Southern Illinois University Carbondale

ECE 476/593c Syllabus
Intro to Broadband Communication Systems
Fall 2014

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Office Hours: M-W-F; 3:00-4:50 pm; and/or by appointment
Lecture: MWF, 1:00 – 1:50 p.m., ENGR A-410
Lab: TBA

Teaching assistant: Hari Prasad Naram
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Objectives: This course investigates cutting-edge technologies for broadband communication systems as well as broad-band access networks. The digital transmission fundamentals are reviewed at first. Then satellite and wireless, microwave, and optical transmission technologies are presented along with latest developments and examples in the field.

Topics:
1. Digital communication fundamentals (6 classes)
2. Mobile broadband communications (6 classes)
3. Elements of OFDMA (8 classes)
4. Broadband access technologies (6 classes)
5. Passive optical networks (8 classes)
6. Next-generation Broadband Optical access Networks (6 classes)

Laboratory experiments: Use of TIMS equipment for hands-on experiments of communication system modules.

Reference textbooks:

Grading/Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Project/lab Report</td>
<td>15%</td>
</tr>
<tr>
<td>Project Presentations</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Attendance/ Class Participation</td>
<td>5%</td>
</tr>
</tbody>
</table>

A: 87-100; B: 75-86; C: 65-74; D: <65

1 Subject to change at instructor’s discretion
Classroom Policies:

A. Attendance Policy: Attendance will be taken at random throughout the semester, and it will be counted toward the final grade.

B. Announcements: Students are responsible for all announcements made in class and/or posted to D2L.

C. Late Homework/Missed Exams: Late homework is not accepted without prior consent. If an exam is missed for a legitimate reason, a grade will be assigned based on the remaining homework/exams.

D. Mobile Technology Policy: Please refrain from using any mobile device in the classroom. This is an interactive course and your attention is required.