

Computer Music

MUSTH 351, Section 1/MUS 740.63, Section 1, M, W 4:10-5:25 pm, 431 HN

Date	Class	Readings/Assignments
Jan 28 (M)	Introduction, review syllabus. Digital Audio Basics	No assignment due
Jan 30 (W)	Digital Audio Basics	Get settled with ordering course materials
Feb 4 (M)	Multi-track sequencing Digital Performer Intro	HW Assignment 1
Feb 6 (W)	Multi-track sequencing Recording & Editing	BB Assignment 1
Feb 11 (M)	Multi-track sequencing MIDI and sampling	HW Assignment 2
Feb 13 (W)	Multi-track sequencing Envelope techniques	BB Assignment 2
Feb 18 (M)	NO CLASS (President's Day)	
Feb 20 (W)	Multi-track sequencing Transposition & Quantization	HW & BB Assignments 3
Feb 25 (M)	Mixing and MIDI effects	HW Assignment 4
Feb 27 (W)	Project presentations	Project 1 due
Mar 3 (M)	Intro to Max/MSP/Jitter	
Mar 5 (W)	How numbers work in Max	BB Assignment 4
Mar 10 (M)	Programming techniques & tricks	HW Assignment 5
Mar 12 (W)	Additive Synthesis and Modulation via Max/MSP	BB Assignment 5
Mar 17 (M)	Subtractive Synthesis via Max/MSP	HW Assignment 6
Mar 19 (W)	FM Synthesis via Max/MSP	BB Assignment 6
Mar 24 (M)	NO CLASS	
Mar 26 (W)	FFT via Max/MSP	HW & BB Assignments 7
Mar 31 (M)	FFT via Max/MSP	HW Assignment 8

Apr 2 (W)	Controllers & Interfaces: Keyboard and mouse	BB Assignment 8
Apr 7 (M)	Controllers and interfaces: Cameras & Arduino	HW Assignment 9
Apr 9 (W)	Project Presentations	Project 2 due
Apr 14 (M)	Jitter: video and music	
Apr 16 (W)	Jitter: OpenGL and 3D graphics	BB Assignment 9
Apr 19-27	NO CLASS (Spring Break)	
Apr 28 (M)	OpenGL, continued	HW Assignment 10
Apr 30 (W)	Phase Vocoding/Granular Sythesis	BB Assignment 10
May 5 (M)	Spectral Morphing	
May 7 (W)	Special Topics	
May 12 (M)	Special Topics	
May 14 (W)	Final Project Presentations	Project 3 due

May 22 (Th) Project Presentations: 4:00-6:00pm in our regular classroom.

Required Materials

- 1) Ohm: The Early Gurus of Electronic Music Special Edition 3CD + DVD; Label: Ellipsis Arts; ASIN: B000BDGVX6 (available on Amazon, among other places)
- 2) Max/MSP/Jitter software (for Mac or PC, a 9-month license is available for \$59 at <http://cycling74.com/purchase/discounts>)

Course Summary

This course assumes no prior experience with computer music or synthesis. The student will develop a working knowledge of synthesis and digital signal processing through the composition of individual projects and through weekly exercises. The student will also become familiar with relevant software, including Digital Performer and Max/MSP/Jitter. We will also explore important works of the past as well as some of the interactive sound art and electro-acoustic music that continues to shape the genre today.

Methods for Student Evaluation

Students will be evaluated on the satisfactory completion of and performance on the following:

1. Attendance and Class participation
2. Homework Assignments:
 - HW: These are in-class assignments based on making things happen with software.
 - BB: These are Blackboard listening and reading assignments, geared toward gaining an appreciation of the history, music, and cultural issues associated with computer music
3. Two Oral/written reports on important people in music technology's development

4. Three projects:
- Project 1: Music composition using multi-track sequencing (*musique concrète* techniques, MIDI, sampling)
 - Project 2: Music composition or software using Max/MSP/Jitter (emphasis on interactivity and real-time interactions)
 - Project 3: Your Choice – composition, analytical paper, or stand-alone application

Grading

Attendance/Class Participation/Homework:	20%
Two Oral/Written Reports:	10%
Project 1:	20%
Project 2:	20%
Project 3 (Final):	30%

Lateness

Any assignment handed in late without permission will be marked down one full grade (if handed in one class session late), and two full grades if turned in two class sessions late. No assignment will be accepted later than two class sessions after the original due date.

How to Contact Me

Office Hours: 403 Hunter North, M/W 6:00 – 6:50, (or by appointment)
 Office Telephone: 212 650 3187
 Department Fax: 212 772 5022
 Email: nbowen@gc.cuny.edu

Usually the quickest way to reach me is by email, which I check at least once a day. At times I may wish to communicate with the entire class by email between our regular class sessions. If you do not already have an email account, please set one up as soon as possible. (You may also leave messages on my office voice mail, but please bear in mind that I will only be on campus on Mondays and Wednesdays this semester.)

Class Policies

Each lecture will start promptly at 4:10. I will be taking attendance each class period. If you cannot make it to class, please let me know beforehand by email or talk to me after class. In the event of a serious emergency or illness, you should contact me by email so I can assist you with the material you have missed. Excessive unexcused absences and lateness (more than twice) will have a detrimental effect on your final grade. According to Music Department policy, grades of A are given only for truly outstanding work; B represents good work, with occasional signs of superior quality; C represents adequate work; D represents inferior but passing work; and F = failing. Grades of IN (“incomplete”) will only be given in the case of serious, documented emergencies, and then only when permission has been granted in writing from the Department Chair, no later than one week before the final class meeting.

Students who wish to withdraw from the class with a grade of W may do so by submitting a withdrawal form with the required signatures to Oasis by the announced deadline (around the eighth week of classes). Withdrawal after the announced deadline is allowed only in the case of serious emergency and must be approved by Student Services. Students who stop attending class without withdrawing officially will receive a grade of WU, which counts the same as F. The Music Department does not support requests to have grades of WU changed retroactively to W.

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on

Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

Incompletes

In the Music Department, the grade of incomplete is granted only in cases of serious, documented emergencies, and then only when permission has been obtained in writing from the Department Chair. No student may withdraw with a grade of "W" after Thursday, March 27th.

Online Resources

This syllabus and other materials will be available on Blackboard (<http://bb.hunter.cuny.edu/>) and also on my personal website (<http://nb23.com/MUSTH351>). We will be fairly active on Blackboard, so if this is a new resource to you, please come to me for help.