Catalog Data:
ECE 3750 – (3)(Y) Signals and Systems
Prerequisite: Elementary circuits and calculus through ordinary differential equations
Develops tools for analyzing signals and systems operating in continuous-time, with applications
to control, communications, and signal processing. Primary concepts are representation of
signals, linear time-invariant systems, Fourier analysis of signals, frequency response, and
frequency-domain input/output analysis, the Laplace transform, and linear feedback principles.
Practical examples are employed throughout, and regular usage of computer tools (Matlab) is
incorporated. Students cannot receive credit for both this course and BIOM 310.

Textbook:

Time and Place:
MWF 1:00- 1:50pm, Rice 130

Instructor:
Maïté Brandt-Pearce, Professor of Electrical and Computer Engineering
Office: THN C322; Tel: 434-924-1470; Email: mb-p@virginia.edu
Office Hours: 9-10am Wednesdays and Thursdays

Teaching Assistants:
Xu Wang, Ph.D. student in electrical engineering
Office: C316 Thornton; Email: xw2bx@virginia.edu
Office Hours: Wednesdays 4-5pm, Fridays 2-3pm, in Stacks
Homework Help Session: Mondays at TBD in TBD

Homework Policy:
Homework will be assigned as listed below, due Wednesdays. You may discuss with your
classmates or the instructor concerning your understanding of the homework problems and the
underlying concepts, but you must complete the work independently (if you work with someone
else, please write their name on your HW). Please make certain that you write neatly, and that
you show detailed work, not just the final answer. Homework solution will be posted on-line.
The lowest homework grade will be dropped. Late homework will not be accepted without a
doctor’s note.

Pop Quizzes:
Unannounced 10 minute quizzes will be administered in class frequently covering recent course
lecture material. Some will be graded and others used for formative assessment purposes.
Always come to class prepared with paper and pencil.

Exam Policy:
Midterms are 50 minutes, in class, on the day scheduled (Mondays). The final exam is three
hours, cumulative. All exams are closed book and closed notes. One letter size page of notes
will be allowed (both sides). You must turn in your notes with your tests. A calculator is allowed.
Grading Policy:
Homework 15%
Pop quizzes 15%
Midterm Exam I 20%
Midterm Exam II 20%
Final Exam 30%

Honor System:
I trust every student in this course to fully comply with all of the provisions of the UVA honor system. Alleged honor violations brought to my attention will be forwarded to the Honor Committee. In addition, any homework found to be identical to another student’s work, or to a solutions manual, will be given an automatic zero.

Schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Book Sections</th>
<th>Assignment</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/28-8/30 (short)</td>
<td>1.1 - 1.9</td>
<td>HW 1</td>
<td>9/4</td>
</tr>
<tr>
<td>2</td>
<td>9/4-9/9</td>
<td>Matlab, 2.1-2.7</td>
<td>HW 2</td>
<td>9/11</td>
</tr>
<tr>
<td>3</td>
<td>9/11-9/16</td>
<td>2.8 - 3.4</td>
<td>HW 3</td>
<td>9/18</td>
</tr>
<tr>
<td>4</td>
<td>9/18-9/23</td>
<td>3.5 - 3.9</td>
<td>HW 4</td>
<td>9/25</td>
</tr>
<tr>
<td>5</td>
<td>9/25-9/30</td>
<td>Review</td>
<td>Midterm I (Chapters 1-3)</td>
<td>9/30</td>
</tr>
<tr>
<td>6</td>
<td>10/2-10/7</td>
<td>4.1 - 4.7</td>
<td>HW 5</td>
<td>10/9</td>
</tr>
<tr>
<td>7</td>
<td>10/9-10/11 (short)</td>
<td>4.8 - 5.5</td>
<td>HW 6</td>
<td>10/16</td>
</tr>
<tr>
<td>8</td>
<td>10/16-10/21</td>
<td>6.1 - 6.6</td>
<td>HW 7</td>
<td>10/23</td>
</tr>
<tr>
<td>9</td>
<td>10/23-10/28</td>
<td>6.4 - 6.6, 7.1</td>
<td>HW 8</td>
<td>10/30</td>
</tr>
<tr>
<td>10</td>
<td>10/30-11/4</td>
<td>Review</td>
<td>Midterm II (Chapters 4-7)</td>
<td>11/4</td>
</tr>
<tr>
<td>11</td>
<td>11/6-11/11</td>
<td>8.1 - 8.6</td>
<td>HW 9</td>
<td>11/13</td>
</tr>
<tr>
<td>13</td>
<td>11/20-11/25</td>
<td>10.1 - 10.8</td>
<td>HW 11</td>
<td>12/2</td>
</tr>
<tr>
<td>14</td>
<td>12/2-12/4 (short)</td>
<td>11.1-2, 12.1, 13.1-2</td>
<td>HW 12</td>
<td>Not due</td>
</tr>
<tr>
<td>15</td>
<td>12/6</td>
<td>Review</td>
<td>Final</td>
<td>12/13</td>
</tr>
</tbody>
</table>