Practice with Max/MSP** - volume 1. A PDF demo of the book is available at virtual-sound.com/en

Russ, Martin. **Sound Synthesis and Sampling**, Third Edition. Focal Press; 3 edition (2008) ISBN-10: 0240521056. A comprehensive introduction to the underlying principles and practical techniques applied to both commercial and research sound synthesizers.

Demers, Joanna. **Listening through the Noise: The Aesthetics of Experimental Electronic Music**. Oxford University Press, USA (2010). Electronic music since 1980, including developments and spin-offs from the popular and alternative genres. ISBN-10: 019538766X

Collins, Nicolas. **Handmade Electronic Music: The Art of Hardware Hacking**. Routledge; 2nd edition (2009). ISBN-10: 0415998735