PITCH-CLASS SET THEORY EXPLORATION OF SOUND IN 20TH/21ST CENTURY CONTRAPUNTAL PRINCIPLES PSYCHOPHYSICAL TONE COLOR INTERPRETIVE 20TH CENTURY PIONEERS MUSIC OF GHANA MUSICAL MINIMALISM SIXTEENTH CENTURY COUNTERPOINT FUGUE IN THE STYLE OF BACH XENAKIS AND LIGETI MICROTONAL MUSIC
The Music Theory Department comprises a diverse faculty, including professional music theorists, composers, scholars in education and musicianship, and performers. We are united by our shared desire to teach our students every aspect of musicianship through a thoughtful and holistic approach.

The educational mission of the NEC Theory Department is to help students experience the close connections between musical understanding, creation, and performance. We believe that this mission is best achieved by honoring and nurturing the diverse perspectives, interests, and strengths of our faculty, and recognizing each of our students as individuals with unique interests and needs.

Our students aspire to be excellent performers, composers, scholars, and teachers, so our courses are designed to promote creative learning through which they will gain extraordinary insight into the music they perform and love.
Music Theory

Spring 2019 Course Catalog

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THYU 334: An Introduction to Pitch-Class Set Theory
Bert Van Herck
The modernist music that emerged in the early 20th century is the result of a long evolution that can be traced back to the tonal practice period of the 18th century (and beyond). Yet the analytical concepts from the tonal tradition are inadequate for post-tonal music. This course offers a creative approach for exploring and understanding this repertoire and the underlying theoretical concepts. For this purpose, the basics of the pitch-class set theory will be discussed in detail. This theory has established fundamental concepts for 12-tone music that have been acknowledged as the standard for discussing this repertoire in academia and scholarly publications. The focus of this class is dual: a theoretical understanding of post-tonal music and its concepts; and developing a musical sensitivity of these concepts through creative work. Musical examples are drawn from a broad range of repertoire including composers such as Schönberg, Webern, Stravinsky, Varèse, Bartok, Lutoslawski, Berio, Knussen, and Boulez among others. Prerequisite: THYU 202,208.

THYU 374: Exploration of Acoustic Properties and Aesthetics of Sound in selected works of 20th and 21st century
Davide Ianni
The course is designed to provide students with a deeper understanding of sound, starting with its acoustics and psycho-acoustic properties, and ending with the new instrumental techniques of sound production and its poetic possibilities in the multifaceted scene of contemporary music composition and recital production.

To this end, students will:
• Gain necessary knowledge of Acoustics and Psychoacoustics principles, in order to better curate recitals and performance situations;
• Make out a historical context in connection to the main poetics that have irreversibly changed musical practices and conceptions in Western Music.
• Develop the necessary language and analytical tools associated with different compositional poetics, with a focus on developing familiarity with secondary techniques of sound production and their musical notation.
THYU 382: Music as Narrative
Roger Graybill
This course explores narrative-driven approaches to musical analysis, and provides students with the concepts and tools for carrying out such an analysis. We will consider what musical narrative is, and explore various ways in which it can arise—for instance, through the establishment and eventual resolution of a conflict, or through the introduction of a striking event (say, a surprising chromatic harmony or a peculiar textural effect) that later is “explained” in some way by the music. Special attention will be paid to the role of musical agency, which plays an important role in many narrative interpretations. The work for the course includes occasional readings, but the primary emphasis will be on the analysis of music from the repertoire.
Questions will consider will include the following:
• In what ways can music be heard as an unfolding narrative? What is the purpose of a narrative interpretation?
• How does performance bear on the narrative interpretation of a work, and vice versa?
• What is the ideal balance between “objectivity” and “subjectivity” when doing a narrative-driven analysis?
• How does a narrative interpretation of a musical work relate to other ways of thinking about musical structure?

THYG 548: Contrapuntal Principles
Matthias Truniger
Counterpoint is the technique of combining independent melodic lines simultaneously. It is perhaps one of the most distinctive features of Western art music. This course traces the evolution of contrapuntal practice and its underlying theoretical principles from the Baroque period up to the twentieth century. Music to be examined includes works by Bach, Beethoven, Brahms, Schoenberg, Stravinsky, Webern, and Carter. Students will deepen their understanding of tonal and atonal counterpoint through constant writing of compositional exercises as well as through analysis, listening, and performance. Further insight will be gained from theoretical texts by Mattheson, Kirnberger, Seeger, and Krenek. There will be weekly assignments (analysis, counterpoint exercises), a midterm project (composition in tonal counterpoint), and a final project (composition in atonal counterpoint). All projects will be performed and discussed in class.
THYG 555: Psychophysical Analysis: Tone Color Analysis

Robert Cogan

Tone color, especially instrumental tone color, is one of the most fundamental yet least examined and least understood aspects of music. This is especially perplexing given the fact that creation of musical instruments has been one of the constants of cultures throughout all of human history. Over the last hundred-fifty years there has been a gradual evolution of scientific, technology-based analysis of sound and sonic coloration. Especially in the past twenty-five years have these developments exploded, with new computer-electronic means of analysis and entirely new conceptual developments based on them. There now exist new ways of observing the physical structures of sound and also of conceiving the neuroscience of hearing and perception. Especially revealing has been the development of spectrographic computer analysis of sound, and the connection of this form of analysis to other, more conventional methods of musical understanding. We have been able to make real progress toward an expanded musical analysis which illuminates the role of both vocal and instrumental tone color in musical structures and expression everywhere and “everywhen.” In introducing sonic analysis in the Seminar, we will make use of the spectrographic analysis facilities of the NEC Music Theory Department.

Tone-color awareness in music has many parallels with the history of visual color in art (as well as with the analysis of speech sounds in linguistics). Consequently, this semester will include some consideration of vision and of visual color. The Seminar will interfold the following elements:

- General technical introduction to acoustical and sonic analysis
- Readings and discussion of sonic analysis of musical works (Chinese and Japanese instrumental music; Gregorian chant; Mozart, Beethoven, Debussy, Berg, Stravinsky, Carter, and others); primary text; Robert Cogan, New Images of Musical Sound
- Introduction to color vision and visual color analysis (Monet, Turner, Van Gogh, Seurat, Kandinsky, Albers)
- Written-oral presentations by Seminar members on selected works by Debussy, Webern, Stravinsky, Varese, Messiaen, and possibly others.

The Seminar aims to cover a considerable range of technical and artistic matter; it is my intention in each seminar meeting to combine technical information with the examination of a variety of musical-artistic sources. To avoid gaps in one’s learning, I do expect regular attendance and active seminar participation.

THYG 582: Interpretive Analysis

John Heiss

Analysis for performers; concepts of rhythm, line, harmony, and form; performance implications of analytic conclusions; performance and analysis of works from students’ areas of specialization.
THYG 583: 20th Century Pioneers

Pozzi Escot

Explorations through readings, analysis, listening, and performance of innovative 20th century American music and of important theoretical developments which revolutionized and influenced the compositional practice throughout. These developments will be exposed, researched, studies and discussed. An introduction will let us see the past and what previous American composers like Charles Griffes, Edward MacDowell, Sousa, Chadwick, plus how North American Indian, African and other cultures, might have influenced the compositional practice of the American composers of today. It opens with Ives, Hanson, Sessions, Anthiel, Crawford, Partch, Carter, Cage, Nancarrow, Babbitt, Shapley, and Cogan. Most of these composers wrote theoretical treatises which have and continue to deeply influence the understanding of the compositional practice today. Hanson’s Harmonic Materials of Modern Music was the first book to be devoted to unordered pitch-class sets of all sizes. Sessions’ books The Musical Experience and Harmonic Practice show extraordinary musical inter-disciplinarity. Babbitt is today recognized as the father of serial development and Cogan for his pioneering writing on the development of spectrographic analysis of music and the co-author of the extraordinary book “Sonic Design: The Nature of Sound and Music.” The great American composer Elliott Carter writes re. the “Sonic Design” book that “These two composers are the pioneers to view the large field of music we live in today as a whole and to derive general concepts and principles that describe and explain methods of each style, age, and people.”

THYG 585: Music of Ghana

Felicia Sandler

In this course, students engage select traditional and contemporary music created in Ghana, West Africa. As a theory offering, the focus is analytical, yet performance is a strong component of the course. Members will:

1. Drum, sing, and transcribe traditional repertoire such as Kete, Sikye, Tora, Kpanlogo, Adowa, Nnwonkoro, Sanga, and Bamaaya. Course members participate in a concert at the end of the term, providing the singing component of a dance/drum performance with the Agbekor Drum and Dance Society, and the Kiniwe Ensemble at Tufts University, led by Mr. Emmanuel Attah Poku – master drummer of the Ashanti Palace in Kumasi.

2. Transcribe select traditional musics.

3. Transcribe and analyze contemporary art music and popular music in Ghana: Palm-wine high-life, Big band high-life, and works by Dr. Ephraim Amu, J.H. Kwabena Nketia, and others.

4. Read and write about our own understandings of the ways that theorists have described the music of Africa and the delights and controversies of that work.
THYG 586: Musical Minimalism
Katarina Miljkovic
This course is dedicated to the research of various compositional systems in music of the later 20th and 21st century. Students will look into different designs of musical time, pitch, rhythm, timbre and form, in selected works from repertoire. The beginning point of the course is an analysis and discussion of examples from various fields: architecture, visual art, literature and nature. Students observe and discuss systems of organization that are encountered in everyday life and commonly perceived as beautiful and harmonious. This thread of thought extends throughout the course by applying similar observations to music. The class will trace chaotic consequences of WWII and disintegration of established musical norms, rooted in the tradition of Western music, hyper-organization leading to an increase of indeterminacy, total reduction of minimalism and its consequences, new nature of complexity emerging from science and mathematics. Selected works by Boulez, Stockhausen, Cage, Feldman, Glass, Reich, Sciarrino, Lachenmann and Grisey are the core repertoire of the course. Students are invited to bring works of their own choosing, and discuss them in class.

The goal of the course is to introduce a student to dialectical opposition between hyper-order and randomness, driving forces of music development since 1945.

THYU 412T / THYG 512T: Sixteenth Century Counterpoint
Lyle Davidson
The objective of this course is to master contrapuntal thinking and technique. Therefore, this course is not about analytical exposure to music, nor using Fux's 1725 Species Counterpoint for compositions. Counterpoint concerns more than that. Renaissance Music reflects an ordered creation in sound. The maker of Renaissance pieces is responsible for creating a sounding structure in a manner that is audible to the listener. That goal is reached when a student's motets sound like those written by the 16th century master, Lassus.

In successful counterpoint, one voice enters while other voices listen. Then, one or more of the other voices enter. In this way, a dialogue ensues in which the flow of attention moves throughout the texture, from one voice to another. Phrase by phrase the process continues. One voice begins, other voices support it. In this way, cooperation and respect among the voices animate the Counterpoint.

Writing 32 canons a2 and three motets during the first semester builds the foundation. The second semester focuses on contrapuntal textures. Students complete four versions of five textures (including canons) a3 and two motets plus a movement of a mass (a3, a4 or more) that is based on one of the three techniques commonly used in the period (cantus firmus, paraphrase, and parody). The role of accents in forming rhythmic textures and Renaissance solmization is practiced. Representative pieces of Lassus and others are analyzed. When possible, pieces are performed in an appropriate space.
THYU 414T / THYG 514T: Fugue in the Style of Bach
Matthias Truniger

Fugues occupy a prominent position in the work of Johann Sebastian Bach. Whether written for solo instruments, chamber ensemble, or chorus, Bach's fugues epitomize a kind of musical thinking that was central to the Baroque period, and that continued to exert its influence throughout the eighteenth and nineteenth centuries. Focusing on examples from the Well-Tempered Clavier and the Art of Fugue, this course introduces students to the principles and techniques of fugal composition. Aspects of structure and style will be explored through analysis, listening, and performance, as well as through constant writing of contrapuntal exercises modeled on Bach's music. As a final project, each student will compose a four-voice fugue for keyboard or four melodic instruments. All projects will be performed and discussed in class.

THYU 419T / THYG 519T: Xenakis and Ligeti
Stratis Minakakis

The work of Xenakis and Ligeti is of seminal importance to contemporary music. Both outsiders to the Franco-German post-1945 avant-garde, their unique vision established them as two of the most formidable explorers of music in Europe and throughout the world. While their personal idioms are highly distinct, both Xenakis and Ligeti frequently addressed common compositional issues. From their 1950s critique of serialism, to their later interest in complex patterns, their development was often triggered by identical impulses. This course examines aspects of Xenakis' and Ligeti's work through the prism of the solutions both composers provided to the same problems.

THYU 421T / THYG 521T: Understanding Microtonal Music
Julia Werntz

To understand the various roads that can lead musicians into the use of microtones we will explore the microtonal music and writings of five important twentieth- and twenty first-century composers and how each underlying premise is manifested in the music itself. These roads include just intonation and spectralism (math and acoustics), "ultra-chromaticism," expressive infection, speech contours, beating/clusters, non-Western and folk tunings and techniques, and even philosophy and spirituality. Students gain clarity on questions of intent and end result, and apply this clear thinking to their final analysis or composition projects.
Robert Cogan: “Over different periods of the past five decades I have headed NEC’s Departments of Composition, Music Theory, and Graduate Theory, with the intention of developing methods and programs appropriate to the changing worlds, musical, technological, and conceptual, of our time. I have spoken, my works have been performed and recorded, and my books and writings have been published throughout America, Europe, and Asia, including by Harvard University Press and Prentice-Hall, Inc. I have collaborated with IBM Research, where I was Distinguished Visiting Professor, and have also taught at the Berkshire Music Center (Tanglewood), Central Conservatory (Beijing), the Shanghai Conservatory, and the State University of New York (Purchase campus). My students are active nationally and internationally.”

A composer, Lyle Davidson, actively pursues a long held interest in the relation of Music to Psychology, Development, Cognition, and pedagogy. A strong advocate of basic skills in Solfege and Harmony, his passion is 16th century counterpoint.

Pozzi Escot, a Juilliard and Musikhochschule Hamburg graduate, was chosen as one of the five outstanding women composers of the 20th century in 1975 (with Bacewicz, Boulanger, and Crawford) when her Symphony V Sands was premiered by the New York Philharmonic Orchestra. Escot is currently a Woodrow Wilson Visiting Fellow, Editor-in-Chief of the acclaimed music journal SONUS, President of the International Society of Hildegard von Bingen Studies, and Professor of Graduate Theory/Composition at New England Conservatory.

Roger Graybill’s research has focused on rhythm and gesture, theory pedagogy, the music of Brahms, and musical narrative. In addition to his publications and presentations, he has extensive experience as a church organist.

John Heiss is an active composer, conductor, flutist, and teacher. His works have been performed worldwide, receiving premieres by Speculum Musicae, Boston Musica Viva, Collage New Music, the Da Capo Chamber Players, Aelolian Chamber Players, Tanglewood Festival Orchestra, and Alea III. He has received awards and commissions from the National Institute of Arts and Letters, Fromm Foundation, NEA, Rockefeller Foundation, Massachusetts Council on the Arts and Humanities, ASCAP, and the Guggenheim Foundation. His principal publishers are Boosey & Hawkes, E.C. Schirmer, and Elkus & Son.

Heiss has been principal flute of Boston Musica Viva and has performed with many local ensembles, including the BSO. His articles on contemporary music have appeared in Winds Quarterly, Perspectives of New Music, and The Instrumentalist. Along with Juilliard faculty Joel Sachs, Heiss has designed and written a book/CD-ROM classical music primer for Blue Marble Music entitled Classical Explorer.

Starting in the 1970s, Heiss has directed many NEC festivals dedicated to composers or themes, and has spearheaded visits to NEC by many composers, including Ligeti, Lutoslawski, Berio, Carter, Messiaen, Schuller, and Tippett.

At Commencement 1998, John Heiss received NEC’s Louis and Adrienne Krasner Teaching Excellence Award.

Davide Ianni is an Italian composer residing in the U.S. since 2004. His music spans from solo to orchestral works, including pieces for fixed media and live electronics. Ianni’s works have been featured in festivals and concerts around the world in such venues as the Venice Biennale, BEAMS, Boston Cyber Arts, Nicosia’s International New Music Festival, Third Practice, Wellesley Composer Conference, SICPP, June in Buffalo. His compositions have been performed by virtuosi such as Philipp A. Staudlin, Alexandre Lecarme, Lorenzo Tomio, Maarten Stragier, Luca Piovesan, and has been commissioned by ensembles such as Sound Icon, Alea III, Moscow Contemporary Music Ensemble, L’Arsenale, Dinosaur Annex, New York New Music Ensemble.
Katarina Miljkovic is a dedicated researcher of the connections between music, plastic art, nature and science. Using computational models of processes in nature, she is researching crossover between science and music of our heritage as well as music of today. Dr. Miljkovic presented her works and research at national and international conferences and music festivals.

Stratis Minakakis is a composer and conductor whose creative work engages issues of memory, cultural identity, and art as social testimony; it also explores the rich possibilities engendered by the interaction between arts and sciences.

As a composer, he has collaborated with leading performers and ensembles across Europe, North America, and Japan, such as The Crossing choir, the PRISM and Stockholm saxophone quartets, the Harry Partch ensemble, the Arditti String Quartet, Ensemble Counter(induction, Noh actress Ryoko Ayoki, recorder virtuoso Tosiya Suzuki, and conductors Donald Nally and Rüdiger Bonn.

As a conductor, he has directed and coached numerous chamber music and orchestral ensembles in contemporary repertory, including works by Milton Babbitt, Katherine Balch, Henri Dutilleux, György Ligeti, Fabien Levy, Eric Maestri, John Mallia, Katarina Miljkovic, Dimitris Minakakis, Joan Arnau Pamiés, Y. A. Papaioannou, and Iannis Xenakis.

Also active in the field of music theory, his recent work focuses on interpretive analysis of the late string quartet manuscripts by Beethoven. This line of work builds upon the pioneering research of violinist Nicholas Kitchen on the expressive markings and articulations of Beethoven manuscripts. Other areas of interest include early Modernism, and the music of Xenakis and Ligeti.

Felicia Sandler has a keen interest in West African music in general and West African choral music in particular. Her drumming teachers include C.K. Ladzekpo, Johnson Kemeh and Attah Poku. She has studied song with Nani Agbeli, Attah Poku (Ashanti), Emashie Cultural Group (Ga), Faustina Dugbenu (Ewe), Obi Nyim Nda (Fanti), and Zablong Zakania Abdallah (Dagomba). She is project director for a critical edition of the complete works of Ephraim Amu.

Matthias Truniger earned Master degrees in cello performance and music theory from the Musikhochschule Zürich, Switzerland, and a DMA degree in music theory from NEC. He has held teaching positions at the Musikhochschule Luzern (1991-1999) and NEC (since 2000), and conducted courses at the Conservatorio della Svizzera Italiana and the Lucerne Festival Academy. He is also active as a composer.

Bert Van Herck is a composer, originally from Belgium. He studied composition with Jonathan Harvey, Magnus Lindberg, Julian Anderson, Chaya Czernowin, Brian Ferneyhough, Helmut Lachenmann, and Tristan Murail. With Hans Tutschku, he studied electroacoustic music. From his fascination with spectral music and electronic music he explores different ways of how sound and harmony can interact.

His music has been played by various performers and ensembles such as Le Nouvel Ensemble Modern, Ensemble FA, Ensemble Intercontemporain, and has been presented at the ISCM World New Music Days in 2009 (Sweden) and 2010 (Australia).

Since the mid-1990s the music of composer Julia Werntz has been almost exclusively microtonal. Through her music, her published writings, her teaching, and her activities as Artistic Director of the Boston Microtonal Society, she has emerged as an important voice in the field of microtonal music. Her compositions have been performed at concert series and festivals around the Northeastern United States and Europe. She has several times been a fellow at the Virginia Center for the Creative Arts. Werntz’s manual on microtonal ear training and composition, Steps to the Sea, was published both in the U.S. (Frog Peak Music), and in Germany, as part of the book 1001 Microtones (von Bockel Verlag). She has published articles on microtonal and other contemporary music in Perspectives of New Music, the Sonneck Society Bulletin, ParisTransatlantic, NewMusicBox, and New World Records.

Werntz is both Artistic Director of the Boston Microtonal Society and co-founder of its chamber ensemble NotaRiotous.
Music Theory Major

The mission of the Music Theory Program is to provide NEC students with a flexible and individualized curriculum that builds on students’ potential future roles as music writers, collaborators, educators, promoters and, credentials that will make them stronger candidates for teaching positions in private schools, colleges, and university levels. The program addresses the emerging need for interdisciplinary music artists and scholars.

Music Theory Program offers the following concentrations:

- Music Theory with a concentration in Pedagogy
- Music Theory with a concentration in Composition
- Music Theory with a concentration in Performance
- Analytical approaches to Music

A three-member committee, comprised of the department chair, the student’s advisor and another faculty member, provides guidance to each Theory major student throughout the study. A theory major is also expected to complete one or multiple theses during his or her tenure at NEC.

In addition to coursework, students are given private theory lessons (called studio theory) for two years with the faculty member of their choice. This includes systematic study of various topics, keyboard harmony (figured bass and score reading), and work on a thesis during the second year.

Please see the NEC website for further detailed information.
Music Theory Minor

The Music Theory Minor prepares students for further in-depth theoretical study and work, such as graduate placement exams, a major or double major at the graduate level, and teaching assistant positions in graduate schools. The Music Theory Minor consists of 10 credits, including a Capstone Project.

Students may pursue a Music Theory Minor in one of the following tracks:

- Performance and Analysis
- Studies in Contemporary Music
- Music Theory and Applied Composition
- Research in Music Theory

The Capstone Project

The Capstone Project for the Music Theory Minor is a one or two-semester course of individual study with a member of the Music Theory faculty, the duration and scope of which is determined by the Music Theory Minor track elected by the student; it is undertaken after the student completes their Music Theory elective requirements.

During the completion of the Capstone Project, Music Theory Minors will receive ongoing individual support from their Advisors and collegial support from the other students in their department Minor cohort at scheduled meetings.

Please see the NEC website for further detailed information.
Music Theory Department Resources and Opportunities

The music theory department welcomes interest in any and all of the department offerings. Theory majors and minors, and indeed the entire student body, can utilize our many resources.

Music Theory Learning Center
All undergraduate and graduate students are welcome to take advantage of the Learning Center’s resources and regularly available student teaching assistants. Our teaching assistants can:

• Answer your questions and help with class assignments
• Assist with the cultivation of keyboard harmony and ear training skills using interactive computer-based exercises

The learning center operates on a regular schedule during the academic year. Times and location will be announced at the beginning of each semester, and the center is free and open to any member to NEC college students regardless of major.

Student Employment Opportunities
The Music Theory department employs many students that serve many different functions.

Some areas students are employed include:

Teaching Assistants
Teaching Assistants will work with a professor to plan and facilitate a course (or courses), acquire a behind-the-scenes understanding of classroom teaching in higher education, and grow as future educators, receiving invaluable supervision and guidance from their mentor.

Department Assistants
Department Assistants will work with faculty and staff on administrative and organizational duties. Common tasks include providing audio/visual support for department events, maintaining the department Facebook page, making copies of class materials for faculty, and assisting with the semester course catalog.

Music Theory Learning Center Teaching Assistants
Music Theory Learning Center Teaching Assistants work one-on-one or in small groups with students on keyboard and ear training exercises, using the music theory software in the NEC computer lab.

Additional Opportunities
Other employment opportunities offered include proctoring and grading exams, assisting with keyboard harmony classes, and other jobs as needed.