Department of Electrical and Computer Engineering

COURSE OUTLINE

ELEC 545 Nanotechnology
Spring 2015 (201501)

Instructor
Dr. Chris Papadopoulos
Phone: 721-8619
E-mail: papadop@ece.uvic.ca

Office Hours
Day: Tuesday Time: 2:30PM – 5:00PM
(or by appointment)
Location: EOW 429

Lectures
Sections: A01/CRN 21128
Days: TWF
Time: 9:30AM – 10:20AM
Location: DSB C126

Website
http://coursespaces.uvic.ca/ (NetLink ID required)

Required Text
Readings will be provided.

Reference texts


Introduction to Nanoscience, Lindsay, Oxford (2010).

Topics
I Nanoscale Imaging and Fabrication
II Properties of Nanostructures
III Nanoelectronics
IV Nanophotonics
V Bionanotechnology

Assessment
Tests 15; 20% (Take home, due Feb. 17; Mar. 17)
Term Project Presentation 10%, Paper 30% (Due April 2)
Final Exam 25%

Submit all work directly to instructor (in-class or office by 5PM). Term papers will not be accepted after the due date.
The final grade obtained from the above marking scheme will be based on the following percentage-to-grade point conversion:

<table>
<thead>
<tr>
<th>Passing Grades</th>
<th>Grade Point Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>9</td>
<td>90 – 100</td>
</tr>
<tr>
<td>A</td>
<td>8</td>
<td>85 – 89</td>
</tr>
<tr>
<td>A-</td>
<td>7</td>
<td>80 – 84</td>
</tr>
<tr>
<td>B+</td>
<td>6</td>
<td>77 – 79</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>73 – 76</td>
</tr>
<tr>
<td>B-</td>
<td>4</td>
<td>70 – 72</td>
</tr>
<tr>
<td>C+</td>
<td>3</td>
<td>65 – 69</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>60 – 64</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>50 – 59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Failing Grades</th>
<th>Grade Point Value</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>0</td>
<td>0 – 49</td>
<td>Fail, conditional supplemental exam. (For undergraduate courses only)*</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>0 – 49</td>
<td>Fail, no supplemental.</td>
</tr>
<tr>
<td>N</td>
<td>0</td>
<td>0 – 49</td>
<td>Did not write examination, Lab or otherwise complete course requirements by the end of term or session; no supplemental exam.</td>
</tr>
</tbody>
</table>

*Assignment of E grade will be at the discretion of the Course Instructor.*

The rules for supplemental examinations are found on page 82 of the current 2014/15 Undergraduate Calendar.

<table>
<thead>
<tr>
<th>Term in which E Grade was obtained:</th>
<th>Application Deadline for Supplemental Exam</th>
<th>Supplemental Exam Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>First term of Winter Session (Sept – Dec)</td>
<td>February 28 in the following term</td>
<td>First week of following May</td>
</tr>
<tr>
<td>Second term of Winter Session (Jan – Apr)</td>
<td>June 30 in the following term</td>
<td>First week of following September</td>
</tr>
<tr>
<td>Summer Session (May – Aug)</td>
<td>October 31 in the following term</td>
<td>First week of following January</td>
</tr>
</tbody>
</table>

Deferred exams will normally be written at the start of the student’s next academic term; i.e., approximately 4 months following the deferral of the exam.

**Course Objectives and Learning Outcomes**

Understand properties of nanoscale materials and tools used to create/characterize them. Examine and apply this knowledge to applications based on nanostructures.

**Syllabus**


**Accommodation of Religious Observance**

See [http://web.uvic.ca/calendar2014/GI/GUPo.html](http://web.uvic.ca/calendar2014/GI/GUPo.html)

**Policy on Inclusivity and Diversity**

See [http://web.uvic.ca/calendar2014/GI/GUPo.html](http://web.uvic.ca/calendar2014/GI/GUPo.html)

**Standards of Professional Behaviour**

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour at [http://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf](http://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf) which contains important information regarding conduct in courses, labs, and in the general use of facilities.

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the ECE Chair by email or the ECE Chair's secretary eceasst@uvic.ca to set up an appointment.

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult [http://web.uvic.ca/calendar2014/FACS/UnIn/UARe/PoAcI.html](http://web.uvic.ca/calendar2014/FACS/UnIn/UARe/PoAcI.html) for the UVic policy on academic integrity.