

AQUACULTURE AND FISHERIES SCIENCE

EFFECTIVE FALL 2021

Student: _____ ID No.: _____ Advisor: _____

I. GENERAL EDUCATION (min 40 cr)			
	Course No.	Grade	Cr.
Knowledge			
A1. STEM	BIO 101/102		
A2. Social and Behavioral Sciences	EEC 105		
A3. Humanities			
A4. Arts and Design			
Competencies			
B1. Write effectively			
B2. Communicate effectively			
B3. Mathematical, statistical, computation	MTH_____		
B4. Information literacy			
Responsibilities			
C1. Civic knowledge & responsibility (e.g. MAF100,220)			
C2. Global responsibilities			
C3. Diversity and inclusion (e.g. MAF370)			
Integrate & Apply			
D1. Ability to Synthesize (e.g. AFS300, 440)			
Grand Challenge			
G. Grand Challenge Course	AFS 105G		
Additional General Education			
Additional General Education			
Additional General Education			
Additional General Education			

III. PROFESSIONAL COURSES (min. 30 cr total)				
Course Description:	Course No.	Grade	Cr.	Off:
Foundational Courses (10 cr that count as supporting electives)				
Shellfish Aquaculture	AFS 201(3,1)			F
Finfish Aquaculture	AFS 202(2,1)			F
Fisheries Science	AFS 215 (2,1)			F
Concentration Courses (min. 20 cr; 12 from AFS)				
Suggested Courses for Aquaculture Focus (choose from):				
Crustacean Aquaculture	AFS 362 (3)			Alt S(o)
Marine Finfish Aquaculture	AFS 432 (3)			Alt.S(o)
Salmonid Aquaculture	AFS 483 (3)			Alt.F(e)
Topics in Molluscan Aquaculture	AFS 581 (3)			Alt S(e)
Advanced Aquaculture Systems	AFS 584 (3)			Alt S(e)
Suggested Courses for Fisheries Focus (choose from):				
World Fishing Methods and Lab (3,1)	AFS 321/322			F
Fisheries Ecology (3,1)	AFS 415/416			Alt.F(o)
Fisheries Stock Management (3)	AFS 531 (3)			Alt.S(e)
Ecosystem Based Fishs Sci. & Mngt	AFS 560 (3)			Alt.S(o)
Common courses (choose from):				
Diseases of Aquatic Organisms (D1)	AFS 300 (3,1)			S
Aquaculture and the Environment	AFS 425 (3)			F
Aqua. Food Production, Philippines (D1)	AFS 440 (3)			J-term
Marine Plastic Pollution (2,1)	AFS 488 (3)			S
Advanced Diseases Aquatic Org	AFS 500 (3)			Alt F(o)
General Oceanography	OCG 301 (3)			F
Marine Biology	BIO 360 (3,1)			F,S
Fish Physiology	AFS 486 (3)			Alt.F(o)
Additional Concentration Course***				
Additional Concentration Course***				

II. PRE-PROFESSIONAL & BASIC SCIENCES			
A. Introductory Professional Courses (10 credits)			
Foods from the Sea (3,1; F) (A1,G)	AFS105G/106		
Intro to Resource Econ (3; F,S) (A2)	EEC105		
Natural Resource Conserv (3; F,S) (A1)	NRS100		
B. Basic Sciences (24 credits)			
<i>Biology (8 cr)</i>			
Principles of Biology I (3; F,S) (A1)	BIO 101		
Principles of Biology I Lab (1; F,S) (A1)	BIO 103		
Principles of Biology II (3; F,S) (A1)	BIO 102		
Principles of Biology II Lab (1; F,S) (A1)	BIO 104		
<i>Chemistry (4 cr)</i>			
CHM 101 or 103 (3, F,S) (A1)	CHM_____		
CHM 102 or 105 (1; F,S)	CHM_____		
<i>Additional Basic Sciences** (min 12 cr)</i>			
Mathematics (MTH103/111/131/141) (A1,B3)	MTH_____		
Additional Basic Sci (Physical Sciences)			
Additional Basic Sci (Ecology/Ecosystem)			
Additional Basic Sci (Computational/Stats)			

IV. INTERNSHIPS/INDEPENDENT PROJECTS (min 3, <12)				
Special Problems,Independent Study	AFS 391/2 (1-3)			F,S,Sm
AFS Internship	AFS 399 (1-6)			F,S,Sm
Special Projects	AFS 491/2 (1-3)			F,S,Sm

V. SUPPORTING***(min 15) AND OTHER ELECTIVES				
Skills and Tools (up to 9 cr)				
Small Boats: Equipment & Operation	AFS 290 (3)			F
Basic Scuba Diving	AFS 270 (3)			F,S
Research Diving Methods	AFS 433 (3)			F,S
Additional supporting and other electives				

Planning for Academic Success	URI101 (1)			F
& Part of the Marine Technology Certificate (15 cr. total)				

* Some courses may count for more than one category. If so, do not double count credits in the total count.

** **Suggested Basic Science (check General Education catalog)**
Math: Calculus (MTH131) is required for a fisheries focus; otherwise, either MTH103 or MTH111 fulfill the requirement; **Chem:** At least 2 sem. of Chem are needed if you plan to go to grad school (e.g. add CHM124/126).
Physical Sci: any basic course in Geology (GEO), Oceanography (OCG), Physics (PHY); **Ecology/Ecosystem Science:** e.g. BIO262, NRS212, NRS223, or NRS234G; **Computer Sci and Statistics:** any course in CSC or STA (100, 200, 300 level; e.g. STA220 or STA308).

*** **Suggested Additional Concentration:** 300 or above courses in AFS, Marine Bio (BIO), Oceanography (OCG), Ecology/Ecosystem (NRS), Marine Affairs(MAF), Economics(EEC). **Suggested Supporting Electives:** courses 200 or above in Economics (EEC, ECN), Business (BUS), MAF, Anthropology(APG), Marine Bio(BIO), GEO, NRS, OCG, Animal and Veterinary Sciences (AVS), Sustainable Agriculture & Food Systems (SAF)

Course Credits Required: 120
Course Credits Completed:

Approved for Graduation:
 Advisor: _____ Date: _____

B.S. Aquaculture and Fisheries Science- Effective Fall 2021

Sample 4 Year Plan

College of the Environment and Life Sciences

Freshman Year Fall Semester

Course Code	Description	Cr	
AFS 105G/106	Food from the Sea Lec/ Lab	4	
BIO 101/103	Principles of Biology I/ Lab	4	
EEC 105	Introduction to Resource Economics	3	
	*General Education	3	
	*General Education	3	
URI 101	Planning for Academic Success	1	
* Counting for General Education		15-18	

Freshman Year Spring Semester

Course Code	Description	2020 - 2021	Cr	
AFS 202	Finfish Aquaculture		3	
BIO 102/104	Principles of Biology II/ Lab		4	
OCG/GEO	Basic Science (Physical Sci)		3	
MTH _____	Precalculus or Applied Calculus I		3	
	*General Education		3	
* From General Education Course Offerings			16	

Year 1 Milestones: Earn at least 30 credits and a GPA of 2.0 or higher. Meet with your Advisor for AFTC option discussion.

Sophomore Year Fall Semester

Course Code	Description	Cr	
AFS 201	Shellfish Aquaculture	3	
NRS 100	Natural Resource Conservation	3	
CHM 103/105	Introduction Chemistry Lecture/Lab	4	
	Supporting Elective (e.g. skills)	3	
	Concentration (e.g. AFS 321/322)	3	
* From General Education Course Offerings		16	

Sophomore Year Spring Semester 2021-2022

Course Code	Description	Cr	
e.g. AFS 362/432	Concentration Course	3	
e.g. MAF 370	Concentration Course	3	
e.g. BIO 262	Basic Science (Ecology/Ecosystem)	4	
	Supporting Elective (skills)	3	
	*General Education	3	
* From General Education Course Offerings		16	

Year 2 Milestones: Earn at least 64 credits and a GPA of 2.0 or higher. Meet with your Advisor to discuss major, internships and research opportunities.

Junior Year Fall Semester

Course Code	Description	Cr	
e.g. BIO360,OCG301	Concentration Course	3	
e.g. AFS 483, 415	Concentration Course	3	
	Supporting Elective	3	
	Basic Science (Computer Sci/Stats)	3	
	*General Education	3	
		15	

Junior Year Spring Semester 2022 - 2023

Course Code	Description	Cr	
e.g. AFS 300	Concentration Course	3	
e.g. AFS 432	Concentration Course	3	
	Supporting Elective	3	
	**Special Projects or Internship	3	
	*General Education or Elective	3	
** could be done in the Summer		15	

Year 3 Milestones: Earn at least 85 credits and a GPA of 2.0 or higher. Meet with your Advisor to prepare intent to graduate application for fall submission.

Senior Year Fall Semester

Course Code	Description	Cr	
e.g. AFS 486	Concentration Course	3	
e.g. BIO, MAF, NRS	Concentration Course	3	
	Supporting Elective	3	
	Basic Science	3	
	*General Education or Elective	3	
		15	

Senior Year Spring Semester 2023-2024

Course Code	Description	Cr	
e.g. AFS 584	Concentration Course	3	
e.g. AFS 488	Supporting Elective	3	
	Supporting Elective	3	
	*General Education	3	
	Elective	3	
		15	

Year 4 Milestones: Earn 120 credits and a GPA of 2.0 or higher in CUM and CON. Complete all remaining required courses.

Effective Fall 2021

Total Credits to Graduate = 120