EE234: Photonics Laboratory  
Instructor: Jelena Vuckovic  
Winter 2010/2011

Lectures: Mon Fri 1:15-2:05pm  
Gates, B12  
Lab: Wed 1-5pm, Packard 066

Class web-site (linked from JV’s site)  
http://www.stanford.edu/class/ee234/  
(lecture notes and assignments are posted on the coursework portion of the class website)

Instructor’s coordinates:  
Nano-Science Building, office #209  
Phone: x5-2288, E-mail: jela@stanford,  
WWW: http://www-ee.stanford.edu/~jela

Instructor’s office hours  
Fridays, 2pm – 3:30pm, Nano #209

TA’s:  
1. Armand Rundquist (amandhr)  
2. Gary Shambat (gshambat)  
Office hours: TBA

Administrative staff:  
Ingrid Tarien  
Office: Nano #306  
ingrid@ee

Course materials  
- Lecture notes will be posted on the class web site.  
- There are no required textbooks.  
- Recommended textbooks:  
  - B. Saleh and M. Teich, Fundamentals of Photonics  
    (1st edition available online at:  
    http://www3.interscience.wiley.com/cgi-bin/bookhome/88511919/?CRETRY=1&SRETRY=0)  
  - L. Coldren and S. Corzine, “Diode lasers and photonic integrated circuits”

Homework  
- Weekly homework: will be posted on the class web site (on Fridays), and solutions will be due one week later (Fridays @2pm).  
- Late homeworks will be graded according to the following formula:
where \( t \) is the time when homework is turned in (measured in days from the due date \( t=0 \)), \( s(t) \) is the homework score as a function of time, \( s(0) \) is the homework score on the due date, and \( p \) is the time when solutions are posted on the class web site (measured in days from the due date).

Exceptions to grading according to this formula are possible in special circumstances, by contacting the instructor.

**Prelabs**

Prelab questions will be posted online weekly and your answers will be due at the beginning of the lab session on Wednesday.

**Lab reports**

Lab reports are due on Wednesday at 1pm (one week after the completion of the experiment). They should be submitted electronically (by e-mail) to the TA in charge of the experiment and the instructor.

Lab reports should be written in the format posted on the course website.

Each team writes and submits one report. Therefore, you should share writing responsibilities with your lab partner.

**Exams**

No exams

**Honor code**

Discussion with others is strongly encouraged, but you are not allowed to copy somebody else’s homework solution or prelab, use any sources that contain the answer to an assigned problem or one very similar to it.

Lab reports writing is shared with your lab partner

**Grade distribution:**

- Homework = 30%
- Prelabs = 10%
- Lab work = 30%
- Lab reports = 30%
## Tentative class schedule

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<tr>
<th>Week</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>01/03</td>
<td>Lecture 1: Semiconductor LEDs and lasers</td>
<td>01/05</td>
</tr>
<tr>
<td>2</td>
<td>01/10</td>
<td>Lecture 3: Photodetectors</td>
<td>01/12</td>
</tr>
<tr>
<td>3</td>
<td>01/17</td>
<td>No class (Martin Luther King Jr. Day Holiday)</td>
<td>01/19</td>
</tr>
<tr>
<td>4</td>
<td>01/24</td>
<td>Lecture 6: Beams, free space propagation</td>
<td>01/26</td>
</tr>
<tr>
<td>5</td>
<td>01/31</td>
<td>Lecture 8: Modes in optical waveguides</td>
<td>02/02</td>
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<tr>
<td>6</td>
<td>02/07</td>
<td>Lecture 10: Optical fiber modes, fiber coupling</td>
<td>02/09</td>
</tr>
<tr>
<td>7</td>
<td>02/14</td>
<td>Lecture 12: Directional couplers and isolators</td>
<td>02/16</td>
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<tr>
<td>8</td>
<td>02/21</td>
<td>No class (Presidents’ Day Holiday)</td>
<td>02/23</td>
</tr>
<tr>
<td>9</td>
<td>02/28</td>
<td>Lecture 15: Photonic crystals (cont’d)</td>
<td>03/02</td>
</tr>
<tr>
<td>10</td>
<td>03/07</td>
<td>Lecture 17: Photonic crystals, nanophotonics</td>
<td>03/09</td>
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</tbody>
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* Lab report 8 due one week after you complete the lab