

# Nanoscience

## Graduation Requirements

In addition to the requirements listed below, students must satisfy:

1. the University regulations (see the Academic Regulations of the University section of this Calendar),
2. the common regulations applying to all B.Sc. programs including those relating to Science Continuation and Breadth requirements (see the Academic Regulations for the Bachelor of Science Degree ),

Students should consult with the Department when planning their program and selecting courses.

## Program Requirements

### Nanoscience

#### B.Sc. Honours (20.0 credits)

##### A. Credits Included in the Major CGPA (11.5 credits)

<b>1. 5.0 credits in:</b>	<b>5.0</b>
CHEM 1001 [0.5] General Chemistry I	
CHEM 1002 [0.5] General Chemistry II	
CHEM 2103 [0.5] Physical Chemistry I	
CHEM 2501 [0.5] Introduction to Inorganic and Bioinorganic Chemistry	
CHEM 3100 [0.5] Physical Chemistry II	
CHEM 3107 [0.5] Experimental Methods in Nanoscience	
CHEM 3503 [0.5] Inorganic Chemistry I	
CHEM 3600 [0.5] Introduction to Nanotechnology	
CHEM 4908 [1.0] Research Project and Seminar	
<b>2. 1.0 credit from:</b>	<b>1.0</b>
CHEM 2203 [0.5] Organic Chemistry I	
CHEM 2204 [0.5] Organic Chemistry II	
CHEM 2302 [0.5] Analytical Chemistry I	
CHEM 2303 [0.5] Analytical Chemistry II	
<b>3. 1.0 credit from:</b>	<b>1.0</b>
CHEM 4103 [0.5] Surface Chemistry and Nanostructures	
CHEM 4104 [0.5] Physical Methods of Nanotechnology	
CHEM 4201 [0.5] Macromolecular Nanotechnology	
<b>4. 3.5 credits in:</b>	<b>3.5</b>
ELEC 2501 [0.5] Circuits and Signals	
ELEC 2507 [0.5] Electronics I	
ELEC 3908 [0.5] Physical Electronics	
ELEC 3105 [0.5] Basic EM and Power Engineering	
ELEC 4609 [0.5] Integrated Circuit Design and Fabrication	
ELEC 4700 [0.5] The Physics and Modeling of Advanced Devices and Technologies	
ELEC 4704 [0.5] Nanoscale Technology and Devices	
<b>5. 1.0 credit from:</b>	<b>1.0</b>
ELEC 2607 [0.5] Switching Circuits	
ELEC 3500 [0.5] Digital Electronics	
ELEC 3509 [0.5] Electronics II	

ELEC 3909 [0.5] Electromagnetic Waves	
<b>B. Credits Not Included in the Major CGPA (8.5 credits)</b>	
<b>6. 2.5 credits in:</b>	<b>2.5</b>
MATH 1004 [0.5] Calculus for Engineering or Physics	
MATH 1005 [0.5] Differential Equations and Infinite Series for Engineering or Physics	
MATH 1104 [0.5] Linear Algebra for Engineering or Science	
MATH 2004 [0.5] Multivariable Calculus for Engineering or Physics	
STAT 3502 [0.5] Probability and Statistics	
<b>7. 1.0 credits in:</b>	<b>1.0</b>
PHYS 1003 [0.5] Introductory Mechanics and Thermodynamics	
PHYS 1004 [0.5] Introductory Electromagnetism and Wave Motion	
<b>8. 1.5 credits in</b> Advanced Science Faculty Electives:	<b>1.5</b>
<b>9. 0.5 credit in</b> Science Continuation (not CHEM)	<b>0.5</b>
<b>10. 0.5 credit in:</b> (or Approved Arts or Social Sciences)	<b>0.5</b>
NSCI 1000 [0.5] Seminar in Science	
<b>11. 1.5 credits in</b> Approved Arts or Social Sciences	<b>1.5</b>
<b>12. 1.0 credit in</b> free electives	<b>1.0</b>
<b>Total Credits</b>	<b>20.0</b>