

## Advising Sheet

Lock Haven University

B.S. in Applied Physics (Nanotechnology) Page 1 of 2

Name \_\_\_\_\_ Entry Date \_\_\_\_\_ Student ID \_\_\_\_\_

### A. General Education

	sh	Course	Date	Grade
<b><u>I. Wellness</u></b>	3 sh	_____	_____	_____
<b><u>II. Skills</u></b>				
English Composition	3 sh	<u>ENGL100-Composition</u>	_____	_____
Mathematics	3 sh	<u>Math141-Calculus I</u>	_____	_____
Speech	3 sh	_____	_____	_____
<b><u>III. Content</u></b>				
A. <b><u>Humanities</u></b>				
Art/Music/Theater/Dance	6 sh	_____	_____	_____
Literature	3 sh	_____	_____	_____
Philosophy	3 sh	_____	_____	_____
B. <b><u>Social Sciences</u></b>				
World History	3 sh	_____	_____	_____
Poli Sci or Economics	3 sh	_____	_____	_____
Psychology`	3 sh	_____	_____	_____
Sociology or Anthropol.				
/Geog/Socw	3 sh	_____	_____	_____
C. <b><u>Natural Sciences</u></b>	6 sh	<u>PHYS170-Int Gen Phy I*</u>	_____	_____
		<u>PHYS171-Int Gen Phy II</u>	_____	_____

\* 2 sh are counted as gen-ed electives in IV

### **IV. Electives\*\***

	sh	Course	Date	Grade
	10 sh			
	(2 sh	<u>PHYS170-Int Gen Phy I*</u>	_____	_____
		_____	_____	_____
		_____	_____	_____
		_____	_____	_____

\* 2 sh are counted as gen-ed elective

\*\*Must be satisfied using recommended Physics courses shown in section D below.

### **V. Additional Overlay Requirements**

		Course	Course	Course
A. Multicultural (MC)	2 courses	_____	_____	
B. Information Literacy (IL)	2 courses	<u>PHAP431</u>	_____	
C. Writing Emphasis (WE)	3 courses	<u>PHYS170</u>	<u>PHYS171</u>	<u>PHYS315</u>
D. External Experience (EE)	2 units	Must get pre-approval from your advisor.		

### B. Area Requirements - Supporting Science and Math Courses

	sh	Date	Grade
<b><u>I. Supporting Math and Science</u></b>			
<b><u>Certificate Courses(PSU)</u></b>			
PHAP201- Materials, Safety and Equipment			
Overview for Nanofabrication	3 s.h.	_____	_____
PHAP202- Basic Nanofabrication Process	3 s.h.	_____	_____
PHAP203 Thin Films in Nanofabrication	3 s.h.	_____	_____
PHAP204- Advanced Lithography and Dielectrics for Nanofabrication	3 s.h.	_____	_____
PHAP205- Materials Modification in Nanofabrication	3 s.h.	_____	_____
PHAP206- Characterization, Packaging, and Testing of Nanofabricated Structures	3 s.h.	_____	_____
<b><u>LHU</u></b>			
PHAP100- Introduction to Nanoscience	1 s.h.	_____	_____
MATH142-Calculus II	3 s.h.	_____	_____
MATH211-Linear Methods	3 s.h.	_____	_____
MATH243-Calculus III	3 s.h.	_____	_____
MATH244-Calculus IV	3 s.h.	_____	_____
MATH301-Differential Equations	3 s.h.	_____	_____
CHEM120- Principles of Chemistry I	4 s.h.	_____	_____

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### C. Core Requirements - Physics Courses

**21 sh**

PHAP300 Thin Films Science and Technology	4 s.h.	_____	_____
PHYS315-Modern Physics (WE)	4 sh	_____	_____
PHYS330-Mechanics I	3 sh	_____	_____
PHYS370-Electricity & Magnetism	3 sh	_____	_____
PHYS350-Quantum Mechanics	3 sh	_____	_____
PHAP431-Advanced Applied Physics Laboratory	4 sh*	_____	_____

\*2hrs per semester in the junior year for a total of 4sh.

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### D. Recommended Physics courses

Totaling 8 semester hours (counted as Gen Ed Electives IV in A)

Choose from:

PHYS250-Heat	3 sh	_____	_____
PHYS290-Electronics	4 sh	_____	_____
PHYS325-Optics	4 sh	_____	_____
PHYS331-Mechanics II	3 sh	_____	_____
PHYS345-Mathematical Methods of Physics	2 sh	_____	_____

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### E. Free Electives

**9 sh**

Strongly Recommended:

CHEM121-Principles of Chemistry II	4 sh	_____	_____
BIOL106 – Principles of Biology I	3 sh	_____	_____
BIOL 107- Principles of Biology II	3 sh	_____	_____
GEOS130- Principles of Geology I	3 sh	_____	_____
PHAP400-Modern Optoelectronics	3 sh	_____	_____
PHAP410-Material Science	3 sh	_____	_____
PHAP499-Independent Study	4 sh*	_____	_____

\*Repeatable up to a total of 4sh

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### F. Additional Notes & Requirements

Any student continuing to pursue a Nanotechnology career is strongly advised to take CHEM 121.

Any student continuing to pursue a Bio/Nanotechnology career is strongly advised to take CHEM 121, BIOL 106 and BIOL 107.

One can also obtain a minor in Math by taking an additional math course at the 300+ level.