

**Graduate Seminar MUS 555:**  
**Encoding the Voice: Electroacoustic Composition with Voice**

This course will deal with basics of computer music composition. Classes will be bi-weekly with individual consultation with individuals on a weekly basis. Students will learn to work in a digital workstation environment ProTools, to record and analyze sound with Spear, AudioSculpt and MAX/MSP to use Wave plugins, be able to work with MIDI environment combining Sibelius and ProTools and to be able to interweave recorded with live sound in a MAX/MSP environment.

Besides bi-weekly assignments students will write a final piece for voice and electronics employing ProTools and MAX/MSP. This piece will be performed in a special concert with voice students in April. In addition, students will be given listening assignments and be asked to respond in writing. We will discuss the various aesthetic issues of electroacoustic composition: students are also expected to present detailed analyses of their own work, focusing on aesthetic issues and how the various technologies affect their compositional process.

Marking is as follows:

Analysis Assignments: 33%

Composition Assignments: 33%

Final Project: 34%

**Part One - History and Aesthetics of Electroacoustic Music**

History of electroacoustic music, aesthetics of electroacoustic Music, studio orientation; working with Pro-Tools and and recording console

**Analysis:** Stockhausen: *Studie II*, Kontakte, Pauline Oliveros: *Bye Bye Butterfly*

**Readings:** Walter Benjamin: *The Work of Art in the Age of Mechanical Reproduction*

Jean-Claude Risset: Foreword to *Electroacoustic Music*

Karlheinz Stockhausen: *Four Criteria of Electronic Music*

Heidi Von Gunden: *The Music of Pauline Oliveros*

C.K. Koenigsberg: *Karlheinz Stockhausen's New Morphology of Musical Time*

**Assignment #1:** ProTools composition with sinusoids

**Part Two – Musique Concrète: Creating Music with Environmental Sounds** Pro-Tools and musique concrète recording, microphones and recording equipment

**Analysis:** Pierre Henry *Symphonie pour un homme seul*, Paul Koonce *Walkabout and Back*, Bernd Alois Zimmermann *Requiem für einen jungen Dichter*

**Readings:** Jacques Attali: *Noise*

Dodge and Jerse: *The Acoustics and Psychoacoustics of Music*, Chapter 2

**Assignment #2:** Musique concrète field recording; musique concrète & tude

**Part Three – Acoustics and Psychoacoustics of the Recorded Voice**

Studio Tutorial, routing, recording and file management, analysis of timbre and spectra using AudioSculpt, frequency modulation, speed variation and cross synthesis, recording the voice, microphone types and placement

**Analysis:** Milton Babbitt *Philomel*, Karlheinz Stockhausen *Gesang der Jünglinge*, Gerald Grisey *Modulations*, Chaya Czernowin, *Shu Hai Practices Javelin*

**Reading:** Richard Kostelanetz: *Notes on Milton Babbitt as Text Sound Artist*

Dennis Smalley: *Spectro-Morphology and Structuring Processes*

John Chowning: *The Synthesis of Complex Audio Spectra by Means of Frequency Modulation*

**Assignment #3:** Spectral composition with voice samples processed and analyzed with AudioSculpt

#### **Part Four–Working with MIDI; Live-Electronics**

MIDI, notation and the audio workstation, importing MIDI files into ProTools, synchronization, controlling the Yamaha 01Z96 console via MIDI using ProTools, introduction to Max7; object-oriented programming

**Analysis:** Luigi Nono *Post Praeludium per Donau*, *Omaggio a György Kurtág*, Brian Ferneyhough *Time and Motion Study III*, Kaija Saariaho *Jardin Secret I*

**Readings:** Brian Ferneyhough: *Collected Writings*

Adriana Marratti: *Music and Science: an Interview with Martina Traversa*

**Assignment #4:** Composition combining live and recorded voice and synchronization

**Part Five–Working with Max/MSP and Pro Tools : Making a Shadow-Voice** Introduction to MSP, speed variation, delays, looping, buffers, real-time sound processing

**Analysis:** Steven Kazuo Takasugi *Strange Autumn*, Alvin Lucier *I am Sitting in a Room*

**Readings:** Steven Kazuo Takasugi: *Strange Autumn*, *An Attempt at an Interpretation*, Wieland Hoban: *Poems*

Christopher Ballantine: *Towards an Aesthetic of Experimental Music*

**Assignment #4:** Composition combining live and processed voice using Max/MSP

#### **Part Six–Final Composition with Voice and Electronics**

Continuation with Max/MSP, speaker placement; using acoustic resonance and contact microphones

**Analysis:** Dániel Péter Biró *Simanim (Signs/Traces)* *Mishpatim (Laws)*, Marta Gentilucci *(On) The Other Side of The Skin – Lullaby*

**Readings:** Daniel Libeskind; *Between the Lines* Paul Celan: *Poems*

**Final Piece:** Work on composition with voice using ProTools/Max/MSP with multiple microphone, multi-track, surround sound setup.