

# Advising Handbook

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Bachelor of Science in Applied Science (B.S. in APSC)



University of Wisconsin-Stout  
P.O. Box 790, Menomonie, WI 54751  
Phone 715.232.1686 • Fax 715.232.1330  
Website: <http://www.uwstout.edu/programs/bsas/>

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## Purpose of Advising Handbook

This handbook has been developed to assist the student in better understanding their major and the choices available to them in planning their education and future.

Many of the questions the student may have can be answered by using this handbook. The student's advisor is also available and will assist in finding the most appropriate answers for their personal education needs.

### Advisor Information:

Name: \_\_\_\_\_

Office: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

## Bachelor of Science in Applied Science Program

### What is Applied Science?

Applied Science is the application of the theoretical and practical knowledge of science to the development and dissemination of technology for the benefit of all society. The Bachelor of Science in Applied Science is a degree for students seeking careers in contributing fields. The program stresses a breadth of scientific concepts, a strong emphasis on technology, an emphasis on the liberal arts, and a depth in applying scientific concepts and technology. Students enter the program in preparation for projected careers in business, industry, technical support, research, government service, and health professions. This program is ideal for students who seek a customized education combining the sciences, liberal arts, and technology. The current concentrations in Applied Science are Biotechnology, Environmental Sciences, Materials Science, and Nanoscience.

### Mission Statement

As part of Wisconsin's Polytechnic University, the mission of the UW-Stout Applied Science program is to provide engaging learning experiences where students and faculty collaborate to pursue diverse scientific explorations. With their knowledge and skills, graduates are prepared to contribute to industry, government, and society.

### Program Objectives

The program is based on a core of biological sciences, physical sciences, and mathematics. Incorporated into the program are the studies of instrumentation, environmental concerns, issues for scientific professionals, and presentation skills. Technical report writing, data analysis, interpersonal communication, and experimental design are stressed across the curriculum. Opportunities for field experience or cooperative education are an essential component of the program. Study of a foreign language and international experiences are also highly encouraged. Following successful completion of courses:

- Students will demonstrate application of scientific knowledge, training, and experience.
- Students will demonstrate awareness and adaptability to technical innovations.
- Students will demonstrate proficiency in laboratory skills and experimental design.
- Students will exhibit management and supervisory skills

- Students will demonstrate advanced technical report writing, data analysis, interpersonal communication, and team-building skills.
- Students will successfully apply their skills in a Co-op or Field Experience.

## **Academic Advising**

### **College of Science, Technology, Engineering and Mathematics (STEM) Expectations and Responsibilities**

The College of Science Technology, Engineering and Management (STEM) believes in and practices developmental advising. This systematic advisement process is intended to aid students in achieving education, career and personal goals through their years at UW-Stout. Developmental advisement is a collaborative process between the academic advisor and the student. While the ultimate decision regarding career goals and educational plans rests with the student, the academic advisor is available to assist students by providing information, resources, and helping them assess alternatives.

#### **Advisor Expectations**

Advisors may expect that the student:

- Recognizes that he/she bears the ultimate responsibility for the development and implementation of their academic plan of study, including meeting program and university graduation requirements.
- Respects the program director's/faculty advisor's appointment or office hours and keeps or cancels scheduled appointments.
- Will prepare for advisor appointments by bringing all necessary material as required by the student's program director/faculty advisor.
- Will keep his/her advisor informed when there are changes in academic plans or progress.
- Will maintain up-to-date personal records of academic progress and will resolve discrepancies on University reports, records, and documents.

#### **Student Expectations**

Students may expect that program directors/faculty advisors:

- Have knowledge of the program and University curriculum requirements and are able to provide accurate information.
- Are informed about University policies, procedures, support services, and resources.
- Are available for consultation by having posted office hours or appointment times.
- Have knowledge of career opportunities and appropriate graduate programs in their fields.
- Will refer the student to specialized institutional and community resources when necessary.

## **General Advising**

First-year students are accepted into the Applied Science program with APSC standing. Students may determine their concentration on their application to the university, or at any time during their academic career. The sooner the student determines their concentration, the more effectively their advisement sessions will be. If the student's cumulative ACT score or ACT Math score are below 22, or their high school GPA is below 3.0, or they are not in the top 40% of their high school graduating class, they will be accepted into the program as APSC.PRE. Students can declare their concentration after a successful first year and will need to do this with the Academic Advising office, room 11, Bowman Hall.

To get first-year students off on the right start, they are enrolled into the APSC block to enhance their academic success.

**Fall – Freshman Year**

ENGL 101/111	3
SPCOM-100	2
MATH	4-5 (depends on ACT)
BIO135	4
APSC 101	1
Total Credits	14-15

**Spring – Freshmen Year**

ENGL 102/112	3
MATH or STAT	3-5
CHEM 135	5
BIO 136 or GEN ED	3-5
If GE (PE, SBS, HUM or TECH)	1-5
Total Credits	12-18

**English and Math Placement**

New students entering the University of Wisconsin-Stout will be placed into Math and English based on their ACT scores. If students have submitted more than one set of scores, placement will be based on the highest subscore of all scores received. If the student has retaken the ACT since they were admitted and have improved their scores, please contact the Admissions Office the updated score report (unless the scores were sent electronically).

**YOUTH OPTIONS OR COLLEGE CREDIT WHILE IN HIGH SCHOOL:**

In addition, if the student took college credit in either Math or English (or any other subject area) while still in high school, make sure an official transcript from the post-secondary institution granting the credit is mailed to the UW-Stout Admissions Office to be added to their official record.

Please mail any additional information to:

Office of Admissions; UW-Stout; 124 Bowman Hall; Menomonie, WI 54751.

**English:**

Let ACT\* be the average of a student's English ACT score and Composite ACT score.

- If ACT\* is 16 or below, place into English 090
- If ACT\* is greater than 16 and less than 25, place into English 101
- If ACT\* is 25 or above, place into Honors English 111

**Math:**

Let ACT\* be the average of a student's Math ACT score and Composite ACT score.

- If ACT\* is 16.5 or below, place into Math 010
- If ACT\* is between 17 and 20.5, place into Math 110 or 118
- If ACT\* is between 21 and 23, place into Math 120
- If ACT\* is between 23.5 and 24.5, place into Math 121 or 123
- If ACT\* is a 25 or higher, place into Math 153 or 156

Transfer students: Registration in any English and/or Mathematics courses the student might still require for their major will depend upon credit earned in those subjects at their previous institution. The transfer equivalency report the student receives from UW-Stout's Admissions Office will indicate whether transfer credit has been awarded in English (i.e., ENGL 101) and/or Mathematics (i.e., MATH 110). For more detailed information, refer to <http://www.uwstout.edu/admissions/transfer.shtml>. Transcripts should be sent to UW-Stout (Office of Admissions; UW-Stout; 124 Bowman Hall; Menomonie, WI 54751) or check online to see if the student has already done so (on Access Stout, under Admission & Placement Test Results). If the student feels their ACT results would be out of date or has never taken the ACT, they will then need to take the Wisconsin English and Mathematics Placement Tests (EPT and MPT). See this website for test dates and registration instructions: <http://testing.wisc.edu/>

Graduates of the Applied Science major often pursue entry-level positions in:

- Biotechnology
- Materials Science
- Broadfield Science Education

- Environmental Management and Research
- Scientific Research and Development
- Professional Schools
- Pharmaceutical Sales
- Technical Support for Scientific Equipment Companies
- Technical Support for Sale of Chemicals

## Advising Resources

There are many advising resources available to students both from UW-Stout as well as the Applied Science Program. The following list is intended to give students an idea of the types of resources available. It is probably not an all-inclusive list as new resources are continually being developed, mainly through the increased use of electronic media, e.g., the internet.

**Undergraduate Bulletin:** The undergraduate bulletin contains information about the University, Admissions, Scholastic Standards, Financial Information, Student Affairs, Special Programs, Major Programs of Study, Minors, Specializations, and Course Descriptions. Available online at <http://www.uwstout.edu/ugbulletin> or from the Advisement Center.

**Student Handbook:** The student handbook contains information about Academics, Academic Misconduct, Services for Students, Campus Organizations and Activities, Racist and Discrimination Conduct, Student Rights and Responsibilities, Alcohol and Other Drug Policies, Campus Police/Security, Conduct on University Lands, and Affirmative Action. Available online at <http://www.uwstout.edu/shb> or from the Advisement Center.

**Curriculum Plan Sheet:** The curriculum plan sheets are available from the program directors or faculty advisors. The program curricula in place at the time of the student's first semester of enrollment at UW-Stout are the requirements they need to fulfill to complete their degree. If a program curriculum changes while a student is at UW-Stout, they have the option to change to the new curriculum plan. The B.S. in Applied Science curriculum plans for each concentration available in the *B.S. in Applied Science Program* section later in this handbook.

**Curriculum Flow Chart:** In addition to the plan sheet, the B.S. in Applied Science program provides a semester-by-semester flow chart to assist in planning the student's program. This flow chart also indicates the prerequisite structure within the B.S. in APSC program. The B.S. in Applied Science curriculum flow charts for each concentration are presented in the *B.S. in Applied Science Program* section later in this handbook.

**Suggested Four-Year Plan:** Another useful scheduling tool is the Suggested Four-Year Program Plan. This program plan helps answer the question, "How can the student complete this program in four years?" The program is presented in a semester-by-semester sequence indicating credit load per semester. The B.S. in Applied Science curriculum suggested 4-year program plans for each concentration are presented in the *B.S. in Applied Science Program* section later in this handbook.

**Program Website:** The Applied Science Program maintains a program website at: <http://www.uwstout.edu/programs/bsas/>. There is much information available there as well as links to other useful Applied Science resources. Of particular interest to the student is a section of "Advising FAQs". This is a collection of issues the faculty advisors deal with on a repetitive basis. Check this handbook or the website first for answers to advisement questions.

**Access Stout:** ACCESS STOUT is the query source that allows students and faculty access to the DATATEL information system, a link to ACCESS STOUT can be found on the homepage at <http://www.uwstout.edu/>. The student can utilize this system to access Registration and Records to view class schedules, unofficial transcripts, Evaluation Reports (EVAL), GPA, and add or drop a class. The student may also utilize this system to view any of their personal financial information.

**Evaluation Report (EVAL):** An EVAL is a report generated by the UW-Stout DATATEL information system. The EVAL keeps track of the student's progress to their program requirements. It lists the courses the student completes within the individual University or Program requirements. Once the student has completed a requirement, the EVAL will list it as complete. The EVAL is available online utilizing the ACCESS STOUT query system.

**Advisement Day:** Advisement Day is an academic day of the semester. There are no classes scheduled that day from 8:00 am to 5:00 pm. All students are required to attend a group meeting with the B.S. in APSC Program Director and faculty advisors. Important announcements and other information are presented at these meetings. In addition, all program requirements are reviewed for student clarity. **Prior to registration, an "Advisement Hold" will be placed on the student's records. This hold will prevent the student from registering until they meet with their advisor and have it removed late in the registration cycle.**

## Academic Dishonesty Defined

The Board of Regents, administrators, faculty, academic staff and students of the University of Wisconsin System believe that academic honesty and integrity are fundamental to the mission of higher education and to the University of Wisconsin System. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

Definitions of academic dishonesty as provided by the National Association of Student Personnel Administrators include:

- Cheating
  - The use of attempted use of unauthorized materials, information, or study aids in any academic exercise.
- Plagiarism
  - The use of others' ideas and words without a clear acknowledgement of the source.
- Fabrication
  - The intentional and unauthorized falsification or invention of any information or citation in any academic exercise.
- Assisting
  - The facilitation or assistance in academic dishonesty.

UW-Stout also considers academic dishonesty to include forgery of academic documents, or intentionally impeding or damaging the academic work of others.

A student charged with violation of academic policy will have a fair hearing. Academic misconduct in the University of Wisconsin System is defined by [UWS Chapter 14](#).

## Experiential Learning through Career Services

Two course opportunities are available for Applied Science students to gain professional experience: **APSC-349 Co-op** and **APSC-398 Field Experience in Applied Science**. Both of these courses can be taken for 3 - 6 months, either in the summer or during the academic year. The co-op represents a paid experience and the student will be an employee of a company and work on meaningful projects. The Field Experience is an alternative experience that may be completed on a volunteer basis. In both cases (the Co-op and Field Experience), the student will be required to provide a mid-term status report to the Applied Science co-op program coordinator. A final report detailing the experience and a presentation to a class are also required. The professional experience is generally taken by the student for 1 - 6 credits between junior and senior year, but may be taken at any time during the academic career. This will appear as a grade on the student's academic transcript. A professional experience keeps the student registered as a full-time student during the semester of absence from UW-Stout. If the student is completing a professional experience during Fall or Spring semester and they are currently covered by their parents' medical insurance, or if they have student loans, students should consult with their insurance providers or lending agency to maintain consistency in coverage and grace periods for student loans.

## Minors Available to Enhance B.S. in Applied Science

The B.S. in Applied Science "No Concentration" option requires at least one minor that is not Biology, Chemistry, or Physics. The minor represents a value-added element to the student's degree and should be chosen to compliment their preferred career path.

There are numerous minors available to students here at UW-Stout. The following list includes some of the minors that have been popular with Applied Science students during the past several years:

- Business Administration Minor
- Cognitive Neuroscience Minor
- Quality Minor
- Psychology Minor

To receive more information about these minors, contact the Advisement Center, locate the minor in the Undergraduate Bulletin [www.uwstout.edu/ugbulletin/ug\\_minors.html](http://www.uwstout.edu/ugbulletin/ug_minors.html), or contact the Minor Coordinator.

## Scholarship Opportunities

The UW-Stout Foundation provides many scholarships, some of which are uniquely set up for the College of Science, Technology, Engineering, and Mathematics students. The UW-Stout Foundation deadline is usually February 15<sup>th</sup> for the upcoming year. Do not miss out on scholarship opportunities by starting the application process too late. The student will most likely need to include with their application items such as instructor or employer recommendations. Be sure to allow enough time (a few weeks minimum) for the student's recommendations to be written. Take advantage of these scholarships and apply. The student may apply for more than one scholarship.

## Graduation

Congratulations! Graduation is on the horizon! There are a few more things the student needs to do before making that walk across the stage. To avoid any surprises, the student should meet with their academic advisor at least one semester prior to their final semester to make sure they are on track for graduation. This will entail a review of the student's evaluation (EVAL) report to identify any course deficiencies and determine how they will be resolved. Once this is complete the student will need to apply online for graduation (<http://www.uwstout.edu/commencement/index.shtml>). This is a mandatory step that signifies that the student has satisfied the completion of all course requirements for a Bachelor of Science degree in Applied Science from UW-Stout.

The university holds graduation ceremonies in December and May of each academic year, and while attendance is not required, it is highly encouraged since it represents a major milestone in the student's career and is the last time they will see many classmates.

The following is a Graduation Check List to ensure all requirements are met.

- Review the student's degree requirements (EVAL) with their advisor.
- Verify graduation deadlines for the student's program director.
- Update the student's permanent address with Records and Registration or the Graduate School to ensure the student receives their diploma and other pertinent information in a timely manner.
- Any financial obligations (fines, tickets, fees, etc.) must be in order to graduate.
- Contact Career Services for help with resume writing and other career related assistance.
- Visit the University of Wisconsin-Stout bookstore for graduation announcements and academic regalia.
- Apply for graduation at the beginning of the semester the student plans on graduating.

## **Alumni Information**

Acquiring a Bachelor of Science degree from the Applied Science Program of UW-Stout may provide the student with many options, including pursuit of post-graduate studies, entrance to professional programs (medical, dental, veterinary, etc.), employment in a business or industry relating to degree studies, among others. UW-Stout provides many services to assist alumni in pursuit of their career goals. For further information, visit <http://www.uwstout.edu/careers/alumni.shtml>.

The Applied Science Program is keenly interested in knowing what alumni are doing, partly because this information and feedback help the program to grow and make meaningful changes, and partly because Applied Science alumni tend to be successful in whatever they do and we want to hear these stories. Nothing enhances a good program like the success of those who have participated in it. Alumni are encouraged to return to Stout for social reasons but also to share their stories with undergraduates anticipating similar career paths.



## **APPENDIX:**

### **Program Plan Sheet Suggested Four-Year Plan Concentration Flowchart**

**For Concentrations:**

**Biotechnology  
Environmental Science  
Materials Science  
Nanoscience  
No Concentration**

**PROGRAM PLAN SHEET:**  
**BACHELOR OF SCIENCE Concentration in Biotechnology**  
 University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
<b>I. Biotechnology Courses</b>	<b>CR</b>	<b>YR</b>	<b>A. Communication Skills (8 cr.)</b>	<b>CR</b>	<b>YR</b>
APSC-101 Applied Science Professional I	1		ENGL-101 Freshman English Composition, <b>OR</b> ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Scientific Professionals, P: PHIL-235	3		ENGL-102 Freshman English Reading, P: ENGL-101 or ENGL-111 <b>OR</b> ENGL-112 Freshman English Honors II, P: ENGL-101 or ENGL-111.	3	
APSC-349 Co-op <b>OR</b> APSC-398 Field Experience	1-6		SPCOM-100 Fundamentals of Speech	2	
APSC-401 Applied Science Profession II	1				
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
			<b>B. Analytical Reasoning (7-8 cr.)</b>		
BIO-135 Organismal Biology	4		MATH-153 Calculus I <b>OR</b> MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4.	4-5	
BIO-136 College Molecular Cell Biology I	5		STAT-320 Statistical Methods, <b>OR</b> STAT-330 Probability and Statistics Engineering and the Sciences	3	
BIO-235 Molecular Cell Biology II, P: BIO-136	4				
BIO-370 Biotechnology, P: CHEM-201	3				
BIO-400 Special Topics in Biotechnology	1-2				
BIO-470 Advanced Biotechnology, P: BIO-235 and BIO-370	5				
BIO-489 Advanced Biology Experience	1-4		<b>C. Health and Physical Education (2 cr.)</b>	2	
CHEM-136 College Chemistry II, P: CHEM 135, or MATH-120 and CHEM-125	5		<b>D. Humanities and the Arts (9 cr.)</b>		
CHEM-201 Organic Chemistry I, P: CHEM-135, or CHEM-125	4		PHIL-235 General Ethics	3	
CHEM-204 Organic Chemistry II, P: CHEM-201	3		From the approved list, choose 6 credits from two or more areas.	6	
CHEM-206 Organic Chemistry II Lab	1				
CHEM-311 Biochemistry, P: CHEM-201	4				
CHEM-331 Quantitative Analysis, P: CHEM-136 or CHEM-201	3		<b>E. Social and Behavioral Sciences (9 cr.)</b>	9	
CHEM-412 Advanced Biochemistry, P: CHEM-311	3		From the approved list, choose 9 credits from three or More areas.		
PHYS-281 University Physics I <b>OR</b> PHYS-241 College Physics I	5		<b>F. Natural Sciences (with lab) (5 cr.)</b>		
PHYS-282 University Physics II <b>OR</b> PHYS-242 College Physics II	5		CHEM-135 College Chemistry I, P: MATH-120	5	
<b>II. Elective Courses</b>			<b>G. Technology (2 cr.)</b>	2	
Any 200 level or higher Biotechnology-related Course as approved by advisor, possibly including MATH-154 Calculus II <b>OR</b> MATH-157 Calculus and Analytical Geometry II	14				
			<b>Total General and Other Requirements</b>	<b>42-43</b>	
<b>Total Concentration Requirements</b>	<b>78-82</b>		Elective credits as need to fulfill 120-credit <b>graduation requirement.</b>		
			<b>TOTAL CREDITS FOR GRADUATION</b>	<b>120-125</b>	

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>

## Bachelor of Science in Applied Science: Biotechnology Concentration

Total Program Credits 121-129

### Freshman Year

<i>1<sup>st</sup> Semester</i>		<i>2<sup>nd</sup> Semester</i>			
ENG-101/111	Freshman English Composition/Honors I	3	ENG-102/112	Freshman English Reading/Honors II	3
BIO -135	Organismal Biology	4	CHEM-135	College Chemistry I	5
APSC-101	Applied Science Profession I	1	SPCOM-100	Fundamentals of Speech	2
MATH-153/156	Calculus I	4 or 5		<i>Gen. Ed. Health Elective</i>	0 to 2
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Humanities/Soc. Science Elec.</i>	3
		<i>Total</i>			<i>Total</i>
		15 or 16			13 to 15

### Sophomore Year

<i>1<sup>st</sup> Semester</i>		<i>2<sup>nd</sup> Semester</i>			
BIO-136	College Molecular Cell Biology I	5	PHIL-235	General Ethics	3
CHEM-136	College Chemistry II	5	BIO-235	Molecular Cell Biology II	4
	<i>Gen. Ed. Health Elective</i>	0 to 2	CHEM-201	Organic Chemistry I	4
	<i>Humanities/Soc. Science Elec.</i>	3	PHYS-281 or 241	University or College Physics I	5
		<i>Total</i>			<i>Total</i>
		13 to 15			16

### Junior Year

<i>1<sup>st</sup> Semester</i>		<i>2<sup>nd</sup> Semester</i>			
PHYS-282 or 242	University or College Physics II	5	BIO-370	Biotechnology	3
CHEM-331	Quantitative Analysis	3	CHEM-311	Biochemistry	4
APSC-311	Issues for Science Professionals	3	BIO-400	Special Topics in Biotechnology	1 to 2
CHEM-204	Organic Chemistry II Lecture	3	STAT-320 or 330	Statistical Methods or Probability and Statistics	3
CHEM-206	Organic Chemistry II Laboratory	1		<i>Concentration Elective</i>	3
		<i>Total</i>			<i>Total</i>
		15			16 to 17

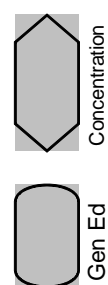
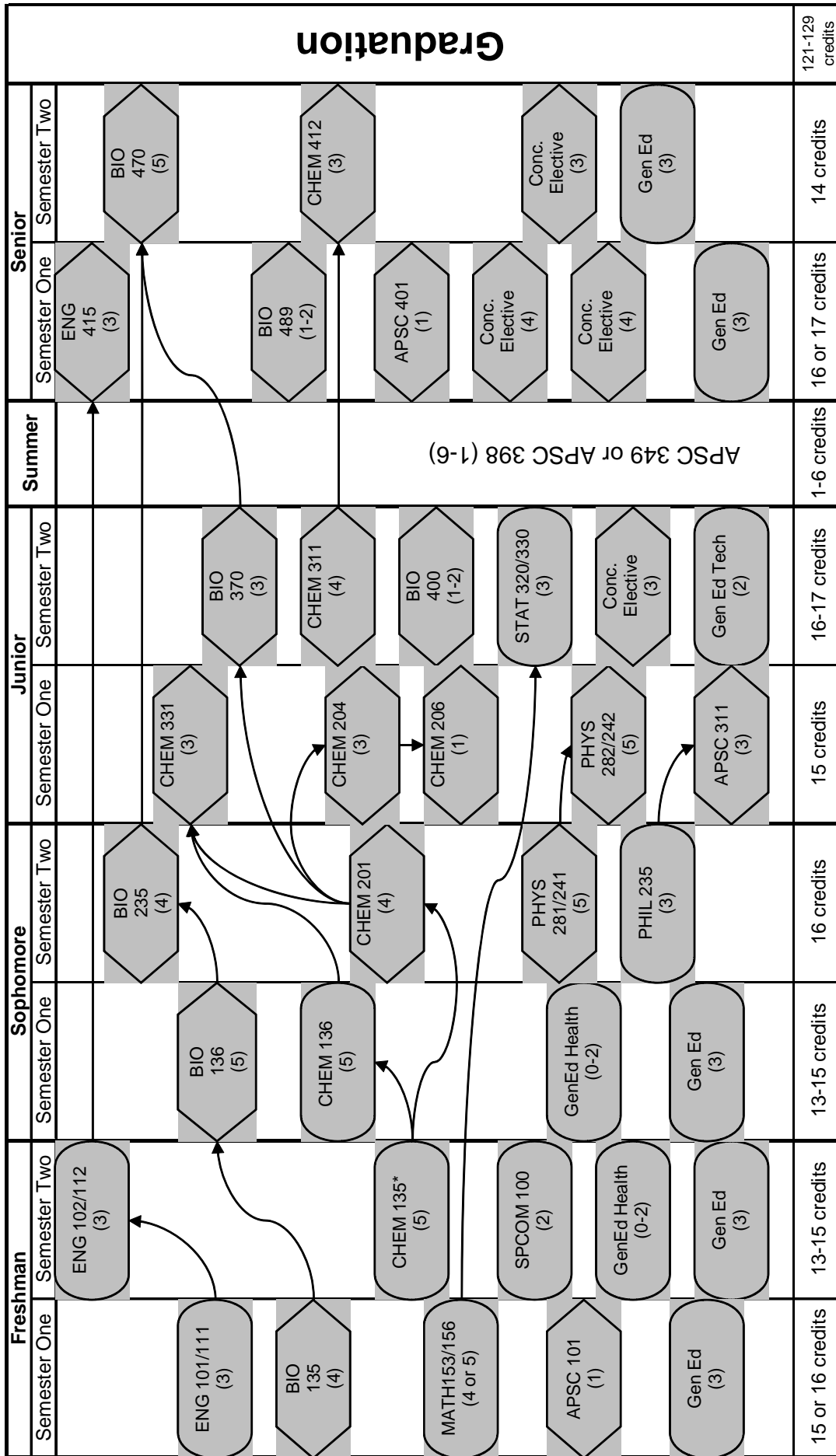
### Summer

APSC 349 or APSC 398      1 to 6

### Senior Year

<i>1<sup>st</sup> Semester</i>		<i>2<sup>nd</sup> Semester</i>			
APSC-401	Applied Science Profession II	1	BIO-470	Advanced Biotechnology	5
ENG-415	Technical Writing	3	CHEM-412	Advanced Biochemistry	3
BIO-489	Advanced Biology Experience	1 to 2		<i>Concentration Elective</i>	3
	<i>Concentration Elective</i>	4		<i>Humanities/Soc. Science Elec.</i>	3
	<i>Concentration Elective</i>	4			<i>Total</i>
	<i>Humanities/Soc. Science Elec.</i>	3			14
		<i>Total</i>			
		16 to 17			

## Applied Science - Biotechnology Concentration Flow Chart



\* CHEM 135 has a prerequisite of MATH 120 or above  
 \*\* Professional Schools and Graduate Schools may require CALC II

**PROGRAM PLAN SHEET:**  
**BACHELOR OF SCIENCE Concentration in Environmental Science**  
 University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
I. Environmental Science Course Requirements	CR	YR	A. Communication Skills (8 cr.)	CR	YR
APSC-101 Applied Science Professional I	1		ENGL-101 Freshman English Composition, <b>OR</b> ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Scientific Professionals, P: PHIL-235	3		ENGL-102 Freshman English Reading, P: ENGL-101 or ENGL-111 <b>OR</b> ENGL-112 Freshman English Honors II, P: ENGL-101 or ENGL-111.	3	
APSC-349 Co-op <b>OR</b> APSC-398 Field Experience	1-6		SPCOM-100 Fundamentals of Speech	2	
APSC-401 Applied Science Profession II	1				
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
			<b>B. Analytical Reasoning (7-8 cr.)</b>		
BIO-111 Science, Society and the Environment	4		MATH-153 Calculus I <b>OR</b>	4-5	
BIO-135 Organismal Biology	4		MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4.		
BIO-136 College Molecular Cell Biology I	5		STAT-320 Statistical Methods, <b>OR</b>	3	
BIO-350 Ecology	3		STAT-330 Probability and Statistics Engineering and the Sciences		
BIO-444 Problem Solving in the Environment	4				
			<b>C. Health and Physical Education (2 cr.)</b>	2	
CHEM-136 College Chemistry II, P: CHEM 135, or MATH-120 and CHEM-125	5				
CHEM-201 Organic Chemistry I, P: CHEM-135, or CHEM-125	4		<b>D. Humanities and the Arts (9 cr.)</b>		
CHEM-331 Quantitative Analysis, P: CHEM-136 or CHEM-201	3		PHIL-235 General Ethics	3	
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 6 credits from two or more areas.	6	
CHEM-353 Environmental Chemistry	3				
CHEM-452 Environmental Regulations Management	3		<b>E. Social and Behavioral Sciences (9 cr.)</b>		
			GEOG-251 Introduction to Geography and Geographic Information	4	
PHYS-281 University Physics I, <b>OR</b> PHYS-241 College Physics I	5		From the approved list, choose 5-6 credits from two or more areas.	5-6	
PHYS-282 University Physics II <b>OR</b> PHYS-242 College Physics II	5				
			<b>F. Natural Sciences (with lab) (5 cr.)</b>		
GEOG-351 Intermediate Geographic Information Systems	4		CHEM-135 College Chemistry, P: MATH-120	5	
SUST-315 Sustainable Design and Engineering	3		<b>G. Technology (2 cr.)</b>	2	
			From the approved list, choose 2 credits from two or more areas.		
<b>II. Environmental Science Course Electives</b>					
Any 200 level or higher Biology, Chemistry or Physics course <b>OR</b> MATH-154 Calculus II <b>OR</b> MATH-157 Calculus and Analytical Geometry II <b>OR</b> ECON-350 Environmental and Natural Resource Economics, P: ECON-201 or ECON-210	11		<b>Total General and Other Requirements</b>	<b>42-44</b>	
			<b>Elective credits as needed to fulfill 120-credit graduation requirement.</b>		
<b>Total Concentration Requirements</b>	<b>78</b>		<b>TOTAL CREDITS FOR GRADUATION</b>	<b>120-122</b>	
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: <a href="http://www.uwstout.edu/provost/geescorslist.pdf">http://www.uwstout.edu/provost/geescorslist.pdf</a>					

**Bachelor of Science in Applied Science: Environmental Science Concentration**

Total Program Credits: 121-127

**Freshman Year**

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
ENG-101/111	Freshman English Composition/Honors I	3	CHEM-135	College Chemistry I	5
BIO -135	Organismal Biology	4	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	BIO-111	Science, Society and the Environment	4
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Gen. Ed. Health Elective</i>	0 to 2
	<u>Total</u>	<u>15 to 16</u>		<i>Gen. Ed. Technology elective</i>	<u>2</u>
				<u>Total</u>	<u>16 to 18</u>

**Sophomore Year**

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
BIO -136	College Molecular Cell Biology I	5	PHIL-235	General Ethics	3
CHEM-136	College Chemistry II	5	STAT-320/330	Statistical Methods/Probability	
GEOG-251	Introduction to Geography and Geographic Information	4		and Statistics	3
	<i>Gen. Ed. Health Elective</i>	0 to 2	CHEM-201	Organic Chemistry I	4
	<u>Total</u>	<u>14 to 16</u>	PHYS-281 or 241	University or College Physics I	<u>5</u>
				<u>Total</u>	<u>15</u>

**Junior Year**

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
CHEM-331	Quantitative Analysis	3	GEOG-351	Intermediate Geographic Information Systems	4
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-350	Ecology	3
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Concentration Elective</i>	4
	<i>Humanities/Soc. Science Elec.</i>	3		<u>Total</u>	<u>14</u>
	<u>Total</u>	<u>17</u>			

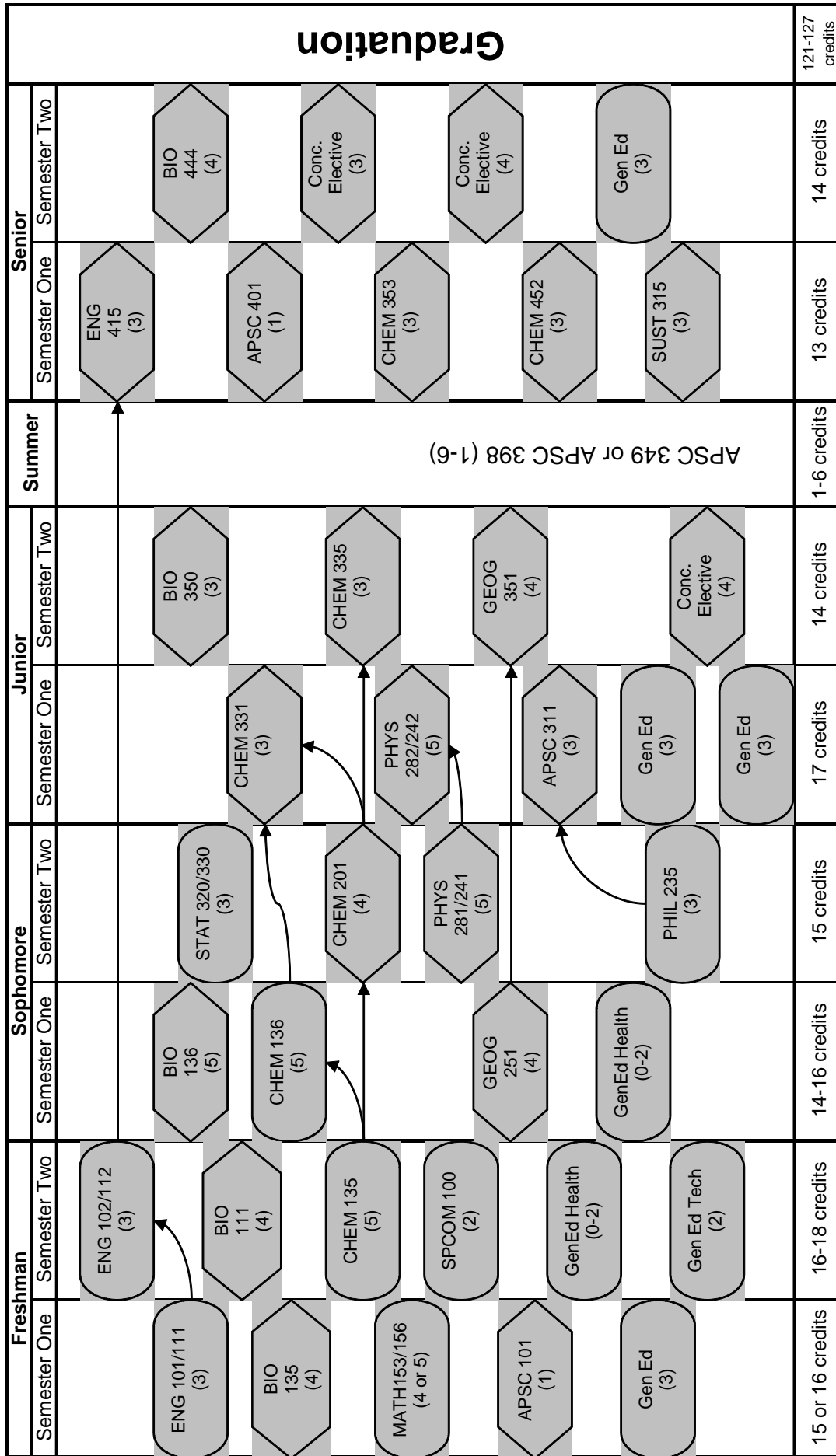
**Summer**

APSC 349 or APSC 398      1 to 6

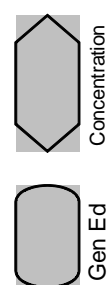
**Senior Year**

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
APSC-401	Applied Science Profession II	1	BIO-444	Problem Solving in the Environment	4
ENG-415	Technical Writing	3		<i>Concentration Elective</i>	3
SUST-315	Sustainable Design and Engineering	3		<i>Concentration Elective</i>	4
CHEM-452	Environmental Regulations Management	3		<i>Humanities/Soc. Science Elec.</i>	3
CHEM-353	Environmental Chemistry	3		<u>Total</u>	<u>14</u>
	<u>Total</u>	<u>13</u>			

## Applied Science - Environmental Science Concentration Flow Chart



\* CHEM 135 has a prerequisite of MATH 120 or above  
 \*\* Professional Schools and Graduate Schools may require CALC II



**PROGRAM PLAN SHEET:**  
**BACHELOR OF SCIENCE Concentration in Materials Science**  
 University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
<b>I. Materials Science Course Requirements</b>	<b>CR</b>	<b>YR</b>	<b>A. Communication Skills (8 cr.)</b>	<b>CR</b>	<b>YR</b>
APSC-101 Applied Science Professional I	1		ENGL-101 Freshman English Composition, OR ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Scientific 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		SPCOM-100 Fundamentals of Speech	2	
APSC-401 Applied Science Profession II	1				
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
MATH-250 Differential Equations, P: MATH-157 OR MATH-255 Differential Equations w/Linear Algebra, P: MATH-154 or MATH-157	3		<b>B. Analytical Reasoning (8-10 cr.)</b>		
STAT-330 Probability and Statistics for Engineers and the Sciences	3		MATH-153 Calculus I OR MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4	4-5	
			MATH-154 Calculus II P: MATH-153 OR MATH-157 Calculus and Analytical Geometry II, P: MATH-156	4-5	
PHYS-281 University Physics I	5		<b>C. Health and Physical Education (2 cr.)</b>		
PHYS-282 University Physics II	5				
PHYS-325 Strength of Materials, P: PHYS-231, MATH-153 or MATH-156; or PHYS-241; or PHYS-281	3		<b>D. Humanities and the Arts (9 cr.)</b>		
PHYS-327 Solid State Physics, P: PHYS-282 or PHYS-242; and MATH-157 or MATH-154	3		PHIL-235 General Ethics	3	
ELEC-290 Circuits and Devices, P: MATH-154 and PHYS-282	4		From the approved list, choose 6 credits from two or more areas.	6	
CHEM-136 College Chemistry II, P: CHEM-135, CHEM-125, or CHEM-135 and MATH-156	5		<b>E. Social and Behavioral Sciences (9 cr.)</b>		
CHEM-201 Organic Chemistry, P: CHEM-135	4		From the approved list, choose 9 credits from three or more areas.	9	
CHEM-301 Physical Chemistry, P: CHEM-115, CHEM-125, or CHEM-135 and MATH-156	3				
CHEM-303 Physical Chemistry Laboratory, P: CHEM-115, CHEM-125, or 135 and MATH-156	1		<b>F. Natural Sciences (with lab) (5 cr.)</b>		
CHEM-325 Chemistry of Polymers, P: CHEM-135	3		CHEM-135 College Chemistry I	5	
CHEM-341 Materials Science I, P: CHEM-115, CHEM-125 or CHEM-135	4				
CHEM-440 Advanced Materials Laboratory, P: CHEM-115, CHEM-125 or CHEM-135	1-3		<b>G. Technology (2 cr.)</b>	2	
CHEM-470 Materials Science II, P: CHEM-301, CHEM-115, CHEM-125 or CHEM-135	3				
			<b>Total General and Other Requirements</b>	<b>43-45</b>	
MFGT-110 Materials and Manufacturing Processes OR MFGT-150 Introduction to Engineering Materials	3		<b>Elective credits as needed to fulfill 120-credit graduation requirement.</b>		
MFGT-251 Polymer & Composite Processes, P: MFGT-110, MFGT-150 or PKG-220 OR MFGT-253 Casting and Joining Processes, P: MFGT-110 or MFGT-150	3				
			<b>TOTAL CREDITS FOR GRADUATION</b>	<b>119-125</b>	
<b>II. Materials Science Selectives – Must take 3 of these 4 courses</b>					
BIO-136 College Molecular Cell Biology I	5				
BIO-235 Molecular Cell Biology II	4				
CHEM-331 Quantitative Analysis, P: CHEM-115, CHEM-125 or CHEM-135; and CHEM-136 or CHEM-201	3				
CHEM-335 Instrumental Methods & Analysis, P: CHEM-115, CHEM-125 or CHEM-135; and CHEM-136 or CHEM-201	3				
Total Concentration Requirements	<b>76-80</b>		Approved General Education course list can be found here: <a href="http://www.uwstout.edu/provost/geescorslist.pdf">http://www.uwstout.edu/provost/geescorslist.pdf</a>		

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

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## Bachelor of Science in Applied Science: Materials Science Concentration

Total Program Credits 120-129

### Freshman Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
ENG-101/111	Freshman English Composition/Honors I	3	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	CHEM-136	College Chemistry II	5
		<i>Total</i>			<i>Total</i>
		13 to 14			0 to 2
					14 to 17

### Sophomore Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
MFGT-110/150	Materials and Manufacturing Processes or Intro to Engineering Materials	3	MFGT-251/253	Polymer & Composite Processes or Casting and Joining Processes	3
Math-250/255	Differential Equations or Differential Equations w/ Linear Algebra	3	PHIL-235	General Ethics	3
STAT-330	Probability and Statistics	3	CHEM-201	Organic Chemistry I	4
	<i>Humanities/Soc. Science Elec.</i>	3	PHYS-281	University Physics I	5
	<i>Gen. Ed. Technology elective</i>	2		<i>Gen. Ed. Health Elective</i>	0 to 2
		<i>Total</i>			<i>Total</i>
		14			15 to 17

### Junior Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
CHEM-301	Physical Chemistry	3	CHEM- 325	Chemistry of Polymers	3
CHEM-303	Physical Chemistry Lab	1	CHEM-341	Chemistry of Materials I	4
APSC-311	Issues for Science Professionals	3	PHYS-325	Strength of Materials	3
PHYS-282	University Physics II	5	ELEC-290	Circuits and Devices	4
	<i>Concentration Elective</i>	4		<i>Humanities/Soc. Science Elec.</i>	3
		<i>Total</i>			<i>Total</i>
		16			17

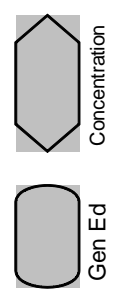
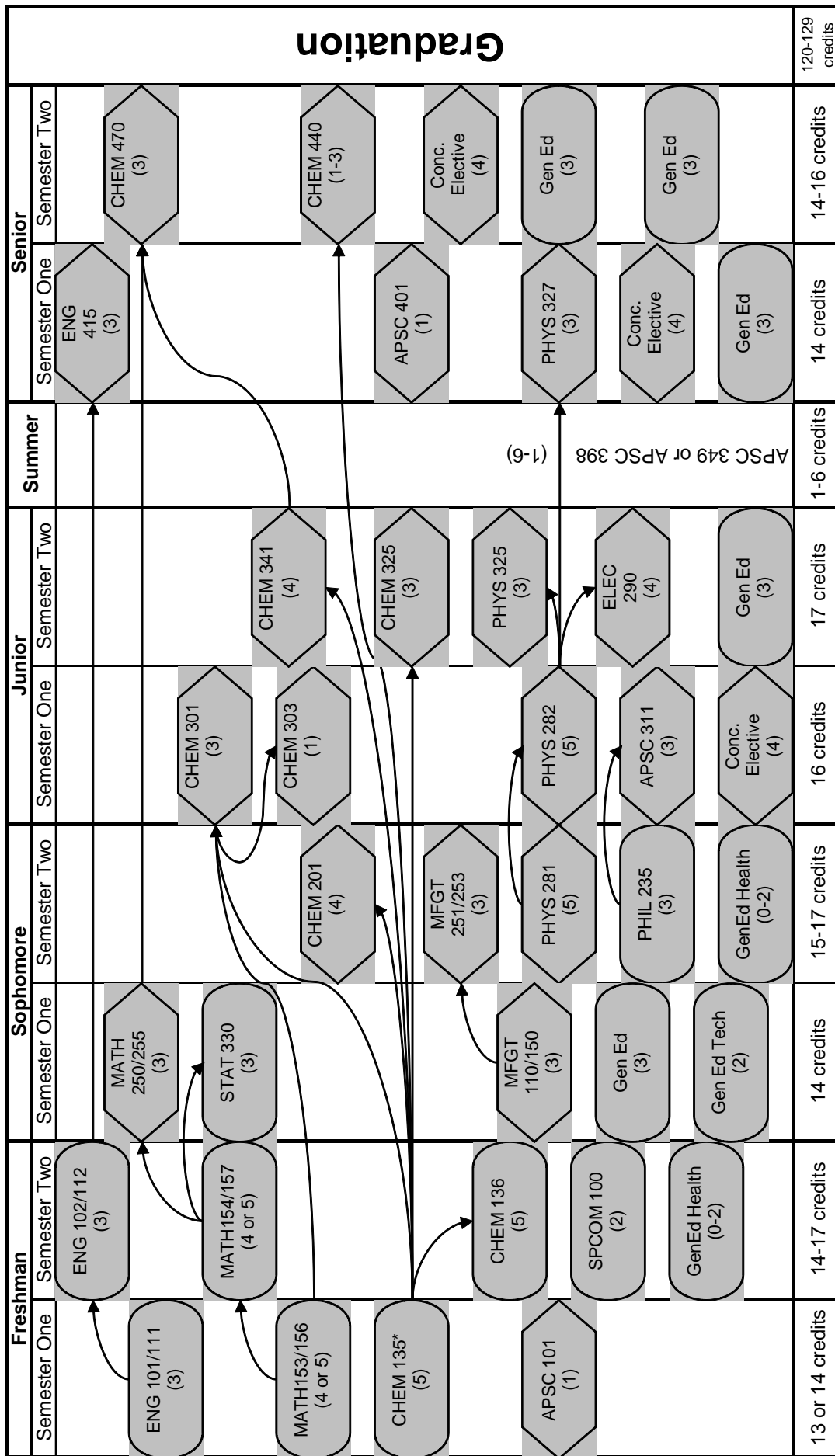
### Summer

APSC 349 or APSC 398      1 to 6

### Senior Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
PHYS-327	Solid State Physics	3	CHEM-440	Advanced Materials Lab	1 to 3
APSC-401	Applied Science Profession II	1	CHEM-470	Materials Science II	3
ENG-415	Technical Writing	3		<i>Concentration Elective</i>	4
	<i>Concentration Elective</i>	4		<i>Humanities/Soc. Science Elec.</i>	3
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Humanities/Soc. Science Elec.</i>	3
		<i>Total</i>			<i>Total</i>
		14			14 to 16

## Applied Science - Materials Science Concentration Flow Chart



\* CHEM 135 has a prerequisite of MATH 120 or above

**PROGRAM PLAN SHEET:**  
**BACHELOR OF SCIENCE Concentration in Nanoscience**  
University of Wisconsin-Stout 2008-2009

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

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>

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## Bachelor of Science in Applied Science: Nanoscience Concentration

Total Program Credits 122-128

### Freshman Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
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		<i>Gen. Ed. Health Elective</i>	0 to 2
	<u>Total</u>	<u>15 to 16</u>		<u>Total</u>	<u>14 to 17</u>

### Sophomore Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
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
	<i>Humanities/Soc. Science Elec.</i>	3	CHEM-201	Organic Chemistry I	4
	<i>Humanities/Soc. Science Elec.</i>	3	PHYS-281 or 241	University or College Physics I	5
	<i>Gen. Ed. Health Elective</i>	0 to 2		<i>Gen. Ed. Technology elective</i>	2
	<u>Total</u>	<u>15 to 17</u>		<u>Total</u>	<u>17</u>

### Junior Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
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
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Concentration Elective</i>	3
	<u>Total</u>	<u>17</u>		<u>Total</u>	<u>14</u>

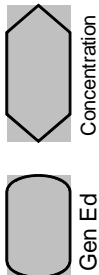
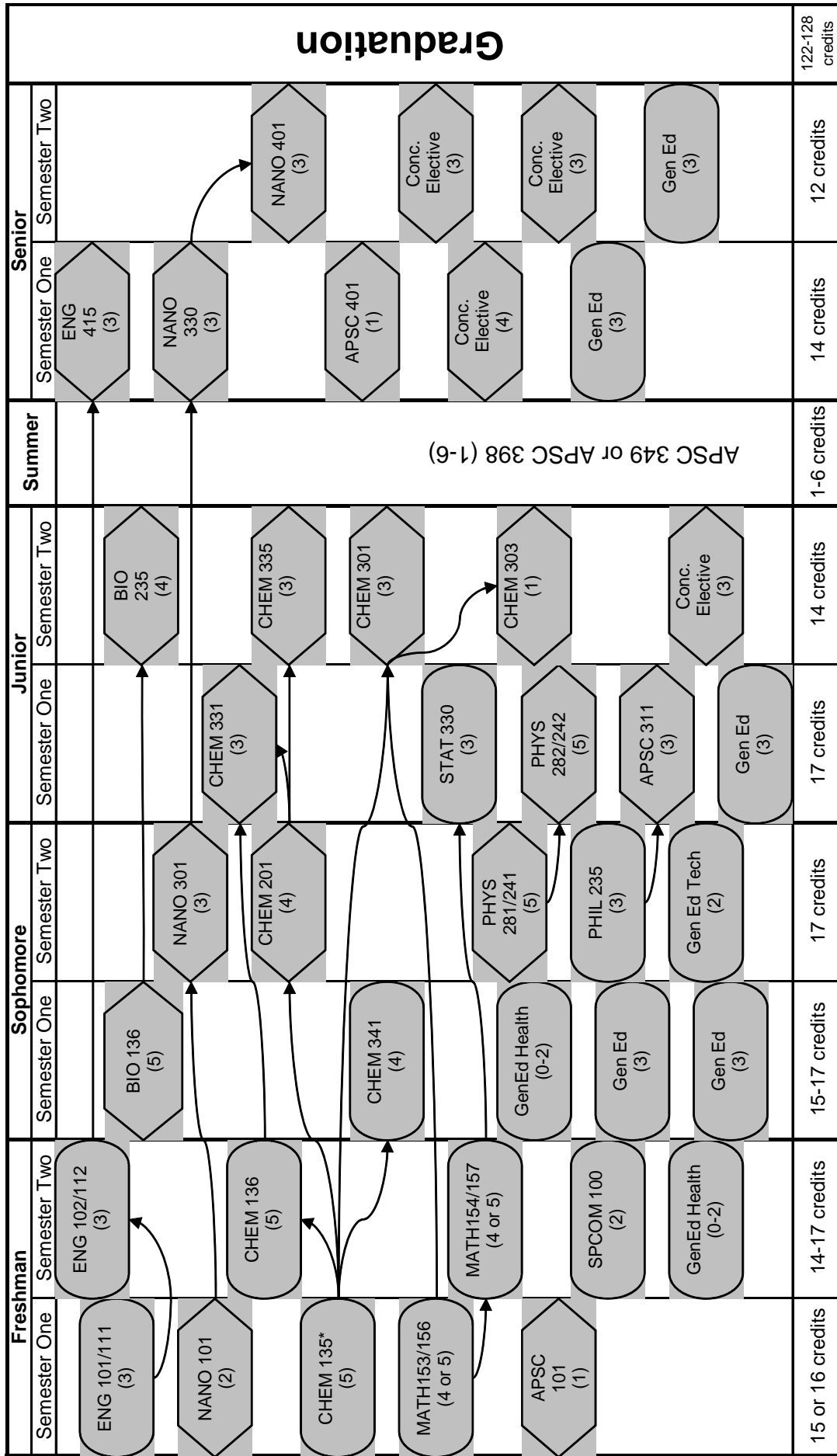
### Summer

APSC 349 or APSC 398      1 to 6

### Senior Year

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

## Applied Science - Nanoscience Concentration Flow Chart



\* CHEM 135 has a prerequisite of MATH 120 or above

**PROGRAM PLAN SHEET:**  
**BACHELOR OF SCIENCE Concentration "No Concentration"**  
 University of Wisconsin-Stout 2008-2009

CONCENTRATION REQUIREMENTS			GENERAL AND OTHER REQUIREMENTS		
I. No Concentration Course Requirements	CR	YR	A. Communication Skills (8 cr.)	CR	YR
APSC-101 Applied Science Professional I	1		ENGL-101 Freshman English Composition, OR ENGL-111 Freshman English Honors I	3	
APSC-311 Issues for Scientific 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		SPCOM-100 Fundamentals of Speech	2	
APSC-401 Applied Science Profession II	1				
ENGL-415 Technical Writing, P: ENGL-102, ENGL-112 or ENGL-113	3				
			<b>B. Analytical Reasoning (7-8 cr.)</b>		
BIO-135 Organismal Biology	4		MATH-153 Calculus I OR	4-5	
BIO-136 College Molecular Cell Biology I	5		MATH-156 Calculus and Analytical Geometry I Course admission based on Math Placement Level 4.		
			STAT-320 Statistical Methods, OR	3	
CHEM-136 College Chemistry II, P: CHEM 135, or MATH-120 and CHEM-125	5		STAT-330 Probability and Statistics Engineering and the Sciences		
CHEM-201 Organic Chemistry I, P: CHEM-135, or CHEM-125	4				
CHEM-331 Quantitative Analysis, P: CHEM-136 or CHEM-201	3		<b>C. Health and Physical Education (2 cr.)</b>	2	
CHEM-335 Instrumental Methods and Analysis, P: CHEM-115, CHEM-125 or CHEM-135; and CHEM-136 or CHEM-201	3				
			<b>D. Humanities and the Arts (9 cr.)</b>		
PHYS-281 University Physics I OR PHYS-241 College Physics I	5		PHIL-235 General Ethics	3	
PHYS-282 University Physics II OR PHYS-242 College Physics II	5		From the approved list, choose 6 credits from two or more areas.	6	
<b>II. Elective Courses</b>			<b>E. Social and Behavioral Sciences (9 cr.)</b>		
Any 200 level or higher Biotechnology-related Course as approved by advisor, possibly including MATH-154 Calculus II OR MATH-157 Calculus and Analytical Geometry II	14		From the approved list, choose 9 credits from three or more areas.	9	
<b>Total Concentration Requirements</b>	<b>57</b>		<b>F. Natural Sciences (with lab) (5 cr.)</b>		
			CHEM-135 College Chemistry I, P: MATH-120	5	
At least one minor that is not Biology, Chemistry or Physics	<b>18-35</b>				
			<b>G. Technology (2 cr.)</b>	2	
			<b>Total General and Other Requirements</b>	<b>42-43</b>	
			<b>Elective credits as needed to fulfill 120-credit graduation requirement.</b>		
			<b>TOTAL CREDITS FOR GRADUATION</b>	<b>120</b>	

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>

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### Bachelor of Science in Applied Science: "No Concentration" Option

One minor that is not Biology, Chemistry or Physics is required  
This plan assumes a 21 credit minor; actual credits will vary depending on chosen minor

Total Program Credits: 120-126

#### Freshman Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
ENG-101/111	Freshman English Composition/Honors I	3	ENG-102/112	Freshman English Reading/Honors II	3
BIO -135	Organismal Biology	4	CHEM-135	College Chemistry I	5
APSC-101	Applied Science Profession I	1	SPCOM-100	Fundamentals of Speech	2
MATH-153/156	Calculus I	4 or 5		<i>Gen. Ed. Health Elective</i>	0 to 2
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Humanities/Soc. Science Elec.</i>	3
	<i>Total</i>	15 or 16		<i>Total</i>	13 to 15

#### Sophomore Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
BIO-136	College Molecular Cell Biology I	5	PHIL-235	General Ethics	3
CHEM-136	College Chemistry II	5	CHEM-201	Organic Chemistry I	4
	<i>Gen. Ed. Health Elective</i>	0 to 2	PHYS-281 or 241	University or College Physics I	5
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Minor Elective</i>	3
	<i>Total</i>	13 to 15		<i>Total</i>	15

#### Junior Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
PHYS-282 or 242	University or College Physics II	5	CHEM-335	Instrumental Analysis and Analysis	3
CHEM-331	Quantitative Analysis	3	STAT-320 or 330	Statistical Methods or Probability and Statistics	3
APSC-311	Issues for Science Professionals	3		<i>Concentration Elective</i>	3
	<i>Minor Elective</i>	3		<i>Minor Elective</i>	3
	<i>Gen. Ed. Technology elective</i>	2		<i>Minor Elective</i>	3
	<i>Total</i>	16		<i>Total</i>	15

#### Summer

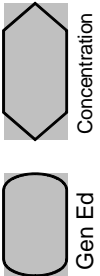
APSC 349 or APSC 398      1 to 6

#### Senior Year

<i>1<sup>st</sup> Semester</i>			<i>2<sup>nd</sup> Semester</i>		
APSC-401	Applied Science Profession II	1		<i>Concentration Elective</i>	3
ENG-415	Technical Writing	3		<i>Concentration Elective</i>	4
	<i>Concentration Elective</i>	4		<i>Minor Elective</i>	3
	<i>Minor Elective</i>	3		<i>Minor Elective</i>	3
	<i>Humanities/Soc. Science Elec.</i>	3		<i>Humanities/Soc. Science Elec.</i>	3
	<i>Total</i>	14		<i>Total</i>	16

## Applied Science - No Concentration Flow Chart

Freshman		Sophomore		Junior		Summer	Senior		Graduation
Semester One	Semester Two	Semester One	Semester Two	Semester One	Semester Two		Semester One	Semester Two	120-126 credits
ENG 101/111 (3)	ENG 102/112 (3)	CHEM 136 (5)		CHEM 331 (3)			ENG 415 (3)		APSC 349 or APSC 398 (1-6)
BIO 135 (4)	CHEM 135* (5)	CHEM 201 (4)	CHEM 335 (3)	PHYS 282/242 (5)	STAT 320/330 (3)		APSC 401 (1)	Conc. Elective (3)	
MATH153/156 (4 or 5)	SPCOM 100 (2)	PHYS 281/241 (5)	PHYS 311 (3)	APSC 311 (3)	Conc. Elective (3)		Conc. Elective (4)	Conc. Elective (4)	
APSC 101 (1)	BIO 136 (5)	PHIL 235 (3)	Minor Elective (3)	Minor Elective (3)	Minor Elective (3)		Minor Elective (3)	Minor Elective (3)	
Gen Ed (3)	GenEd Health (0-2)	Gen Ed (3)	Gen Ed Tech (2)	Minor Elective (3)	Minor Elective (3)		Gen Ed (3)	Gen Ed (3)	
15 or 16 credits	13-15 credits	13-15 credits	15 credits	16 credits	15 credits	1-6 credits	14 credits	16 credits	



\* CHEM 135 has a prerequisite of MATH 120 or above  
 \*\*Professional Schools and Graduate Schools may require CALC II