## EE 359 - Wireless Communications – Autumn 2016

### Tentative Syllabus

<table>
<thead>
<tr>
<th>Lecture #</th>
<th>Date</th>
<th>Topic</th>
<th>Required Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>9/27</td>
<td>Overview of Wireless Communications</td>
<td>Chapter 1 and Appendix D</td>
</tr>
<tr>
<td><strong>Wireless Channel Models</strong></td>
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<tr>
<td>2*-3</td>
<td>9/29, 10/4</td>
<td>Path Loss and Shadowing Models, Millimeter wave propagation</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>4-5</td>
<td>10/6, 10/11</td>
<td>Statistical Fading Models, Narrowband Fading</td>
<td>Section 3.1-3.2.3</td>
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<tr>
<td>6</td>
<td>10/13</td>
<td>Wideband Fading Models</td>
<td>Section 3.3</td>
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<tr>
<td><strong>Impact of Fading and ISI on Wireless Performance</strong></td>
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<tr>
<td>7</td>
<td>10/18</td>
<td>Capacity of Wireless Channels</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>8, 9, 10</td>
<td>10/20, 10/25, 10/27</td>
<td>Digital Modulation and its Performance</td>
<td>Lec 8: Chapter 5 Lec 9-10: Chapter 6</td>
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<tr>
<td><strong>Flat-Fading Countermeasures</strong></td>
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<tr>
<td>11-12</td>
<td>11/1-11/3</td>
<td>Diversity</td>
<td>Chapter 7</td>
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<tr>
<td><strong>MT</strong></td>
<td>Week of 11/7</td>
<td><strong>Midterm (outside class time)</strong></td>
<td>Chapters 2 to 7</td>
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<tr>
<td><strong>ISI Countermeasures</strong></td>
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<tr>
<td>17-18</td>
<td>11/29-12/1</td>
<td>Multicarrier Systems and OFDM</td>
<td>Chapter 12</td>
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<tr>
<td>19*</td>
<td>12/5</td>
<td>Multiuser Systems</td>
<td>Topics in Chapters 13-14</td>
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<tr>
<td><strong>Course Summary</strong></td>
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<tr>
<td>20*</td>
<td>12/9</td>
<td>Course summary/final review (and optional advanced topics lecture outside class time)</td>
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<tr>
<td><strong>Final</strong></td>
<td>12/15</td>
<td>12:15-3:15 pm</td>
<td>Pizza party to follow</td>
</tr>
</tbody>
</table>

*No lectures Thurs 9/29, Tues 12/6, Thurs 12/8. These lectures are rescheduled as follows:*
- Lecture on Thurs 9/29 is rescheduled to Thurs 9/29, 4:30-5:50pm, Gates B03, with snacks.
- Lecture on Tues 12/6 is tentatively rescheduled to Mon 12/5, 12-1:20pm, with lunch
- Lecture on Thurs 12/8 is tentatively rescheduled to Fri 12/9, 12-1:20pm, with lunch (optional extension until 2pm)