ECE 542 Syllabus
Fall 2015

Instructor: Dr. Mohammad R. Sayeh
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Office Hours: Monday - Friday – 2:00 to 3:00
Lecture: MWF, 1:00 – 1:50 p.m., ENGR A-322

Grading/Evaluation:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Exams (3)</td>
<td>60%</td>
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<tr>
<td>Term paper</td>
<td>20%</td>
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</tbody>
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A: 90-100; B: 80-89; C: 65-79; D: 55-64; F: 0-54

Catalog Data: ECE 542: Photonics I. Credit 3. Ray optics, wave optics, beam optics, polarization of light, statistical optics, photons and atoms, Prerequisites: ECE375 with a grade of C or better.


Goals: This course introduces students to fundamentals of Photonics.

Topics:
1. Ray tracing (4 classes)
2. Wave optics (4 classes)
3. Electromagnetic waves (5 classes)
4. Gaussian beams (5 classes)
5. Polarization of light (6 classes)
6. Optical resonance (6 classes)
7. Partially coherent light (6 classes)
8. Photon optics (6 classes)