Bachelor of Science
STOUT Applied Science
UNIVERSITY OF WISCONSIN Wisconsin's Polytechnic University

PROGRAM PLAN SHEET:

BACHELOR OF SCIENCE Concentration in Nanoscience

University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
I. Nanoscience Course Requirements	**CR**	**YR**	**A. Communication Skills (8 cr.)**	**CR**	**YR**
APSC-101 Applied Science Profession I	1		ENGL-101 Freshman English Composition, **OR** ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Science Professionals, P: PHIL-235	3		ENGL-102 Freshman English Reading, P: ENGL-101 or ENGL-111 **OR** ENGL-112 Freshman English Honors II, P: ENGL-101 or ENGL-111.	3	
APSC-349 Co-op **OR** APSC-398 Field Experience	1-6				
APSC-401 Applied science Profession II	1				
			SPCOM-100 Fundamentals of Speech	2	
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
			B. Analytical Reasoning (8-10 cr.)		
NANO-101 Introduction to Nanotechnology	2		MATH-153 Calculus I **OR** MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4	4-5	
NANO-301 Nano-Structures, P: CHEM-135	3				
NANO-330 Nano-Characterization Methods, P: NANO-301	3		MATH-154 Calculus II P: MATH-153 **OR** MATH-157 Calculus and Analytical Geometry II, P: MATH-156	4-5	
NANO-401 Applications of Nanotechnology	3				
BIO-136 College Molecular Cell Biology I	5				
BIO-235 Molecular Cell Biology II	4				
			C. Health and Physical Education (2 cr.)	2	
CHEM-136 College Chemistry II, P: CHEM-135, CHEM-125, or CHEM-135 and MATH-156	5				
CHEM-201 Organic Chemistry, P: CHEM-135	4		**D. Humanities and the Arts (9 cr.)**		
CHEM-301 Physical Chemistry, P: CHEM-115, CHEM-125, or CHEM-135 and MATH-156	3		PHIL-235 General Ethics	3	
CHEM-303 Physical Chemistry Laboratory, P: CHEM-115, CHEM-125, or 135 and MATH-156	1		From the approved list, choose 6 credits from two or more areas.	6	
CHEM-331 Quantitative Analysis, P: CHEM-136 or CHEM-201	3				
			E. Social and Behavioral Sciences (9 cr.)		
CHEM-335 Instrumental Methods and Analysis, P: CHEM-115, CHEM-125 or CHEM-135; and CHEM-136 or CHEM-201	3		From the approved list, choose 9 credits from three or more areas.	9	
CHEM-341 Chemistry of Materials I, P: CHEM-135	4				
PHYS-281 University Physics I	5				
PHYS-282 University Physics II	5		**F. Natural Sciences (with lab) (5 cr.)**		
			CHEM-135 College Chemistry I	5	
STAT-330 Probability and Statistics for Engineering And the Sciences, P: MATH-154 or MATH-157	3				
			G. Technology (2 cr.)	2	
II. Choose 12 credits from the following selective courses:					
CHEM-204 Organic Chemistry II, P: CHEM-201	3		**Total General Education**	**43-45**	
CHEM-206 Organic Chemistry II Laboratory	1				
CHEM-311 Biochemistry, P: CHEM-201	3				
CHEM-325 Chemistry of Polymers, P: CHEM-135	3				
CHEM-440 Advanced Materials Laboratory, P: CHEM-115, CHEM-125 or CHEM-135	3		**Elective credits as needed to fulfill 120-credit graduation requirement.**		
CHEM-470 Chemistry of Materials II, P: CHEM-301, CHEM-341, and MATH-250 or MATH-255	3				
MFGT-251 Polymer & Composite Processes, P: MFGT-150, MFGT-110 or PKG-220	3				
MFGT-253 Casting and Joining Processes, P: MFGT-150 or MFGT-110	3				
Total Concentration Requirements	**77**		**TOTAL CREDITS FOR GRADUATION**	**120-122**	

Ethnic and diversity requirements are to be met through appropriate selection of course work leading to the degree.
Foreign Language requirements are encouraged for all students in the program.
Field Studies and/or Cooperative Education experiences are recommended for all students in the program.
P: Prerequisite
Approved General Education course list can be found here: http://www.uwstout.edu/provost/geescorslist.pdf

05/20/08

Bachelor of Science in Applied Science: Nanoscience Concentration

Total Program Credits 122-128

Freshman Year

1st Semester				*2nd Semester*			
ENG-101/111	Freshman English Composition/Honors I		3	CHEM-136	College Chemistry II		5
NANO-101	Introduction to Nanotechnology		2	ENG-102/112	Freshman English Reading/Honors II		3
APSC-101	Applied Science Profession I		1	SPCOM-100	Fundamentals of Speech		2
MATH-153/156	Calculus I		4 or 5	MATH-154/157	Calculus II		4 or 5
CHEM-135	College Chemistry I		5		*Gen. Ed. Health Elective*		0 to 2
		Total	15 to 16			*Total*	14 to 17

Sophomore Year

1st Semester				*2nd Semester*			
BIO -136	College Molecular Cell Biology I		5	PHIL-235	General Ethics		3
CHEM-341	Chemistry of Materials I		4	NANO-301	Nano-Structures		3
	Humanities/Soc. Science Elec.		3	CHEM-201	Organic Chemistry I		4
	Humanities/Soc. Science Elec.		3	PHYS-281 or 241	University or College Physics I		5
	Gen. Ed. Health Elective		0 to 2		*Gen. Ed. Technology elective*		2
		Total	15 to 17			*Total*	17

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Junior Year

1st Semester				*2nd Semester*			
STAT-330	Probability and Statistics		3	CHEM-301	Physical Chemistry		3
CHEM-331	Quantitative Analysis		3	CHEM-303	Physical Chemistry Lab		1
APSC-311	Issues for Science Professionals		3	CHEM-335	Instrumental Methods and Analysis		3
PHYS-282 or 242	University or College Physics II		5	BIO-235	Molecular Cell Biology II		4
	Humanities/Soc. Science Elec.		3		*Concentration Elective*		3
		Total	17			*Total*	14

Summer

APSC 349 or APSC 398 1 to 6

Senior Year

1st Semester				*2nd Semester*			
NANO-330	Nano-Characterization Methods		3	NANO-401	Applications of Nanotechnology		3
APSC-401	Applied Science Profession II		1		*Concentration Elective*		3
ENG-415	Technical Writing		3		*Concentration Elective*		3
	Concentration Elective		4		*Humanities/Soc. Science Elec.*		3
	Humanities/Soc. Science Elec.		3			*Total*	12
		Total	14				

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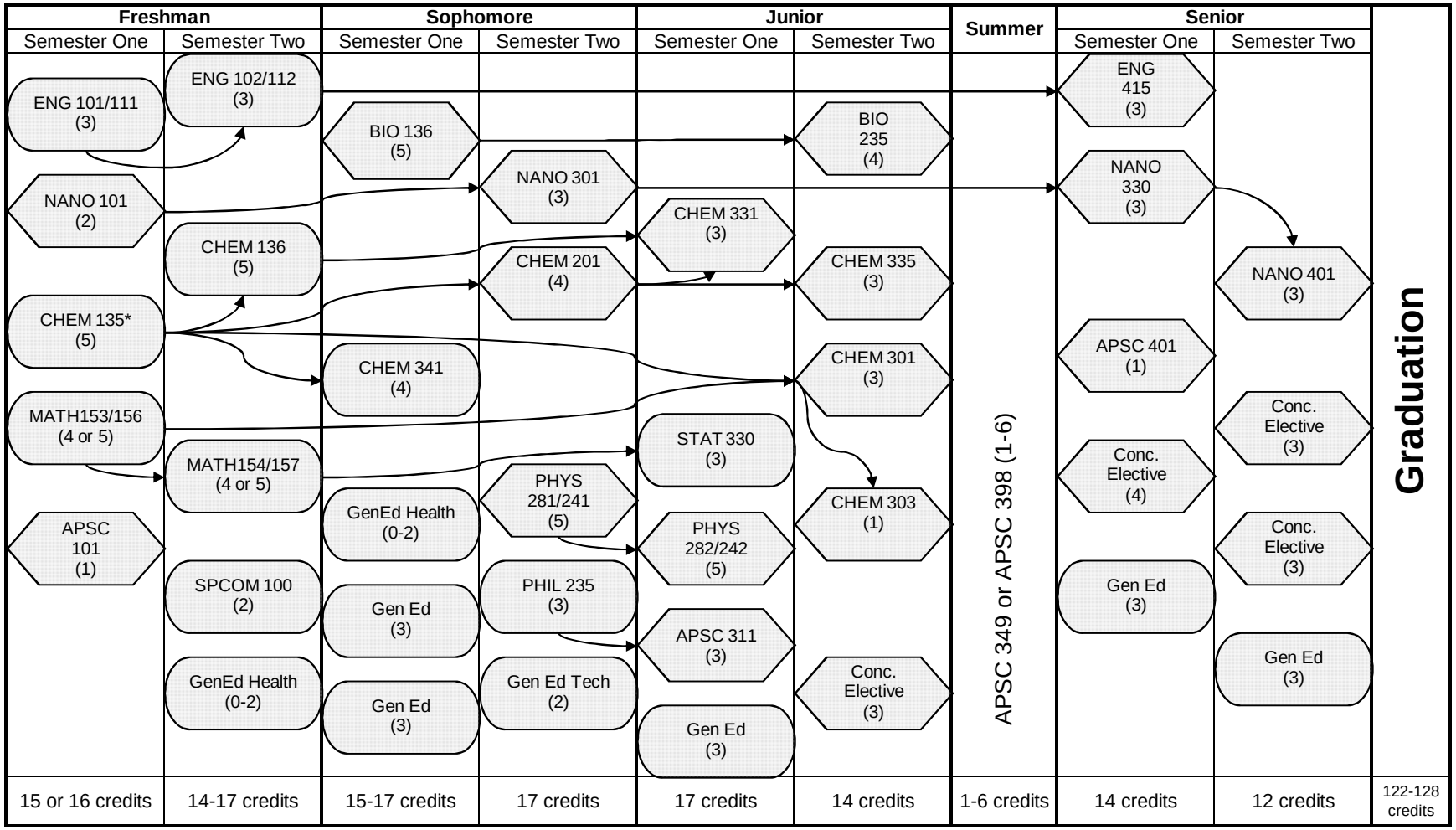
Applied Science - Nanoscience Concentration Flow Chart



Gen Ed Concentration

* CHEM 135 has a prerequisite of MATH 120 or above

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