

## **Bachelor of Science in Agriculture Major: Food Business Management**

Food Business Management gives students experience in creating and analyzing food as well as in the economics and business operations of food processing. Students enrolled in this major earn the degree Bachelor of Science in Agriculture and will complete a minimum of 121 credit hours as outlined below.

General Education Requirements				
Requirement	Course Options	Hours		
GE Seminar	GENED 1201	1		
Writing and Information Literacy	Major requirement: <b>ENGLISH 1110</b> * (or Student Choice – see below)	3		
Mathematical & Quantitative Reasoning/Data Analysis	Major requirement: <b>MATH 1148 *</b> (or Student Choice – see below)	4		
Literary, Visual and Performing Arts	Student Choice	3		
Historical & Cultural Studies	Student Choice	3		
Natural Science	Major requirement: <b>BIOLOGY 1101 or</b> 1113* (or Student Choice – see below)	4		
Social & Behavioral Sciences	Major requirement: AEDECON 2001 or ECON 2001.01 * (or Student Choice – see below)	3		
Race, Ethnic and Gender Diversity	Student Choice	3		
Theme: Citizenship for a Diverse & Just World <sup>a</sup>	Student Choice	4-6		
Theme: Student Choice <sup>a</sup>	Student Choice	4-6		
GE Reflection	GENED 4001	1		
General Education Credit Hours: 33-3				

<sup>\*</sup> Indicates a pre/corequisite course for this major that also satisfies this GE category. If a student makes an alternative selection in this GE category, **they must also complete this course.** 

B.S. in Agriculture Degree Requirements				
Requirement	Course Options	Hours		
College & Department Survey	FAES 1100 (0.5) & FDSCTE 1100 (0.5)	1		
Oral Expression	AGRCOMM 3130 or COMM 2110	3		
Additional Science	PHYSICS 1103 or 1106.01 or 1200	3-5		
Internship	FAES 3191 & FDSCTE 4191	1		
Minor or Equiv. <sup>b</sup>	Choose a minor in Agribusiness, Business, or Entrepreneurship and Innovation	13-15		
Credit Hours: 21-25				

<sup>&</sup>lt;sup>a</sup> Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course (\*), one course in each GE Theme area may double count in the GE and major hours.

Major Supporting Coursework		
Requirement	Course Options	Hours
Chemistry	CHEM 1110 or 1210	5
Microbiology	MICROBIO 4000.01 or .02	4
Data Analysis	COMLDR 3537, AEDECON 2005, ANIMSCI 2260, HCS 2260, ENR 2000, or STAT 1450	3
	Credit Hours:	12

Major Coursework					
Course	Title	Hours			
FDSCTE 2300	Role of Food Science in Human Health 💠	3			
FDSCTE 2400	Introduction to Food Processing	3			
FDSCTE 3400	Sustainability of the Food Supply Chain 💠	4			
FDSCTE 4410	Hazard Analysis and Critical Control Points (HACCP)	2			
FDSCTE 4536	Food Safety and Public Health	3			
FDSCTE 4600	Food Composition and Function	3			
FDSCTE 5310	Food Quality Assurance	3			
FDSCTE 5320	Food Laws and Regulations	2			
FDSCTE 5330	Food Plant Management	2			
FDSCTE 5710 Food Additives					
Choose one Capsto	ne course:				
FDSCTE 5720	Food Product Development	3			
FDSCTE 5730 Technical Problem Solving					
Choose two Process	sing courses:				
FDSCTE 5410	Fruit and Vegetable Processing	3			
FDSCTE 5420	Dairy Processing	3			
FDSCTE 5430	Food Fermentations	3			
FDSCTE 5450	Food Packaging	3			
FDSCTE 5750	Brewing Science Capstone	3			
MEATSCI 4510	Processed Meats	3			
Major Electives					
Select at least two courses in each category from list on pg. 2 (at least four courses; a minimum of 12 credit hours)					
	Major Credit Hours:	48			

33-37	General Education
21-25	Degree Requirements & Minor
12	Major Supporting Courses
48	Major
0-7	Open Electives
121	Minimum Total Credit Hours

b Students in this program will select one of the following minors: Agribusiness, Business, or Entrepreneurship and Innovation. Students should declare a minor by the time 60 credit hours are accumulated.

Major Electives: Business (c	noose a minimum of two courses)	
Course	Title	Hours
AEDECON 3103	Principles of Agribusiness Finance	3
AEDECON 3105	Principles of Agribusiness and Food Supply Chains	3
AEDECON 3141	Agricultural Cooperatives	2
AEDECON 3160	Human Resources Management in Small Business	3
AEDECON 4340	Project Management for Sustainability and Applied Econ. (if not in minor)	3
BUSFIN 3120	Foundations of Finance (if not in minor)	3
BUSFIN 3500	Legal Environment of Business	1.5
BUSOBA 3130	Foundations of Operations Management (if not in minor)	3
BUSMHR 2000	Introduction to International Business	1.5
BUSMHR 2210	Personal Leadership and Team Effectiveness	3
BUSMHR 2500	Entrepreneurship	3
BUSMHR 3100	Foundations of Management & Human Resources (if not in minor)	3
BUSMHR 3510	Innovation and Entrepreneurship (if not in minor)	3
BUSMHR 5530	Social Entrepreneurship (if not in minor)	3
BUSML 3150	Foundations of Marketing (if not in minor)	3
BUSML 3250	Principles of Marketing	3
BUSML 3380	Logistics Management	1.5
COMM 2131	Business and Professional Speaking	3
COMM 3330	Communication and Conflict Management	3
COMM 3331	Communication and Decision Making	3
ECON 2002.01 or 2002.03H	Principles of Macroeconomics	3
PUBAFRS 5890	US Food Policy	3
Major Electives: Food (choos	se a minimum of two courses)	
Course	Title	Hours
FDSCTE 2410	Brewing Science	2
	†	
FDSCTE 4193	Independent Studies	1-3
	Independent Studies Alcohol and Society	
		1-3
FDSCTE 4597.01	Alcohol and Society Food and Health Controversies in the 21st	1-3
FDSCTE 4597.01 FDSCTE 4597.02	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research	1-3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if	1-3 3 3 1 to 5
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major	1-3 3 3 1 to 5
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major	1-3 3 3 1 to 5 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430	Alcohol and Society  Food and Health Controversies in the 21st Century  Research with Distinction / Honors Research with Distinction  Processing Fruit and Vegetable Products (if not selected in major core)  Dairy Processing (if not selected in major core)  Food Fermentations (if not selected in major core)	1-3 3 3 1 to 5 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430  FDSCTE 5450	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core)	1-3 3 3 1 to 5 3 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430  FDSCTE 5450  FDSCTE 5500	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core) Measurement of Food Preparation and Liking Food Product Development (if not selected in	1-3 3 3 1 to 5 3 3 3 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430  FDSCTE 5450  FDSCTE 5500  FDSCTE 5720  FDSCTE 5730	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core) Measurement of Food Preparation and Liking Food Product Development (if not selected in major core) Technical Problem Solving (if not selected in	1-3 3 3 1 to 5 3 3 3 3 3 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430  FDSCTE 5450  FDSCTE 5500  FDSCTE 5720  FDSCTE 5730	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core) Measurement of Food Preparation and Liking Food Product Development (if not selected in major core) Technical Problem Solving (if not selected in major core) Brewing Science Capstone (if not selected in	1-3 3 3 1 to 5 3 3 3 3 3 3 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5450  FDSCTE 5500  FDSCTE 5720  FDSCTE 5730  FDSCTE 5750	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core) Measurement of Food Preparation and Liking Food Product Development (if not selected in major core) Technical Problem Solving (if not selected in major core) Brewing Science Capstone (if not selected in major core)	1-3 3 3 1 to 5 3 3 3 3 3 3 3 3 3 3 3
FDSCTE 4597.01  FDSCTE 4597.02  FDSCTE 4999 or 4999H  FDSCTE 5410  FDSCTE 5420  FDSCTE 5430  FDSCTE 5450  FDSCTE 5500  FDSCTE 5720  FDSCTE 5730  FDSCTE 5750  MEATSCI 3110  MEATSCI 4510	Alcohol and Society Food and Health Controversies in the 21st Century Research with Distinction / Honors Research with Distinction / Processing Fruit and Vegetable Products (if not selected in major core) Dairy Processing (if not selected in major core) Food Fermentations (if not selected in major core) Food Packaging (if not selected in major core) Measurement of Food Preparation and Liking Food Product Development (if not selected in major core) Technical Problem Solving (if not selected in major core) Brewing Science Capstone (if not selected in major core) Introductory Meat Science Processed Meats (if not selected in major	1-3 3 3 1 to 5 3 3 3 3 3 3 3 3 3 3 3

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- A minimum of 30 semester hours of credit earned through regular course enrollment at this University, and regular course enrollment in the last semester in the College of Food, Agricultural, and Environmental Sciences.
- A cumulative point-hour ratio of at least 2.00 on all coursework completed at The Ohio State University as well as at least a 2.00 in the major.
- If a major-required course or major elective is a GE Theme course, two 3-4 cr courses (no more than one per theme area) is permitted to double count in the GE and major hours. GE Theme courses are indicated with a ❖ symbol.
- Students are encouraged to participate in education abroad opportunities. Consult
  with your advisor for how education abroad credit applies to your degree or
  consider the CFAES Global Option.
- Students must complete a minimum of 40 hours in major/major supporting coursework with at least 12 hours taken from the academic unit(s) offering the major at OSU in the baccalaureate program.
- Courses required in the major (including major supporting courses and major electives) may <u>not</u> be taken pass/non-pass.
- Coursework taken as open electives may include a maximum of 4 credit hours of physical activity courses (all 1139-1197 courses), and a maximum of 4 credit hours of campus music organizations.
- A college maximum of six hours of individual studies courses (x193) can be applied toward graduation; some majors may have a lower maximum.
- Students of CFAES must complete an internship of 1-2 hours as a requirement for degree. Any additional internship credit hours may count towards major hours (consult with your advisor). A college maximum of six hours of internship credit can be applied toward graduation; some majors may have a lower maximum.
- A maximum of three credits of 3488 can be applied toward graduation although some majors may have a lower maximum. A cumulative point-hour ratio of 2.0 is required to register for 3488 credit.
- Credit hours for 4999 ("with Research Distinction") and 4999H ("with Honors Research Distinction") are repeatable to maximum of six hours.
- An application for degree must be submitted online at least two semesters prior to the intended graduation term. Application found at: <a href="https://students.cfaes.ohio-state.edu/academics/undergraduate/graduation">https://students.cfaes.ohio-state.edu/academics/undergraduate/graduation</a>

#### Policies and General Requirements for Minors/Minor Equivalent

- The minor/minor equivalent must contain a minimum of 12 credit hours distinct from the major and/or additional minors (i.e., if a minor requires more than 12 credit hours, a student is permitted to overlap those hours beyond 12 with the major or with another minor).
- A 2.00 cumulative point-hour ratio is required in the minor/minor equivalent with a minimum C- grade for any course to be listed in the minor or minor equivalent (includes transfer credit).
- For programs requiring a minor: minors should be declared by the time students complete 60 hours.
- A student is permitted to count up to 6 credit-hours of transfer and/or EM credit in the minor or minor equivalent.
- Coursework graded Pass/Non-Pass cannot count in the minor. No more than 3 credit-hours of course work graded S/U may count toward the minor. Maximum of 3 credit-hours of xx93 are allowed to count in the minor.

#### Policies and General Requirements for Degree

A minimum of 121 total credit hours. Remedial coursework (English 1109; EDUTL 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1010; Mathematics 1040, 1050, 1073, 1074, 1075) do not count toward the 121-hour minimum requirement for the BS



# 4-Year Course Plan B.S. in Agriculture Major: Food Business Management

This model plan of study is presented as a suggested path to graduate in four years. It is intended to be a useful guide; however, each student is unique and should review the Degree Requirements for their catalog year and work with their advisor to develop an individualized course plan that best fits their personal academic background and goals.

NOTE: This sheet should not be used in isolation. To graduate in a timely manner, students must consult their academic advisor on a regular basis.

Freshman Year	Autu	mn Semester		Sı	oring Semester	
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Complete Math requirement	FAES 1100	College Survey	.5	GE R.E. & G. Diversity		3
-Complete at least one science	FDSCTE 1100	Dept Survey	.5	GE Math: MATH 1148	College Algebra	4
-Complete Math requirement -Complete at least one science -Complete English 1110.01  Hours: 31  Sophomore Year  Benchmarks -Declare minor -Complete three science courses by the end of this year -Begin to consider an internship location  Hours: 62  Junior Year	CHEM 1110 a	Elementary Chemistry	5	GE WIL: ENGLISH 1110	First-Year English Comp.	3
	BIOLOGY 1101 or 1113	Biology	4	GENED 1201	GE Launch Seminar	1
	AGRCOMM 3130 or COMM 2100	Oral Communication	3	Free Elective		2
Hours: 31	GE SBS: AEDECON 2001 or ECON 2001	Microeconomics	3	Free Elective		2
		Total:	16		Total:	15
Sophomore Year	Autu	mn Semester		Sı	oring Semester	•
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Complete three science	Add'l Sci: Physics 1103ª	Forces, Elect., Magnetism	3	FDSCTE 4410	Hazard Analysis and Critical Control Points (HACCP)	2
	FDSCTE 2300 b	Food Sci. in Health ❖	3	GE Citizenship <sup>b</sup>		4
	FDSTE 2400	Intro to Food Processing	3	AEDECON 2005 <sup>a</sup>	Data Analysis	3
	Minor Course		3	MICROBIO 4000.01	Basic and Practical Microbiology	4
	GE Historical and Cultural Study		3	FDSCTE Elective (Food #1)		3
Hours: 62						
		Total:	15		Total:	16
Junior Year	Autu	mn Semester	+	Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Apply to graduate -Complete internship by end	FDSCTE 3400 b	Sustainability of the Food Supply Chain ❖	4	GE Lit, Vis and Perf Arts		3
of the summer -Half of major hours to be	FDSCTE 5310	Food Quality Assurance	3	FDSCTE Processing Class		3
completed by the end of the	Minor Course		3	FDSCTE 4536	Food Safety and Public Health	3
year	FDSCTE Elective (Bus #1)		3	Minor Course		3
	FDSCTE 4600	Food Composition and Function	3	FDSCTE Elective (Bus #2)		3
Hours: 93		Total:	16		Total:	15
Senior Year	Autu	imn Semester	!	Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Meet graduation requirements	FDSCTE Processing Class		3	FDSCTE Capstone or Elective		3
-Meet with a Career Services Advisor	FDSCTE Capstone or Elective		3	FDSCTE 5710	Food Additives	2
	FDSCTE 5330	Food Plant Management	2	FDSCTE 5320	Food Laws and Regulations	2
	Free Elective		3	Free Elective		3
	Minor Course		3	Minor Course/Free Elective		2
	FAES 3191 & FDSCTE 4191	Internship	1	GENED 4001	GE Reflection	1
		Total:	15		Total:	13
				Minimum credit hours	for Bachelor of Science Degree:	121

<sup>&</sup>lt;sup>a</sup> One possible course of a requirement that has multiple options, as outlined in corresponding Degree Requirements document.

b Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course (\*), one course in each GE Theme area may double count in the GE and major hours.

### **4-Year Completion Checklist**

Benchmarks  CourseRequirement Complete Math requirement Complete at least one science Complete at least one science Complete at least one science Complete English 1110.01  Notes: Notes: Notes: Notes:  Notes	Freshman Year		Autumn Semester Spring Semester		ng Semester				
Complete at least one science   Complete English	Benchmarks		Course/Requirement		✓	Course/Requirement		✓	
Complete at least one science  Complete English 1110.01  Hours:  Notes:  Notes:  Notes:  Sophomore Year  Benchmarks  Course/Requirement  Complete three science courses by the end of this year  Junior Year  Benchmarks  Course/Requirement  Notes:			FAES 1100						
Science   Complete English 1110.01			FDSCTE 1100						
Complete English 1110.01   Notes:   N		Complete at least one							
Hours: Notes:   Notes:   Notes:		science							
Hours:   Notes:   Notes:   Notes:		Complete English							
Sophomore Year   Sophomore Year   Sophomore Year   Sophomore Year   Sophomore Year   Sourse/Requirement   V   Course/Requirement   V   Course/Re		1110.01							
Sophomore Year   Sophomore Year   Sophomore Year   Sophomore Year   Sophomore Year   Sourse/Requirement   V   Course/Requirement   V   Course/Re			Notes:			Notes:			
Benchmarks   Course/Requirement   ✓ Course/Re			Notes:			Notes.			
Declare minor	So	phomore Year		Autumn Semester			Spring Semester		
Complete three science courses by the end of this year  Begin to consider an internship location  Hours:  Junior Year  Autumn Semester  Course/Requirement  Complete internship by end of the summer  Half of major hours to be completed by the end of the year  Benchmarks  Course/Requirement  Notes:	Be	nchmarks	Course/Requirement		✓	Course/Requirement		✓	
science courses by the end of this year    Begin to consider an internship location		Declare minor							
science courses by the end of this year    Begin to consider an internship location	П	Complete three							
Begin to consider an internship location  Hours:  Junior Year	_	science courses by							
Internship location Hours:  Junior Year  Benchmarks Course/Requirement Apply to graduate Complete internship by end of the summer Hours:  Senior Year  Meet graduation requirements Meet with a Career Services Advisor  Notes:		the end of this year							
Hours: Notes: No		Begin to consider an							
Hours:   Junior Year   Autumn Semester   Spring Semester		internship location	Notes:	<u> </u>		Notes:			
Benchmarks Course/Requirement ✓ Course/Requirement ✓  Apply to graduate  Complete internship by end of the summer be end of the year  Hours: Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:	Hours:		Notes.		Notes.				
□ Apply to graduate □ Complete internship by end of the summer   □ Half of major hours to be completed by the end of the year Notes:   Hours: Notes:    Notes:  Note	Junior Year		Autumn Semester		Spring Semester				
Complete internship by end of the summer  Half of major hours to be completed by the end of the year  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Meet graduation requirements  Meet with a Career Services Advisor  Notes:  Notes:  Notes:  Notes:  Notes:	Be	nchmarks	Course/Requirement		✓	Course/Requirement		✓	
Complete internship by end of the summer  Half of major hours to be completed by the end of the year  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Notes:  Meet graduation requirements  Meet with a Career Services Advisor  Notes:  Notes:  Notes:  Notes:  Notes:		Apply to graduate							
by end of the summer  Half of major hours to be completed by the end of the year  Hours:   Notes:   Notes:    Senior Year   Autumn Semester   Spring Semester    Benchmarks   Course/Requirement   ✓ Course/Requirement   ✓ Course/Requirement   ✓ Course/Requirement   ✓ Course/Requirement   ✓ Course/Requirement   ✓ Notes:   N									
☐ Half of major hours to be completed by the end of the year Notes:   Notes: Notes:    Notes:  Notes	Ц								
be completed by the end of the year  Notes:	_								
end of the year  Notes:    Notes:   Notes:	Ш	half of major hours to be completed by the							
Benchmarks Course/Requirement ✓ Course/Requirement ✓   Meet graduation requirements Meet with a Career Services Advisor Notes: Notes:    Notes:		end of the year							
Senior Year     Autumn Semester     Spring Semester       Benchmarks     Course/Requirement     ✓       □ Meet graduation requirements     □     □       □ Meet with a Career Services Advisor     □     □       Hours:     Notes:     Notes:	Hours	:	Notes:			Notes:			
Benchmarks Course/Requirement ✓ Course/Requirement ✓  Meet graduation requirements  Meet with a Career Services Advisor  Hours: Notes: Notes:			Auto	mu Competer		Consists Comparison			
☐ Meet graduation requirements ☐ Meet with a Career Services Advisor  Hours: Notes: Notes:				mm Semester	./		ng Semester	./	
requirements  Meet with a Career Services Advisor  Hours: Notes: Notes:	_		Course/Requirement			Course/Requirement		Υ	
Meet with a Career Services Advisor  Hours: Notes: Notes:		Meet graduation requirements							
Hours: Notes: Notes:									
Hours: Notes: Notes:									
Total		GOTTIGGO TIGTIGGT							
Total									
Minimum credit hours for Bachelor of Science Degree: 121	Hours:		Notes: Notes:						
	Minimum credit hours for Bachelor of Science Degree: 12						121		