

Introduction to Electroacoustic Music

College of William and Mary – Music 281
Tu/Th 9:30am - 10:50am, Ewell Hall 260
Fri 10:00am - 10:50am, Ewell Hall 260

FALL 2004

Instructor: Marcus Bittencourt, Assistant Professor of Music

Office Hours: by e-mail appointment (with at least one day notice), 110 Ewell

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Required book: An Introduction to the Creation of Electroacoustic Music.
by Samuel Pellman.

- All the hand-outs given in class ;
- Computer supplies (CD-Rs), as needed ;

This class will introduce the basic operations of a Computer Music studio: digital sound, recording and editing, sound processing, sound synthesis, multitrack editing, mastering, and we will explore the concept of a solfege of Sound Objects. Most lab sessions will develop these skills in the context of creative compositional exercises. MIDI software will be explored, as well as synthesis and interactive software from the computer music research community. In addition to obtaining technical competence in the modern digital music studio, our larger objective is to gain an aesthetic awareness and appreciation of the unique co-evolution of technology and creativity inherently expressed in electroacoustic music throughout its history.

Grading is done in the following way:

A= 100-90 B= 89-80 C= 79-70 D= 69-60 F= 59-0

Pluses and minuses are also used. There will be one midterm project and one major final project. The actual schedule may change as I see your progress in the class. In case changes have to be made, these changes will be properly announced during class and the new rules will supersede the ones contained in this syllabus. Also, you are expected to participate actively in the classes performing exercises. Your willingness, promptness and diligence to tackle those exercises in class (as well as the homework assignments) will be the most important part of your grade. Attendance is very important. You are allowed only two excused absences per semester. In other words, those two excused absences don't count against your grades (any unexcused absence will be counted even if you have no excused absences). Please tell me in advance that you will be absent. You can call me at my office, e-mail me, or have a friend tell me. I will accept excuses if you tell me when you come to the next class at the latest. In case you miss class, you will be responsible for acknowledging the announcements and course notes/materials given during the missed class, as well as responsible for all assignments due. If you have any problems or questions, please talk to me anytime. I will be very happy to help you out.

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Syllabus

Part I: Digital Sound Theory and basic sound editing: MixViews, Audacity

8/26 8/27
8/31 9/2 9/3

Part II: Multitrack sound editing: mix, ardour; digital effects: reverb, filters and equalization

9/7 9/9 9/10
9/14 9/16 9/17

Part III: Algorithmical Composition: Introduction to RTcmix programming

9/21 9/23 9/24
9/28 9/30 10/1

Part IV: Sound synthesis methods: Additive and Subtractive synthesis

10/5 10/7 **10/8 midterms due**
10/12 (*fall break, no classes*)
10/14 10/15

Part V: Sound synthesis methods: AM, FM, and Granular synthesis

10/19 10/21 10/22
10/26 10/28 10/29

Part VI: Real-Time programming environments: PureData, Jmax

11/2 11/4 11/5
11/9 11/11 11/12

Part VII: Fast Fourier Transform and FFT-based sound applications: Ceres, Mammut.

11/16 11/18 11/19
11/23
11/25 11/26 (*thanksgiving, no classes*)
11/30 12/2 12/3