

Intro to Programming for Digital Media and Computer, MUCO 471

Course Syllabus

Instructor:

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Course Description:

This class is geared towards composers and musicians as well as students with an interest in programming and some musical background). It focuses on using the computer to create generative music and to enable the creation of multimedia interactive performance, composition, and improvisation environments. Students will learn the graphical programming language Max (formerly Max/MSP, developed by Cycling '74) and supplement this with other computer/electronic music tools to implement creative projects. Topics include synthesis techniques, video/graphics, multi-channel audio, tracking methods, aesthetics, historical and current repertoire, software architecture, performance organization, and documentation strategies. The course focuses on assignments to solidify concepts covered in class. All work is iteratively geared toward completing a single final creative project/ Max patch.

Course Objectives:

- Learn MaxMSP, Max for Live, Jitter
- Develop skills in Max/MSP to create music, audio, sequencers, DSP effects, MIDI tools and video applications. Use Max/MSP to study audio synthesis and processing algorithms.
- Learn the basics of Jitter - real-time video, graphics, and matrix processing.
- Investigate multi-channel audio and manipulation techniques.
- Investigate techniques, working methods, and interactive media performance composition aesthetics.
- Develop knowledge of repertoire, including contemporary and historical works of interactive composition and performance.

Materials Required:

- A licensed copy of **Max 9** on a personal computer. Available at <https://cycling74.com/shop/students>
 - \$250: Max Academic Permanent License (best value)
 - \$90: Max Academic Annual Subscription
 - \$12.99/month Subscription
- All other software is optional and should be purchased at the student's discretion. Note: some of the supplemental tools I will demo in class are only available on Mac OS. This does not mean that there aren't PC equivalents available.
- Additional readings/listening: available for download or from the library.
- A good pair of closed headphones for class!

Assessment Measures:

50% Final Project Checkpoints (10)
40% Module Programming Assignments
10% Class Participation