Lecturer: Jon Forshee, Ph.D.
Office: Ent Center for the Arts, room 250
Phone: 719-255-5965

Email: jforshee@uccs.edu
Office hours: Tuesdays 12pm-2pm or by appointment
Website: https://www.uccs.edu/vapa/index/music/faculty/forshee

Course Description

In this introductory course of computer music, students will discover the history of the technology and aesthetics of electronic and computer music, explore music software for the production of digital music, and create original computer music using the software synthesizers available in the library and the 209 MAC lab or a student's personal software program. In general, this class aims to be creative, informative, artistic and interactive. This project-based course seeks to foster each student's artistic objectives while motivating students to incorporate new ideas, approaches and aesthetics of computer music into their own works.

Objectives

- Identify major innovative composers and inventors of computer music,
- Understand and explore new musical and sonic possibilities with a variety of computer music software,
- Develop the ability to work with a range of software synthesizers and apply various historical techniques to original short computer music pieces/etudes,
- Discover resources to direct future computer music related activities,
- Compose/design original creative computer music projects; Create a collection (portfolio) of short digital audio compositions,
- Present an oral, academically oriented PowerPoint project based on a computer music theme/element/aspect/content.

Grading

Attendance	15points (15%)
Creative Etudes (4)	40 points (40%)
Quizzes on reading/listening/lectures	35 points (15%)
Final piece & Academic Presentation	15 points each (30%)

Grading Scale (out of 100)

A	94-100
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79

C   74-76
C-   70-73
D+   67-69
D   64-66
D-   60-63
F   0-59

Required materials
- How to make a noise: frequency modulation synthesis, by Simon Cann. http://www.amazon.com/gp/aw/d/B008H7CEQG?ie=UTF8&redirectFromSS=1&pc_redir=T1&noEncodingTag=1&fp=1
- USB memory stick (1GB minimum), another hard drive and/or 2 different cloud-based backup sources (in other words, students are required to back up their work on three different drives)
- Decent set of headphones (ear buds are not recommended)
- Students will need to download Audacity (free audio software) onto their own personal computers in order to complete some homework assignments. http://sourceforge.net/projects/audacity/?source=typ_redirect

Recommended Books:
- An Introduction to Music Technology, 2nd ed. by Dan Hosken. Routledge, 2014 (kindle, or used, or paperback) http://www.amazon.com/Introduction-Music-Technology-Dan-Hosken/dp/0415825733

- Electronic Music, and Experimental Music: Technology, Music and Culture (5th ed.) by Thom Holmes. Routledge (2015)

- Cambridge Introductions to Music: Electronic Music, by Nick Collins, Margaret Schedel and Scott Wilson. Cambridge University Press, 2013.

Students are encouraged to search out and use free tutorials online. Some links to tutorials will be provided for you on Canvas. There will also be books available on reserve for this class at the Kraemer Library.

Not required but strongly recommend: digital audio recorder. Here are some suggestions under $100:
  - o http://www.amazon.com/TASCAM-DR-05-Portable-Digital-Recorder/dp/B004OU2IQG/ref=pd_cp_MI_0
  - o http://www.bhphotovideo.com/c/product/1180782-REG/zoom_zh1s_h1_handy_recorder_silver.html
  - o http://www.amazon.com/b?node=486500011

The VAPA Music Program has a few Tascam digital audio recorders to check out. Please see the Professor if you'd like to check one out!

There is a modest library holding of books on computers in music as well as Computer Music Journal from around 1983 (this is suggested reading for its high-level work).

> - Students are required to check their UCCS emails in this class at least twice a week.
> - Students are required to check their Canvas assignments (and/or Announcements) at least twice a week.

Attendance
Consistent attendance is vital to the success of this course because the instructor will often work one-on-one with each student. Also there will be lectures with important information that will appear on pop-quizzes. In the event a class is missed, it is the student's responsibility to retrieve the material. Students are strongly encouraged to visit the Professor during office hours or ask for an appointment.

Absences
Only 2 excused absences, with doctors note or equivalent will be accepted.
After two absences, the final grade is lowered by a quarter grade (i.e. B→ B-) *for every class missed*. An arrival 20 minutes or more after class has started (or departing the class 20 minutes or more before class has finished) will be counted as an absence.

Class Participation Expectations:
- Ability to articulate concepts (from the readings/listenings/lectures)
- Actively contribute to critiques and discussions (based on previous lectures/readings/listenings/etc.)
- Ability to constructively engage with one's peers:
- Cell phones, texting, computer use of any kind not central to the class is unacceptable. Please turn off your cellular phones before entering class. If electronic devices disrupt the class, the instructor reserves the right to mark student as "absent" for that class, and if this is consistent, she may ask you to drop the class (Campus guidelines).
- Students are expected to come to class prepared, having completed the assignments due that day.
- No food in this classroom unless by permission.
- Covered/contained beverages are OK with permission only. Be extremely careful with the computers and keyboards.

Assignments
This class requires 2-3 hours of work outside of classroom time to practice/create and complete homework assignments, reading/listenings, and/or work on the Academic PowerPoint presentation. The Kraemer Library Mac's have the same programs available as the COL 209 Mac Lab (+ keyboards and ProTools iLoks to check out).

Creative Études
Meant to scaffold and build upon each other, these very short mini-projects are referred to as "études" or studies because each one focuses on and develops one particular technique. In the classical music tradition, from which computer music and electronic music evolves, these particular types of studies are meant to be learned/practiced in a short amount of time. Consider

these assignments as "explorative windows into" the techniques presented. Students may use each of these techniques to build their 'sound libraries' and continue to develop each one into their draft (etude #4) and final project.

Depending on the specific week's audio assignment topic, each project will usually address the following:
- Duration: follow directions for the duration requirement for each Etude.
- NO sampling or taking from other tracks unless by permission of the instructor. All audio is original to the student.
- If using a "default" software MIDI sound or instrument, student modifies the sound to the point where the original is indistinguishable and/or clearly an original sound of the student's.
- As a general guideline, the musical material should be balanced between audio and MIDI tracks (for example, 2 audio tracks and 2 MIDI tracks).
- Each project should *meaningfully use software synthesizers.
- Three or more effects are used are clearly evident in the project (e.g. Compressor, Filter, and Vocoder).
- Clean fades and any unnecessary, unintended (clicks, artifacts from bouncing, etc.) sounds are not present.
- The beginning and ending of the piece should be musically coherent.
- Use of multiple tracks.
- Use of automation.
- Use of some panning.
- The overall level of the mix should not be too quiet or too loud. (In general the mix should have peaks between -6dB and 0dB.)
- Clear evidence that the student worked with a mix so that not any part, sound, or track is unnecessarily too soft or too loud (unless the piece absolutely relies on such sounds).
- Export (Bounce) your project so that the mix can be played on the Class project page. AIFF or WAV are the most acceptable file formats.

*In the above, "meaningfully" means that the outcome of using some kind of effect/technique has a substantially audible result.

The expectation is that each student meets and exceeds the quality of the works submitted for the previous project assignment. There will be a component of the overall evaluation of your work based on a subjective quality judgment made by the instructor.

Students are required to back up their audio creative projects in THREE DIFFERENT back-up drives. Consider using soundcloud and UCCS "Z" drives as possible back-up locations. All work must be saved onto a flash drive before leaving class and/or logging off a campus computer.

Due dates are not negotiable. All projects due on the class Soundcloud page as an audio file- wav or aiff. Be sure your official student name is comprehendible when submitting.

How to Post/Submit an audio assignment:

1. Create a personal Soundcloud profile
2. Send a message and add your assignment soundcloud link to this soundcloud page: https://soundcloud.com/user-126047657

Final Audio and Presentation

This is a combination where the final creative audio project and the final Academic powerpoint (or equivalent) presentation are interlinked in a scholarly fashion with a clear focus on a theme, goal/objective for your audio piece with coherent relation to other electronic/computer music historical canon.

The ultimate form of the final audio project must be an original musical composition using the student's own software or the software available on the campus/library computers. The duration of the composition should be minimum 3 minutes and no longer than 4 minutes. Multidisciplinary work is strongly encouraged. Some students may use this opportunity to compose music for video, film, video games, live-interactive performance or another kind of musical piece. Please see the guidelines for the final presentation on Canvas.

Plagiarism

In this class, using another artist's works and calling it your own will be treated as plagiarism. If you want to use another artist's copyrighted material to sample, then you MUST cite that work, properly. Follow these guidelines:
http://www.nolo.com/legal-encyclopedia/permission-sampled-music-sample-clearance-30165.html

A student who is discovered to have plagiarized others' work will immediately receive a grade of F for the course, and a recommendation for disciplinary action will be forwarded to the Dean of LAS.

Please note that I am an active participant of most online forums and mailing lists involved in audio arts; if you request others to do your work through any online forum, this will be treated as plagiarism (since you are not doing your own work), and will be subject to the above penalties.

Resources

In addition to the computers in the classroom, there are six MACs in the library. They have the same software as the classroom/lab. There are other programs on the PCs such as Audacity. Students may check out iLoks for ProTools as well as midi keyboards at the library. They also have headphones. Please ask the reference librarian for the USB cable for the midi keyboards. Logic ProX and Garage Band are on all campus Macs. Available computers and software on campus:
COH 209 (on Fridays); COH 231: Riker01 - Riker08 = 8 systems - Pro Tools only
Library open area (4 Macs that are on a rectangular table): Jadzia01 - Jadzia04

Accommodations for All

This course is intended for all UCCS students, including those with mental, physical, or cognitive disabilities, illness, injuries, impairments, or any other condition that might inhibit

one's equal access to education. The faculty teaching this course is committed to meeting the needs of all course participants. If, at any point in the term, a student finds they are not able to fully access the space, content, and experience of this course, they are welcome (and not required) to contact their instructor by email, phone, or during office hours to discuss their specific needs. Students are encouraged to contact the Disability Services Office (Main Hall room 105, 719-255-3354 or dservice@uccs.edu). If a student has a diagnosis, DSO can help document specific needs and create an accommodation plan. By making a plan through the DSO, the student can insure appropriate accommodations without disclosing their condition or diagnosis to course instructors.

Basic Needs: Any student who faces challenges securing food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students (Dean of Students Office, Main Hall 201, 719-255-3091 dos@uccs.edu) for support. If a student is without food, for example, Clyde's Cupboard https://orgsync.com/81665/chapter is a UCCS community-based resource that provides free food for students. Support is also available for students facing legal, immigration, and residency issues. A good place to start is the International Affairs Office. https://www.uccs.edu/international/international-students-and-scholars/current-international-students. "The University of Colorado Colorado Springs (UCCS) is committed to maintaining an environment free from sexual misconduct, discrimination or harassment based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy." https://www.uccs.edu/equity/
Lastly, if the student is comfortable in doing so, please notify the professor when/if there are any concerns. This will enable her to provide helpful resources.

Dues Dates for Assignments:

- Week 1: Sound Library: Collect sounds (your own recordings as well as a few from online sources) and edit them
- Week 3 (Feb. 4): Etude #1 musique concrète during class
- Week 4 (Feb. 11): Quiz #1
- Week 6 (Feb. 25): Etude #2 editing (beginning of class)
- Week 8 (Mar. 10): Quiz #2
- Week 9 (Mar. 17): Etude #3 ambient synth + interactive (beginning of class)
- Week 11 (Apr. 7): Quiz #3
- Week 12 (Apr. 14) Etude #4 - Draft #1 of Final project (beginning of class)
- Week 13 (Apr. 21): present in class presentation draft
- Weeks 14-15 (Apr. 28, May 5): Presentations of Final project

No meeting during Final Exam Week, May 11-14.

****
Schedule
The following is the tentative schedule and is subject to change
according to the class learning style
please stay up to date by keeping track of our course schedule on our Canvas page

Week 1-4

Discovery of the elements of sound and recorded sound; digitization; Musique Concrète; fundamentals of electronic music; Building a library of unique sounds; Record sounds; polyphonic music (layering multiple sources)/Multi-tracking; tonality; Familiarization with historical electronic/computer music pieces. Create Etude #1 and #2, using chance operations, EQ (timbre) effects, editing and mixing skills acquired. Discussion of how to work with scales.

Week 5-8

Topics: Subtractive synthesis; time based effects such as echo, delay, looping, reverb, reverse, and learning the history of such techniques; using oscillators to generate original synthesized sounds; FM8 and additive synthesis; Ambient music; Interactive music systems; review fundamentals of sound, chord expansion, rhythm and work on Etudes 3; learning about MIDI

Week 9-12

Topics: FM8; Interactive computer music continued, Audio Synthesis, audio compression; Mid-term and first draft of final project will help students develop and refine final projects, Etude 4 and Final audio. Students are encouraged to explore their own software, use Max/MSP, PD, another music coding software program (but this is not mandatory).

Week 13-15

Work on creative audio final pieces and Academic presentations (one-on-one with Prof); choose dates for final presentations. Presentations will begin during Week 14 and end on Week 15. There is no final exam day.

PLEASE READ THE FOLLOWING CAREFULLY

Academic Honesty and Code of Conduct: Students are responsible for knowing and adhering to the Academic Honesty and Code of Conduct polices for UCCS (available on Canvas under Syllabus). However, here are other extremely important policies to know for this class.

Plagiarism and Academic Dishonesty: Plagiarism consists of using someone else's facts, words, ideas, and/or music (and other creative output) without attributing them to that source/author. Plagiarism is a serious academic offense and will not be tolerated in this class. Buying a paper online, copying sentences, audio, paragraphs, phrases from a book, the internet, or another source without citing them, submitting a paper (or audio) you did not write/create, or submitting a paper that you have already submitted for another class (multiple submissions) all constitute plagiarism and academic dishonesty. You must never use the words, unique ideas, or basic organization of ideas of another person or another work without proper and adequate citation. Other forms of academic dishonesty include cheating, inventing evidence or documentation, and falsifying evidence or documentation.

"Anti-plagiarism software can scan the Internet for similar papers or texts. DO NOT plagiarize. If caught, which is a strong possibility, the matter will be turned over to the Dean of the College of Letters, Arts, and Sciences. Our university imposes severe penalties on students who plagiarize. At best, it will result in an F for this course and academic probation. At worst, it will result in suspension or expulsion. Published material from books, journals, articles may be used, but you MUST acknowledge that source in a citation. Provide citations from all quotes used in your paper as well as any ideas you have paraphrased from another author. The only exception is general knowledge and your own ideas, of course. Failing to cite sources is plagiarizing. Don't do it!

Civility Code: The classroom (even an online one) is an environment for learning: please respect your fellow students. Classroom and Online ground rules will be discussed the first weeks of class. By agreeing to this syllabus and continuing in this class, you are agreeing to abide by those ground rules.

Disability Services: If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact and register with the Disability Services Office, and provide them with documentation of your disability, so they can determine what accommodations are appropriate for your situation. To avoid any delay in the receipt of accommodations, please contact the Disability Services Office as soon as possible. Please note that accommodations are not retroactive, and that disability accommodations cannot be provided until an accommodation letter has been given to me. Please contact Disability Services for more information about receiving accommodations at Main Hall room 105, 719-255-3354 or dservice@uccs.edu.

Important Dates and Information from the Records and Registration Office
Please consult the published Schedule of Classes for extensive info about university policies. They may be picked up for free in the Library or University Center.

Student Enrollment
Students must be enrolled officially in a class that they attend. Students are NOT permitted to sit in class to make up an incomplete grade from a prior term without officially registering and paying for the course. Students who approach a Professor about attending his/her course in order to make up an incomplete grade will be referred to the Records Office. Everyone attending class should be registered and listed on the official class roster. The only exceptions to this rule are persons who have the Professor's permission AND possess either an official campus "audit card" issued by the Bursar or a "Listening-In" permit issued by the Gerontology Center.

Dropping and Adding Courses
Students are fully responsible for their registration status in any given class. If a student decides not to continue in the course, then the student must officially drop the course. The professor does NOT have the ability/authority to "drop" a student who becomes a "no show" in a class. If you decide not to continue in a class, be sure to follow through with the official "drop" procedures, or else you risk receiving an F in the course since you will remain officially enrolled.
Students may drop and add courses through the term census date –Feb 6th– which is the point when 15% of the term is over. After this date, students must use a DROP/ADD form to change their schedule. To ADD a course after census date, students MUST obtain approval from both the instructor and the dean of the college under which the course is offered. Similarly, students who wish to DROP a course after census date MUST obtain approval from the instructor. Instructor's approval is based on the student passing the course as of the date of drop. After census date, the approval of both the dean of the college offering the course and the instructor is required to drop a course.

If the student is receiving financial aid or veterans' benefits, those offices must also sign the form. The student must submit the COMPLETED form to either the Student Help Center (M H 208) or Admissions & Records (M H 108) for processing. Incomplete forms or forms lacking required signatures CAN NOT be processed.

Military Students: Military students who have the potential to participate in military activities including training and deployment should consult with faculty prior to registration for a course, but no later than the end of the first week of classes, to determine the class attendance policy. At this time, the student should provide the instructor with a schedule of planned absences, preferably signed by the student's commander, in order to allow the instructor to evaluate and advise the student on the possible impact of

the absences. In this case, faculty will consider absences due to participation in verified military activities to be excused absences, on par with those due to other unavoidable circumstances such as illness. Faculty will judge the validity of student absences from class and may require documentation for excused absences. For classes requiring mandatory attendance incompatible with the number of planned absences, students will be advised to register, if possible, during a semester in which they will not be participating in these activities. As with any academic issue, students may exercise their right to appeal adverse attendance decisions. Should the faculty member and student be unable to agree on appropriate accommodation under this policy, either party shall have the right to request mediation from (in order) the department chair, the academic dean, and the vice chancellor for academic affairs. Please see the Military Students website for more information: http://www.uccs.edu/~military/. Feel free to contact the UCCS Office of Veteran and Military Affairs, 255-3606 or the Dean of Students Office, 255-3258 if you need additional assistance.

E-Mail Policy: Students MUST check their uccs.edu email account once a week. This course may require more frequent checking. Beginning Fall 2004, email became an official means of communicating with students. To assure the reliability and dependability of using e-mail for communication with students, all enrolled students have been assigned an official campus e-mail account. This account is stored on the Student Information System (SIS). Students have been notified and are expected to check their campus e-mail account on a regular (at least weekly) basis. Students may forward their campus e-mail to a private e-mail account, but are expected to assure the forwarding of messages is working properly so they do not miss important communiqués. Information about campus e-mail and forwarding the account can be found at http://www.uccs.edu/~helpdesk/.