SYLLABUS

MPATE-GE 2312: Tonmeister Technology II

Steinhardt School of Culture, Education, and Human Development

Department of Music Technology

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Office Hours: Wednesday 3:30 pm to 6:00 pm

Catalog Description
Course examines advanced Tonmeister music production theories and techniques related to recording acoustic music for playback on immersive sound systems. Students will sharpen their recording skills through class lectures and live recording sessions. Topics include surround sound (Dolby 5.1), surround with height channels (Auro-3D), wave field synthesis (WFS), immersive audio, and object based systems (Dolby ATMOS).

Learner Objectives
By the end of the course students will be able to:

• Identify, classify, and analyze several types of multi-channel sound systems.
• Plan and execute surround and 3-D recording of live performances of classical, jazz, folk, and world music.
• Compare immersive recording techniques and analyze the type of sound images that they will produce.
• Assess and critique the sound quality produced by stereo, 5.1 surround sound, and sound systems with height channels (3-D).

Assessment
Assignments 35% (7 assignments, 5% each)
Mid-Term Exam 20%
Final Exam 35%
Class participation 10%

Assignments (5% each)

For each recording session listed, a single PDF of documentation is required, one per session, that includes the following information:

1. Session date
2. Performing artists
3. List of performed repertoire
4. Microphone input list
5. Seating and microphone position diagram
6. A written description of the sound quality produced by each immersive recording system used

Recording Sessions:

1. Jazz quartet (5 points)
2. Film orchestra (5 points)
3. Classical guitar (5 points)
4. Tango ensemble (5 points)
5. Classical Indian music (5 points)
6. New Music ensemble (5 points)
7. World music ensemble (5 points)

Class Participation

Students will be expected to participate in class listening exercises and live recording sessions that are crucial to the structure of the course. Through active class discussions, students will benefit and learn from one another's experiences. The class listening exercises and discussions will reflect the learning objects, assignments, and assigned
readings for the course. For example, students will be assigned specific tasks during recording sessions including: production, recording, score following, microphone placement, recording console operation, and documentation.

Readings

Required Texts


Suggested Additional Reading


Course Format

Classes will be conducted using direct instruction, listening exercises, group discussions, and small and large group recording activities.

Course Website

The syllabus, details about assignments, and any other general course information will be available online through NYU Classes. In addition, postings will be made regarding events or other items of importance regarding this course.

Course Outline

<table>
<thead>
<tr>
<th>2nd Summer Session</th>
<th>Topic</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 Day 1</td>
<td>Lecture: 5.1 Surround Sound Monitoring</td>
<td>Reading pp. 23-31</td>
</tr>
<tr>
<td>Week 1 Day 2</td>
<td>Lecture: Surround Sound Recording Techniques</td>
<td>Reading pp. 32-67</td>
</tr>
<tr>
<td>Week 1 Day 3</td>
<td>Jazz quartet Recording Session</td>
<td>Jazz quartet Documentation</td>
</tr>
<tr>
<td>Week 1 Day 4</td>
<td>Film Orchestra</td>
<td>Film Orchestra Documentation</td>
</tr>
<tr>
<td>Week 2 Day 1</td>
<td>Lecture: Recording With Height, AURO 3-D</td>
<td>Reading pp. 71-105</td>
</tr>
<tr>
<td>Week 2 Day 2</td>
<td>Classical Guitar Recording Session</td>
<td>Classical guitar Documentation Midterm Take Home Exam Due</td>
</tr>
<tr>
<td>Week 3 Day 3</td>
<td>Tango ensemble Recording Session</td>
<td>Tango ensemble Documentation</td>
</tr>
<tr>
<td>Week 4 Day 4</td>
<td>Classical Indian music Recording Session</td>
<td>Classical Indian music</td>
</tr>
<tr>
<td>Week 3 Day 1</td>
<td>Lecture: Multi-channel Mixing Techniques, Dolby ATMOS</td>
<td>Reading pp. 65-86</td>
</tr>
<tr>
<td>Week 3 Day 2</td>
<td>New Music ensemble Recording Session</td>
<td>New Music ensemble Documentation</td>
</tr>
<tr>
<td>Week 3 Day 3</td>
<td>World music ensemble Recording Session</td>
<td>World music ensemble Documentation</td>
</tr>
<tr>
<td>Week 3 Day 4</td>
<td><strong>Final Exam</strong></td>
<td>5 essay questions based on assigned text readings and lectures</td>
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**Statement on Academic Integrity**

Students are responsible for understanding the concept of plagiarism, and knowing and understanding the contents of the University “Statement of Academic Integrity”

http://steinhardt.nyu.edu/policies/academic_integrity

Plagiarism will immediately result in a failing grade in the course and the student will be reported to their school’s academic Dean.

**Students with Disabilities**

Academic accommodations are available for students with documented disabilities. Please contact the Moses Center for Students with Disabilities at 212-998-4980 for further information.

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**Appendix A**

**Graduate Scale and Rubric**

**Steinhardt School of Education Grading Scale**

There is no A+

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
</tbody>
</table>

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Letter Grade Rubric

A—Outstanding Work

An "A" applies to outstanding student work. A grade of "A" features not simply a command of surround and 3-D recording techniques, but importantly, a high level of understanding the scientific concepts, practical applications and artistic outcomes associated with these immersive recording techniques.

An "A" assignment is excellent in nearly all respects:

- It fulfills requirements of the assignment
- Is composed in a neat, compressive, and accurate manner
- It demonstrates a clear understanding of the immersive recording techniques discussed and demonstrated in class.
B—Good Work

A "B" is given to work of high quality that reflects a command of surround and 3-D recording theory and techniques and a strong presentation but lacks an in-depth technical or aesthetic engagement with the material.

A "B" assignment shares most characteristics of an "A" project, but

- It may have some minor weaknesses in the documentation and command of the material.

- It fails to meet one requirements outlined in the assignment.

C—Adequate Work

Work receiving a "C" is of good overall quality but exhibits deficiencies in the student's technical knowledge, skill level, or has inaccurate documentation.

A "C" project is generally competent; it is the average performance. Compared to a "B" project:

- It may have serious shortcomings in its command of the reading and lecture material or accuracy in the documentation that should have been obtained by doing the readings and participating in class recording sessions.

- It fails to meet one or two of the requirements outlined in the assignment.

D or F—Unsuccessful Work

The grade of "D" indicates significant problems with the student’s work, such as a shallow understanding of the material.

- It fails to demonstrate an understanding of the technical material covered in class.

- It fails to demonstrate adequate music production skills

- It fails to fulfill 2 or more of the requirements outlined in the assignment

An "F" is given when a student fails to demonstrate an adequate understanding of the material, or fails to follow the directions in an assignment, or fails to hand in an assignment.
Pluses (e.g., B+) indicate that the assignment is especially strong on some, but not all, of the criteria for that letter grade. Minuses (e.g., C-) indicate that the paper is missing some, but not all, of the criteria for that letter grade.

**Assignment Grade Rubric**

5 Points = A work  
4 Points = B work  
3 Points = C work  
2 Points = D work  
1 Point = F work

**Class Participation Rubric**

A (14 to 15 Points) The student attends all classes and always participates in class discussions and recording exercises.

B (11 to 13 Points) The student attends most classes, participates in most recording sessions, and sometimes participates in class discussions.

C (9 to 10 Points) The student attends most classes, participates in most recording sessions, but rarely participates in class discussions.

D (6 to 8 Points) The student attends most classes, participates in some recording sessions, and does not participate in class discussions.

F (1 to 7 Points) The student misses some recording sessions or is late, participates and does not participate in class discussions.