

## **Intro to Computer Music 2 MUA 2106**

Tuesday 2:00 p.m. – 4:00 p.m.

Thursday 2:00 p.m. – 3:00 p.m.

4 MC

Location: YSTCM Computer Music Studio

Instructor: Assoc. Prof. Steven M. Miller

Office: YSTCM Sound Design (2<sup>nd</sup> floor practice room wing)

Phone: 6516 1300

Email: [musmm@nus.edu.sg](mailto:musmm@nus.edu.sg)

www: <http://www.stevenmiller.net>

### **Course Abstract:**

Computer based composition, sound design, and performance are well established in contemporary music and serve to expand the creative resources available to composers and musicians. This course module will help students develop a fundamental understanding of these resources from aesthetic and technical viewpoints.

A continuation of MUA2105, this course will simultaneously focus on the aesthetic and musical considerations of electroacoustic media as well as on developing the requisite theoretical knowledge and practical technical facility with the tools and resources of electroacoustic music. This dual focus will provide an appropriate historical, aesthetic, and technical basis to support further exploration into composition and performance with electro-acoustic media.

This semester the focus is on programming for musical uses in the Max/MSP programming environment. Building on skills and knowledge gained with the non real-time Csound environment, we will now focus on programming in Max/MSP which is particularly suited to creating interactive programs and virtual instruments for live performance. Continuing the ideas of data/signal flow and software opcodes/modules optimized for specific tasks, we will broaden the resources to include MIDI control and real-time digital audio signal processing.

### **Course Description:**

From the official online description:

Explores the techniques, repertoire and aesthetics of computer music. Composition and research projects are completed using the resources of the Computer Music Studios. Participation in at least one public performance programme is required.

### **Required Texts:**

Todd Winkler, *Composing Interactive Music*, MIT Press 1998

MUA2106 Intro to Computer Music 2  
Assoc. Prof. Steven M. Miller

Curtis Roads, *The Computer Music Tutorial*, MIT Press 1996

Peter Manning, *Electronic and Computer Music*, Revised and Expanded Ed., Oxford University Press 2004

Additional reading online, on reserve in library, or distributed in class as assigned.

**Recommended Texts**

The following texts should be consulted for technical, historical, aesthetic, and cultural background related to the development of computer music:

Robert Rowe, *Interactive Music Systems*, MIT Press 1993

Robert Rowe, *Machine Musicianship*, MIT Press 2001

Charles Dodge and Thomas A. Jerse, *Computer Music; Synthesis, Composition, and Performance*, 2<sup>nd</sup> Ed.. Schirmer Books, 1997

Curtis Roads, ed., *The Music Machine*, MIT Press 1992

Curtis Roads and John Strawn, eds., *The Foundations of Computer Music*, MIT Press 1987

Joel Chadabe, *Electric Sound; The Past and Promise of Electronic Music*. Prentice Hall 1997

Thom Holmes, *Electronic and Experimental Music; Technology, Music, Culture*, 3<sup>rd</sup> Ed., Routledge 2008

**Expectations Concerning Student Work:**

Students will attend all classes, and arrive prior to the class time in order to begin class on time. It is the student's responsibility to sign in on the roll sheet provided at each class meeting.

Students will be responsible for completing readings, assignments, and projects on time. While acknowledging and allowing for special circumstances, students are expected to complete all assignments in a timely manner. Assignments are due at the beginning of the class period on the due date. Late assignments will receive partial credit. Students are expected to keep current on all reading assignments in advance of associated in-class discussions, demos, etc. Students will be expected to arrive at each class on time, well-prepared and able to make important and productive contributions to the discussions.

There will be 1 (one) mid-term written exam. The general content will be covered in a study sheet to be distributed approximately 1 (one)

MUA2106 Intro to Computer Music 2  
Assoc. Prof. Steven M. Miller

week before the exam date. There will be a final paper and no final exam.

4 main creative projects will be assigned over the course of the semester.

**Grading:**

Weekly assignments & quizzes	20%
Project 1	10%
Project 2 (Midterm)	10%
Midterm exam	20%
Project 3	10%
<u>Project 4 (Final)</u>	<u>30%</u>
Semester Grade	100%

**Note:**

All reasonable attempts will be made to adhere to the schedule & information in this document. However, the instructor reserves the right to make changes, accommodations, and adaptations based on a number of factors including class progress, special opportunities, etc., as well as occurrences outside the instructor's control.