SB
Self-Determined Major Proposal: Music Technology / Composition
Revised: 12/08/05

My life for the past ten years has had three major focal points: computers, film and music. I have worked hard at developing skills in each of these fields but have yet to successfully combine them in a way that nourishes my creative drive. Instead, I have focused on creative aspects of each field individually, or have used one field to amplify my accomplishments in the others. In 2002, I created a virtual flash portfolio that showcased my musical and non-musical compositions. The portfolio was a major success, earning second place in the International Macromedia Student Web Design Contest for Best Interface Design (K-12). While this project enabled me to focus on both computers and music, my knowledge of one field had no bearing on my knowledge in the other. The portfolio could have easily showcased other creative works, and the musical compositions could have easily been displayed though another medium.

I propose a program that, in my opinion, takes creation to an entirely new level. I would like to major in Music Technology with a concentration on Composition for Electronic Media. My goal is to compose music for film / television. To best achieve this goal, I will take courses in music composition, music theory, psychology, film, and computer science. Film scoring is unique in that it uses aspects of these fields to spark a rare form of directed creativity. It requires a perfect balance between modesty and ostentation. In order for a film score to be successful, it must be inspired by the visual and auditory information provided. It must be subtle yet powerful, while never losing track of its primary objective: to enhance the film it is written for.

For my senior project, I will re-score excerpts of a previously scored film. This allows me to culminate my developed skills in a manner that supports my post-college ambitions. It also allows me to illustrate how music can drastically change the mood of a scene. One possibility would be to re-score a battle scene from the opposite perspective. In most war films, music works sub-consciously in establishing the protagonist and antagonist. My goal would be to compose music that reverses that establishment. For example, if I were to re-score the final scene of *The Patriot*, I would write music that supports the British Army instead of the Colonial Militia. This film would work well because it has characters established on both sides of the conflict. Ultimately, my music would make the Colonial Militia appear treacherous instead of patriotic. While this would generate a disturbing effect, the process would fully utilize the skills I had developed. Furthermore, it would provide me with two unique challenges: first, to write music relative to the action on-screen, and second, to clear my mind of the *official* score so that my work takes an original approach. I want to ensure that film scores of the past inspire new creative thought instead of hindering it.

For the musical aspect of my program, I have chosen to complete sequences in Music Theory and Composition. Composition is at the heart of my major and I would like to take advantage of all that Professor Holland and the music department has to offer in this field. In order to be an effective film composer, I must develop both modern and classical compositional techniques to complement films taking place in various time periods and locations. The independent studies in Music Technology, Electronic Music,

and Composition will compliment the traditional course studies in composition and theory. The independent study in Tonal Counterpoint with Professor Givan will be essential to my career as a film composer. Counterpoint is the process of combining musical ideas in a way that creates musical dialog instead of harmony. When this technique is used in association with visual information, a powerful effect and unique sense of motion is created. Furthermore, since Counterpoint was extensively used during the Baroque Era, it can provide an historical reference for period films. The Music Technology courses with Professor Holland will give me the skills I need to express my compositional ideas. The days of Max Steiner and Erich Korngold have long since passed, and a thorough understanding of music technology and recording techniques is essential for a modern day film scoring career.

This technological shift in the compositional process serves as a gateway to the study of Computer Science. Given my strong technological background, I believe that the Intro to Computer Science II course will provide me with both technical and analytical skills beneficial to composing modern day film music. Furthermore, it will prepare me for my final Physics of Sound (PY109) project, which is to create a musical composition using the programming language CSound. Csound is a text-based sound programming language that I became familiar with during my time at Northeastern University and have continued to study independently.

As my final project will illustrate, the psychological effect of music on the perception of visual ideas is extraordinary and frequently overlooked. Both the Introduction to Psychology and Perception courses will help me understand the inner workings of the human mind, and ultimately, will allow me to create more effective music.

Core Courses: (*Italics* = completed / in-progress, * = Elective)

Music

MU 208W – Music and Culture (4)
MU 241 – Materials and Structures 1 → *MU 151– Materials and Structures I (3)*
MU 152 – Materials and Structures IB (3)

MU 242 – Materials and Structures II (4)
MU 243 – Materials and Structures III (4)
MU 255 – Music Technology I (3)
MU 353 – Music Technology II (3)
MU 355 – Orchestration (3)
MU 356 – IND: Tonal Counterpoint (3)
MU 357 – Composition (3)
MU 361 – Topics in Recording Engineering and Computer Music Technology (3)
MU 372 – IND: Music Technology I (3)
MU 372 – IND: Electronic Music (3)
MU 372 – IND: Film Scoring / Final Project (3)
MU 372 – IND: Composition (3)
MP 281X – Private Musical Instruction (2)
MP 381X – Private Musical Instruction (2)

Film: American History / Liberal Studies 2

AM 233 – American Past in Film (4)
LS2 105 – Motion and Emotion in the Temporal Arts (3)

Computer Science / Physics

CS 106 – Introduction to Computer Science I (4)
CS 206 – Introduction to Computer Science II (4)
PY 109 – Sound and Music w/ Lab (4)

Psychology

PS 101 – Introduction to General Psychology (3)
PS 325 – Perception (4)

Foreign Language

FX 171H – Self Instruction Hebrew (3) *

Non-Western / Cultural Diversity

MU 309 – Music in South Asia (IND) (3) *

Unfulfilled Requirements

Natural Science (NR)
→ Spring 2007: PY 109 (4)
Foreign Language (FL)
→ Spring 2006: FX 171H (3)
Non-Western (NW) or Cultural Diversity (CD)
→ Fall 2006: MU 309 (3)

Tentative Schedule

Spring 2006 -- (15)	**Fall 2006 – (18)**
MU 243 (4) MU 353 (3) MU 355 (3) FX 171H (3) * MP 381X (2)	MU 356 (3) (IND – Counterpoint – B. Givan) MU 357 (3) CS 206 (4) PS 101 (3) MP 381X (2) MU 309 (3) (IND – Music Asia) *
Summer 2006 (I) -- (3) MU 372 (3) (IND – MU255)	**Spring 2007 – (16)** PS 325 (4) PY 109 (4) MU 372 (3) (IND - Film Scoring / Composition) MU 361 (3) MP 381X (2)
Summer 2006 (II) – (3) MU 372 (3) (IND - Electronic Music)	**Summer 2007 – (3)** MU 372 (3) (IND – Final Project)

Credits: 58

SKIDMORE COLLEGE – ACADEMIC HISTORY

Fall 2003	
AM-233 – American Past in Film (4) LS-1 – Human Dilemmas (4) MP-281X – Piano (2) MU-151 – Materials/Structures 1 (3)	Credits: 13

Spring 2004	
CS-106 – Intro to Comp Sci I (4) MP-281X – Piano (2) MP-298 – Strings (1) MU-152 – Materials/Structures I (3) MU-208W – Music and Culture (3)	Credits: 13

Fall 2005	
LS2-105 – Motion and Emotion in Arts (3) MU-242 – Materials and Structures II (4) MP-281X – Piano (2)	Credits: 9

Total Skidmore Credits: 35

NORTHEASTERN UNIVERSITY – TRANSFER CREDITS

EN 105 – Writing Seminar II (2.67) MA 200 – Linear Algebra (2.67) MP 281 – Chamber Music (0.66) MU 101 – Rudiments of Music (2.67) MU ELA – Musical Lib Arts Elective (2.67)	Credits: 12

EC 104 – Intro to Microeconomics (4) MP 282 – Private Musical Instruction – 45 min (1) MU 251 – Materials and Structures II (4) MU 255 – Music Technology (4) MU ELA – Music Lib Arts Elective (4)	Credits: 17

Total Transfer Credits: 29

Total Credits Earned: 64 **Total Credits Needed: 56**

Course Descriptions

MU 208W. MUSIC AND CULTURE 4
An intercultural introduction to music as culture. Topics include voice types, instrument categorizations, pitch and time systems, musical structure, transcription/notation, and ethnography. *Prerequisite*: MU151 or MU241 (or current enrollment in MU151 or MU241) or permission of instructor. (Fulfills humanities requirement; meets expository writing requirement for students who placed at EN105 level or who have completed EN103.) G. Thompson

MU 241. MATERIALS AND STRUCTURES I 4
Following a brief review of the rudiments of pitch, rhythm, and meter, students will study the principles of species counterpoint and then proceed to write and analyze diatonic tonal harmony, with reference to musical literature, style, form, and compositional process. Diatonic tonal syntax is the foundation of Western art music from the 17th through the 19th centuries, as well as some jazz and popular musics up to the present time. Examples will be chosen from a wide range of historical periods, musical styles, and traditions. (Fulfills humanities requirement.) *Prerequisite:* Diagnostic exam. B. Givan, D. Rohr

MU 242. MATERIALS AND STRUCTURES II 4
The second semester of theory will continue with the addition of chromatic harmony and the literature, style, forms, and compositional procedures associated with these expanded harmonic techniques, which appear in Western art music from the 18th to at least the early 20th centuries, and jazz. Topics will include chromatic chords, the resurgence of linear contrapuntal processes, modulation, and techniques that pushed to and beyond the limits of tonal harmony, such as expanded tertian chords, linear chromaticism, and finally the symmetrical scales and interval patterns associated with the dissolution of functional tonality. *Prerequisite:* MU152 or MU241. B. Givan, D. Rohr

MU 243. MATERIALS AND STRUCTURES III 4
This semester will introduce students to the compositional and analytical procedures of the 20th and 21st centuries. Topics will include the set-theoretical experiments of the atonal period, the 12-tone serialism of the mid-20th century, and the wide variety of influences (folk music, non-Western musics, jazz, and popular musics, as well as ongoing points of influence and connection from the harmony and counterpoint of Western art music) adopted by composers during these years. Students will develop systematic, critical approaches to the range of contemporary musical styles and possibilities as they choose their own musical pathways. *Prerequisite:* MU242 or MU251. B. Givan, D. Rohr

MU 255. MUSIC TECHNOLOGY I: INTRODUCTION TO ELECTRONIC MUSIC, COMPOSITION, AND RECORDING STUDIO TECHNIQUES 3
Introduction to basic music technology, electronic music, and professional recording studio techniques and equipment. Study of elementary acoustics, MIDI, synthesizers, microphones, analog and digital multitrack recording, sound mixing, and processing. Introduction to works in various styles by established electronic composers. Weekly studio/lab work. *Prerequisites:* ability to read music and QR1. (Fulfills QR2 requirement.) Studio fee: $50. A. Holland

MU 309. MUSIC IN SOUTH ASIA 3
An examination of the major musical phenomena of the Indian subcontinent and their historical and cultural background. Topics include Hindustani and Karnatak classical musical styles, religious music, popular music, and selected regional genres. Prerequisite: MU101 or permission of instructor. (Designated a non-Western culture course.) G. Thompson

MU 353. MUSIC TECHNOLOGY II: ADVANCED ELECTRONIC MUSIC, COMPOSITION, AND RECORDING STUDIO TECHNIQUES 3
Development of original compositions using advanced studio techniques. Areas of study include advanced MIDI projects, computer algorithms for composition and sound synthesis, synthesizer programming, audio (SMPTE)and video (VITC) time code synchronization, digital sampling, digital multitrack recording, automated digital mixing, digital mastering for compact disk, and audio for video. Study of works in various styles by established electronic composers. Weekly studio/lab work. *Prerequisite:* MU255 or permission of instructor. Studio fee: $50. A. Holland

MU 355. ORCHESTRATION 3
Study of the capabilities of orchestral instruments and ways they may be combined. Detailed examination of scores. Orchestration projects. Prerequisite: MU252 or consent of instructor. A. Holland

MU 356. TONAL COUNTERPOINT 3
Study of the contrapuntal style of J. S. Bach and his contemporaries. Analysis and writing of inventions, chorale preludes, and fugues. *Prerequisite:* MU243 or MU252 or consent of instructor. C. Joseph, D. Rohr

MU 357, 358. COMPOSITION 3, 3
Writing in smaller forms for various media. *Prerequisite:* MU243 or MU252 or consent of instructor. A. Holland

MU 359, 360. ADVANCED COMPOSITION 3, 3
Continuation of MU357, 358 including writing in larger forms. *Prerequisite:* MU357, 358 or consent of instructor. A. Holland

MU 361. TOPICS IN RECORDING ENGINEERING AND COMPUTER MUSIC TECHNOLOGY† 3
The study and practical application of advanced music technology topics chosen at the discretion of the instructor. Topics may include advanced MIDI applications; recording engineering, production, and marketing; digital synthesis, recording, and editing; intelligent synchronization; programming languages for synthesis and studies in psychoacoustics. Course may be repeated for credit with the permission of the department. *Prerequisites:* MU255, 353. Studio fee: $50. *Non-liberal arts.* A. Holland

MU 371, 372. INDEPENDENT STUDY† 3, 3

An opportunity for qualified students to pursue independent study, under the supervision of a member of the department, in any field of music. Prerequisite: Consent of the instructor and approval of the department. The Department

MP 281X, 381X. PRIVATE MUSICAL INSTRUCTION 2, 2
Individual sixty-minute weekly instruction in voice, piano, harpsichord, organ, fortepiano, guitar, orchestral instruments, sitar, tabla, and jazz improvisation. At least one semester of sixty-minute lessons is required for any student preparing a full recital. Prospective students accepted by audition/interview. (Fulfills arts requirement.) The fee for sixty-minute private instruction is $600 per course.

CS 106. INTRODUCTION TO COMPUTER SCIENCE I 4
An introduction to the principles of design, implementation, and testing of object-oriented programs. The course covers language features such as control structures, classes, file I/0, and basic data structures including arrays. Other topics include recursion and fundamental algorithms, such as elementary searching and sorting algorithms. (Fulfills QR2 requirement.) The Department

CS 206. INTRODUCTION TO COMPUTER SCIENCE II 4
Continuation of CS 106: study of recursion, pointers, development strategies for large software projects, and introduction to data structures, analysis of algorithms, and program verification. Prerequisite: CS106 or permission of instructor. The Department

PY 109. SOUND AND MUSIC WITH LAB 4
The physical principles of sound—how it is produced, propagated, and perceived. Illumination of principles will emphasize examples from music. Mechanisms used to produce different types of musical sounds will be discussed as well as the physical principles behind the reproduction of music in its many forms such as radio, tape recorders, and CD players. The laboratory component will include measurement of the speed of sound, frequency analysis of musical instruments, and sound recording. (Fulfills QR2 and natural sciences requirements.) J. Linz

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AM 233. REPRESENTATIONS OF THE AMERICAN PAST IN FILM 4
An examination of how Hollywood filmmakers have represented the American past, with special attention to the implications of movies for the construction of American cultural identity. Students will analyze films as historical documents that reflect (and sometimes reproduce) the ethos or cultural politics of the period in which they were made and first viewed. Through the use of popular culture theories, students will consider the ways in which films inform (and sometimes obfuscate and subvert) historical understanding. (Fulfills social sciences requirement.) D. Nathan

LS2 105. MOTION AND EMOTION IN THE TEMPORAL ARTS 3
How do works of art express feelings that "move" us? And how do we experience "movement" in particular art forms and works of art? This course explores major examples of those art formsliterature, film, drama, dance, and musicthat reveal their structures sequentially, demanding that the reader or audience experience them in a specific order in time. By (1) directly examining selected works, (2) understanding through these works how each art form creates feeling, and (3) analyzing the pattern of feeling in each work as it unfolds in time, we will explore the nature of aesthetic experiencehow the "movement" of particular art forms "moves" us. The course's major critical question is not so much what a novel or dance or concerto is as how it works and what it does. The course integrates close analysis of the works of art with readings in aesthetics and criticism that specifically focus these issues of feeling and movement in each of the arts. J. Rogoff, Liberal Studies

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PS 101. INTRODUCTION TO GENERAL PSYCHOLOGY 3
An introduction to the science of psychology through a survey of theories, methods, facts, and principles of behavior. Open to first-year students. The Department

PS 325. PERCEPTION 4
The study of the way in which people use sensory input to identify and interpret information in the world. The course will examine contributions of sensory, neural, and cognitive factors to perceptual experience. Discussions will cover general perceptual principles, but will emphasize visual and auditory processes. Three hours of lecture, two hours of lab per week. *Prerequisite:* PS101. H. Foley, F. Phillips

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FX 171 SELF-INSTRUCTIONAL BASIC STUDY 3
Hebrew
