PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS

AUDIO PROCESSING & EAR TRAINING
RATS 1080

Class Hours: 3.0  Credit Hours: 3.0
Laboratory Hours: 0.0  Revised: Fall 2013

Catalog Course Description:

Complete coverage of audio processes with extensive hands-on use. All processes will be covered in theory, technology, and application, including spectral, dynamic, and time-based, including underlying concepts of time, space, and frequency domains; and Z-plane, discrete wavelet. Implementations of processors in the analog and digital domains are covered, with hands-on use. The class also guides the student toward developing critical listening skills; including ear-training software and iterative testing to establish the success of the student’s improved abilities.

Entry Level Standards:

College-level reading and writing

Prerequisites:

VPT 1015

Textbook(s) and Other Course Materials:

Other reading/media materials will be provided or specified by instructor.
Professional headphones required (Audio-Technica ATH-M50, Sony 7506, or equivalent)

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Initial placement test on current state of knowledge; discussion of past work and experiences.</td>
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<tr>
<td>2</td>
<td>Equalizers (Ch. 14-Mixing Audio); history, application, types, implementations; Ear training exercises</td>
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<tr>
<td>3</td>
<td>Dynamic Range Controllers (Ch. 15, 16, 17)</td>
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<tr>
<td>4</td>
<td>Dynamic Range Controllers – continued (Ch. 16, 17) Test #1</td>
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<tr>
<td>5</td>
<td>Delays &amp; Reverbs (Ch. 21, 23); Ear training exercises</td>
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<tr>
<td>6</td>
<td>Reverbs (Ch. 23)</td>
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<tr>
<td>7</td>
<td>Time-based modulation (Ch. 22)</td>
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II. Course Goals*:

The course will

A. Guide students to understand and use all audio processors, in theory and application. (III, V)

B. Enhance students’ ability to discern frequencies, dynamic relationships, and processing, in order to apply appropriate tools and techniques. (II, IV)

C. Develop students’ skills in combining critical listening with tool selection and application for a given problem or task. (II, III)

*Roman numerals after course objectives reference goals of the Media Technologies program.

III. Expected Student Learning Outcomes*:

Students will be able to:

1. Demonstrate effective use of audio processors, both analog and digital, in widely varying applications. (A, B, C)

2. Repeatedly identify frequency ranges and dynamic contrasts in order to select the appropriate processor for a given application. (A, B, C)

3. Differentiate between tools for proper selection based on several criteria, including latency, bandwidth, flexibility, and repeatability. (A, B, C)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: **60%**

Four tests will be given, at a minimum, including a mid-term. The final exam is comprehensive and includes hands-on demonstration of ability. Tests will consist of multiple choice, true/false, and written statements.
B. Laboratory Expectations: 40%

Lab work is actually studio work, hands-on with equipment, either analog or virtual, in specific tests to demonstrate ability in knowing how to use each piece or processor in a given situation. Lab work also consists of weekly learning exercises and assignments.

C. Field Work:

N/A

D. Other Evaluation Methods:

N/A

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>C</td>
<td>70-79</td>
</tr>
<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>F</td>
<td>below 60</td>
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</tbody>
</table>

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.
C. Accommodations for disabilities:

   Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by sending email to disabilityservices@pstcc.edu, or visiting Goins 127, 132, 134, 135, 131. More information is available at http://www.pstcc.edu/sswd/.

D. Other Policies:

   PLEASE SUPPRESS THE URGE TO MULTI-TASK during class. Using a laptop for note taking purposes is fine, but please save YouTube searches, Facebook updates, tweets, or extended sessions of Minecraft for after class. As far as phones are concerned, you can keep them on, but set them to silent. There should be no reason to be using your phone during class.