

University of Florida
School of Music
Special Topics in Music Theory
Spectralism: Turning Sound into Music
Room: MUB 232
MUT 6936 section 11F0

Thursday 4:05 – 7:05

Instructor: Dr. Joseph Dangerfield
Office: UB 307
Office Hours: M 9:30 – 10:30, T 9:30 – 10:30, and by appointment
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COURSE DESCRIPTION

In the 1970s, a compositional approach based on the natural properties of sound began to emerge. Using computer software, composers were able to analyze a sound and isolate its component overtones into approximate models of timbre known as spectra. As a result of these analyses, timbre became a central component of the musical discourse in an attitude towards composition that came to be known as spectralism. Several spectral composers have denounced the term spectralism as overly reductive, failing to portray the flexible application of the information gleaned from spectral research. The true interest of spectral music lies not in the construction of harmonic or temporal events according to spectral models, but rather in the musical possibilities that are revealed as these events are shaped over time and woven into a musical narrative. Spectral music explores the conceptual and perceptual boundaries between timbre and harmony, frequency and pitch, rhythm and duration, and form and the evolution of processes implied by the physical properties of sound. Using primary source readings, repertoire study, and classroom discussion, the class will work towards a nuanced view of the aesthetics of spectral music, its place within the context of modern musical styles, and its influence on compositional technique.

COURSE OBJECTIVES

Over the course of the semester, students will read the writings of a number of spectral composers and scholars, as well as become familiar (through both assigned and classroom listening/score perusal) with works by major spectral composers. These resources will allow classroom discussions to be focuses towards:

- aesthetic issues inherent in a spectral attitude towards composition
- historical influences that foreshadow the coalescence of aesthetic goals and compositional techniques currently referred to as Spectralism
- the derivation of compositional techniques from the physical properties of sound

Using the discussion of these concepts, students will be able to:

- identify and explain the application of spectral principles in specific works
- describe broad stylistic differences between individual spectral composers
- formulate an empirical and epistemological characterization of spectralism, and compare this foundation to other established modes of compositional thought

The exploration of the concepts and techniques at the heart of spectral composition will help students gain a more refined understanding of the role that timbre plays in an musical context. Regardless of an individual's stylistic preference or professional focus (i.e. performance, theory,

musicology, composition, etc.), the increased sensitivity to the nature of sound that comes through the study of Spectralism can enhance his/her personal connection to music of all styles.

TEXT AND MATERIALS

Due to the fact that Spectralism is a relatively recent development, there does not exist a text that adequately addresses the issues to be covered in class. Most spectral music research exists in the form of journal articles, many of which are available through databases such as JSTOR. Although many articles will be assigned for this course,* I would like to recommend a few collections of spectral articles that are helpful resources for the study of spectral music.

- Fineberg, Joshua, ed. "Spectral Music: History and Techniques." Contemporary Music Review 19, no. 2 (2000): 1-152.
- Fineberg, Joshua, ed. "Spectral Music: Aesthetics and Music." Contemporary Music Review 19, no. 3 (2000): 1-128.
- Murail, Tristan. Fineberg, Joshua, ed., Pierre Michel, ed. "Complete Writings and Published Conferences of Tristan Murail." Edited Joshua Fineberg and Pierre Michel. Contemporary Music Review 24, no 2/3 (2005): 115-283.

I would also recommend a few texts that may be helpful in explaining some of the concepts that form the basis of spectral research and its musical applications.

- Sethares, William A. Tuning, Timbre, Spectrum, Scale. 2nd ed. London: Springer-Verlag, 2005.
- Yost, William A. Fundamentals of Hearing: An Introduction. 3rd ed. San Diego: Academic Press, 1994.
- Rossing, Thomas D. The Science of Sound. 2nd ed. New York: Addison-Wesley Publishing Company, 1990.

None of these texts are required. They are simply suggestions to help the ambitious student enhance their understanding of the issues discussed throughout the term. All required reading, and listening for the course will be accessible through the resources of the UFL libraries.

*Students need to have reliable access to a printer, as they should bring copies of the assigned readings to class. I suggest the use of a binder to help organize the printed articles.

GRADING SYSTEM AND DUE DATES

You will receive a percentage grade for each component of the course. These individual grades will be assessed and weighted towards the final grade in the following manner:

- **Assignment 1 (due) = 25%**
- **Midterm Exam (due during class) = 25%**

It is difficult to completely quantify a grading system for assignments of this type. However, you will be evaluated according to the following criteria:

- Completeness of your answer to the assigned question or issue:
 - For assignment 1, you should choose an issue that you are personally intrigued by and that you feel you are able to answer completely.
 - Although midterm questions are answered during class, you will be receiving the

questions a week prior to the exam and I expect that you will be fully prepared to answer every question thoroughly.

- Thoroughness of your research/preparation:
 - Assignment 1 is not due until the 4th week of class. Therefore, I expect that you have done research on your own using the resources available through the UFL libraries. I will be happy to assist you in tracking down resources that are relevant to your work, and to discuss your projects with you at any time.
 - Since you have received all article titles in advance, I expect a thorough read, with substantive commentary both in class, and in the completed summaries.
- Organization and style:
 - For assignment 1, I expect your essay to be well organized according to the standards of graduate-level scholarship. Your thesis (or argument) should be clearly stated and supported by a logical breakdown of appropriate concepts. You are expected to exhaustively cite any articles, books, and scores that you reference in your essay according to an established manual of style. Although I will allow you to choose your own citation style, I suggest (and prefer) Chicago style citations (details of which may be found at <http://www.chicagomanualofstyle.org/>) and the use of footnotes rather than endnotes.
 - I do expect that your summaries to be well organized and that you are able to reference specific scholars, composers, and pieces by name, as necessary.
 - For both of the above tasks I expect you to strive for a clear and concise writing style that is grammatically sound. However, I will be a bit more lenient with those for whom English is a second language.
- **Topic Proposal (due 3/30) = 5%**
 - I expect that your topic proposal consist of:
 - a statement outlining the goals of the project
 - a statement describing the research methods you will use to accomplish the goals of the project
 - a statement describing how your project will be organized
 - a preliminary bibliography of articles, scores, books, etc. that you expect to use for your final project
- **Final Project (due 5/1) = 30%**
 - Again, it is difficult to completely quantify a grading system for a project of this type.
 - However, you will be evaluated according to the following criteria:
 - How well you have achieved the goals described in the topic proposal
 - How thoroughly your chosen topic has been researched
 - Conceptual clarity and how well your argument or thesis is supported
 - Organization and style (as in assignment 1, see above)
- **Class Participation = 15%**
 - For this category your grade will be based on:
 - Preparation-your knowledge of the assigned readings and listening as demonstrated by your participation in class discussions
 - Participation-I expect all students to enrich the class discussions by being enthusiastically willing to offer their own perspective concerning the issues being discussed, showing respect for the opinions of their classmates, and staying fully focused on the class during our meetings. Please do not sleep, text, or answer the

- phone during class (I do not mind food or drinks in the classroom).
- Attendance-As we have a large amount of material to cover, I expect students to make every effort to attend all class sessions during the semester.

Students are responsible for the material covered in sessions for which they are not present. If I am properly notified, and the reason for the missed session is valid, I will be happy to arrange a meeting with you to discuss what you missed.

Unexcused absences will affect your overall grade in the following way:

- 1 unexcused absence - 2.5% deducted from your final grade
- 2 unexcused absences - 5% deducted from your final grade
- 3 unexcused absences - 10% deducted from your final grade
- 4 unexcused absences - 20% deducted from your final grade
- 5 unexcused absences - fail
 - If you must miss a class and have an acceptable excuse (e.g., out of town for professional obligation), you must notify me at least 24 hours in advance of the absence in order to be credited with an unexcused absence.
 - If you miss a class due to illness or some other unavoidable emergency, please notify me via email within 24 hours of the missed class session to avoid being credited with an unexcused absence.
 - Please be on time to class. If you are more than five minutes late to any class that will count as half of an unexcused absence and will affect your grade
 - Exceptions to the policies stated above are at my discretion.

Assignment 1, Midterm Exam, and Final Project

- Assignment 1: Each student will write a brief essay, (about 5 pages, double-spaced) addressing an issue to be chosen from the following list:
 - Many composers/scholars feel that “spectralism” is an overly reductive term. Which composer/scholar’s characterization of the compositional attitude that has come to be known as “spectral” do you agree with most, and why? In what ways does this characterization remain inadequate or incomplete?
 - Looking beyond the use of similar compositional techniques, how would you describe the aesthetic differences between the music of Tristan Murail, and Gérard Grisey? Reference specific musical examples and writings in your answer.
 - There is something lost in translation through the technique of additive synthesis based on the extraction of spectra from acoustic analysis. Discuss reasons why spectra are not complete models of sound and use this as the foundation for a description of the challenges facing a composer who attempts to use spectra to produce a certain timbral effect.
 - Some composers/scholars have reacted strongly to the comparison with certain aspects of minimalism. However, could it be that they protest too much? Provide an aesthetic comparison of Spectralism and minimalism. Why might spectral composers/scholars react so strongly to the comparison?
 - Joshua Fineberg has written that the development of compositional techniques based on spectral research has allowed composers to conceive of musical works “much more closely to the manner in which they will ultimately be perceived than would otherwise be possible.” Evaluate this statement based on your own perceptual experience of a piece of spectral music as compared with the

composer's state aesthetic goals. The following procedure may help you to formulate your response:

- First: Choose a piece of spectral music with which you are not familiar. Make sure that the composer has written extensively about the compositional process behind the piece. (I can help with suggestions.)
- Second: Listen to the piece from beginning to end and note your general perceptual response to the music.
- Third: Read the composer's account of the compositional techniques used to create the sounds in the piece.
- Finally: Listen to the piece again from beginning to end. How much has your perceptual response changed as a result of understanding the intentions of the composer?
- Midterm Exam: One week before the exam, students will be provided with a list of essay questions drawn from issues covered in the assigned readings and class discussions. From these eight questions, four will be selected as the questions on the exam. From these four exam questions, each student will be asked to answer two of his/her choice.
- Final Project: Each student will choose one of the following three options for the final project. A 15-minute in-class presentation of your project is a required component of your final project.
 - 1) You may write a research paper about any of the topics discussed in the course (10 pages or so, double-spaced, variable according to the needs of the topic). If you are a music theory, musicology, or conducting major, then you must choose this option. The paper should include elements of the following:
 - Technical issues – form, rhythm, orchestration, pitch, etc, and how these aspects of the music are reflected in the work(s) presented.
 - Stylistic/aesthetic/philosophical – what kind of experience is the composer trying to create, and why.
 - Historical – research and show convincing evidence for the ways in which a variety of historical forces (e.g., theoretical writings, music by other composers, sociopolitical trends, etc.) may have influenced a specific piece of music, or the music of a specific composer.
 - 2) Composition majors may choose to compose a piece of “spectral” music. A brief (3 – 5 pages, double-spaced) prose explanation of how you composed the work, along with necessary examples, must accompany the work in order for your project to be considered complete.
 - 3) A performance major may choose to prepare a lecture-recital performance of a spectral work. The lecture-recital will include:
 - Explanation of why the work is considered “spectral,” and why the work was chosen.
 - A brief (3 – 5 pages, double-spaced) prose explanation of the work's historical significance, and what significant contributions the work provides the field of study (instrument or voice).
 - An in-class performance of the work, or relevant sections (will count as the in-class presentation).

Resources for Students

- Instructor – Please feel free to approach me with any questions you have. My office hours are detailed above and I am available by appointment.
- Music Library – UFL Libraries give students access to a number of resources that will be essential for the course. Please familiarize yourself with how to use the resources below and feel free to ask for my help.

- Catalogue – scores, recordings, and texts
- JSTOR – online database of journals

COURSE OVERVIEW

- Unit 1: What is spectral music?
- Unit 2: Spectral Music Yesterday: The development of spectral music as evidenced through historical influences.
- Unit 3: Art Meets Science: A closer look at the methods, techniques, and repertoire of spectral music.
- Unit 4: Spectral Music Today and Tomorrow: How a spectral attitude towards composition continues to influence subsequent generations of composers.
- Unit 5: What is spectral music?

Students requesting accommodations due to disabilities must register with the Dean of Students Office. The DOS office will provide documentation to the student, who must then provide the documentation to the instructor when requesting said accommodation. To request classroom accommodations, contact the Assistant Dean of Students/Director of the Disability Resources Program at P202 Peabody Hall or phone 392.12.61 (V), 392.3008 (TDD).

COURSE SCHEDULE (subject to modification as necessary)

Unit 1: What is Spectral Music?

Week 1: Introduction

- Thursday, 8.27 – Syllabus overview and explanation of coursework/expectations; What is Spectralism?
 - Read for next week:
 - Joshua Fineberg – Spectral Music (5 pages)
 - Viviana Moscovich – French Spectral Music: An Introduction (8 pages)
 - Joshua Fineberg – Guide to the Basic Concepts and Techniques of Spectral Music (33 pages, not all text)

Week 2

- Thursday, 9.03 – Lecture: The basic concepts and techniques of spectral music
 - Discussion: Assigned Readings
 - Discussion: Details of Assignment 1
 - Read for next week:
 - Claudy Malherbe – Seeing Light as Color; Hearing Sound as Timbre (13 pages)
 - Gérard Grisey – Did You Say Spectral (3 pages)
 - Tristan Murail – Target Practice (first 14 pages only)
 - Jonathan Harvey – Spectralism (4 pages)

Week 3

- Thursday, 9.10 – Discussion: What aesthetic generalizations can we make about spectral music, and what about spectral music seems to separate it from other compositional styles?
 - No reading for next week; focus on completing Assignment #1

Unit 2: The Development of Spectral Music as Evidenced Through Historical Influences

Week 4

- Thursday, 9.17 – **Assignment #1 Due**
 - Discussion: Using your knowledge of music history, what specific works (theoretical, scientific, philosophical, musical, etc.) might have foreshadowed the development of spectral music?
 - Read for next week:
 - Julian Anderson – A Provisional History of Spectral Music (16 pages)
 - Listening Assignment for next week:
 - Richard Wagner – Das Rheingold (1869), Overture and beginning of Scene 1
 - Claude Debussy – Prélude à L'Après-midi d'un Faune (1894)
 - Edgard Varèse – Ionization (1931)
 - Giacinto Scelsi – Quattro Pezzi (su una nota sola) (1959)
 - György Ligeti – Atmosphères (1961)
 - Per Norgard – Voyage into the Golden Screen (1968)

Week 5

- Thursday, 9.24 – Theoretical Developments Lecture
 - Discussion: progression towards Spectralism as evidenced in the assigned listening
 - Assignment #1 returned
 - Read for next week:
 - Tristan Murail – Afterthoughts (5 pages)
 - György Ligeti – Metamorphoses of Musical Form (15 pages)
 - Tristan Murail – The Revolution of Complex Sounds (first 4 pages only)
 - Eric Drott – Timbre and the Cultural Politics of French Spectralism (7 pages)

Week 6

- Thursday, 10.01
 - Discussion: Last week's readings
 - Read for next week:
 - Tristan Murail – Villeneuve-lès-Avignon Conferences, Centre Acanthes, 9-11 and 13 July 1992 (81 pages, not all text)

Unit 3: Art Meets Science: A closer look at the methods, techniques, and repertoire of spectral music

Week 7

- Thursday, 10.08 – Lecture: What are spectra, what do they represent, and how might they be categorized?
 - Read for next week:
 - Francis Rose – Introduction to the Pitch Organization of French Spectral Music (35 pages, not all text)

Week 8

- Thursday, 10.15 – Midterm Exam Questions given
 - Lecture:
 - No reading; prepare for the midterm exam

Week 9

- Thursday, 10.22 – Midterm Exam
 - Read for Next Week:
 - Gérard Grisey – *Tempus ex Machina*: a composer's reflections on musical time (37 pages, not all text)

Week 10

- Thursday, 10.29 – Midterm exams returned
 - Discussion: Final Project and Topic Proposal
 - Discussion: Form, rhythm, and the aesthetics of Spectralism
 - No assigned reading; focus on your topic proposal
 - Listening assignment:
 - Magnus Lindberg – *Corrent* (1992)
 - Kaija Saariaho – *Du crustal* (1989)
 - Philippe Hurel – *Leçon de choses* (1993)
 - Marc-André Dalbavie – *Color* (2002)

Unit 4: Spectral Music Today and Tomorrow: How a spectral attitude towards composition continues to influence subsequent generations of composers

Week 11 – Topic Proposal Due Monday 11.02 (electronically)

- Thursday, 11.05
 - Rather than having the usual lecture or discussion, I will meet with each student individually to discuss comments I have concerning their topic proposal, and strategies for completing the final project.

Unit 5: What is spectral music?

Week 12

- Thursday, 11.12 – Consonizing Dissonance: The music of Magnus Lindberg
 - Discussion: What do you think is the future of spectral music?
 - How would you explain spectral music to someone who has not been exposed to it?
 - How have the technical, historical, and aesthetic issues covered in this course affected the way you think about music?

Week 13

- Thursday, 11.19 – Student Presentations

Week 14

- Thursday, 11.26 – NO CLASS – THANKSGIVING RECESS

Week 15

- Thursday, 12.03 – Student Presentations

FINAL PROJECTS DUE NO LATER THAN MONDAY 12.07 AT 11:59p