

AQUACULTURE AND FISHERIES SCIENCE

EFFECTIVE FALL 2019

Student: _____ ID No.: _____ Advisor: _____

I. GENERAL EDUCATION (min 40 cr)		Course No	Grade	Cr.
Knowledge				
A1. STEM		BIO 101		
A2. Social and Behavioral Sciences		EEC 105		
A3. Humanities				
A4. Arts and Design				
Competencies				
B1. Write effectively				
B2. Communicate effectively				
B3. Mathematical, statistical, computation				
B4. Information literacy (e.g. BIO396)				
Responsibilities				
C1. Civic knowledge & responsibility (e.g. MAF100, MAF220)				
C2. Global responsibilities (e.g. OCG123G)				
C3. Diversity and inclusion (e.g. MAF 370)				
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 No.	Grade	Cr.	Off:
Course Description:					
Foundational Courses min of 6 cr, count as supporting electives)					
Shellfish Aquaculture		AFS201 (3,1)			F
Finfish Aquaculture		AFS202 (2,1)			S
Fisheries Science		AFS215 (2,1)			F
Concentration Courses (choose any from list below, min. 20 cr; at least 12 from AFS, rest from BIO,EEC,MAF,NRS,OCG)					
Suggested Courses in Aquaculture (choose from):					
Crustacean Aquaculture		AFS 362 (3)			Alt.S(e)
Marine Finfish Aquaculture		AFS 432 (3)			Alt.S(o)
Salmonid Aquaculture		AFS 483 (3)			F
Topics in Molluscan Aquaculture		AFS 581 (3)			Alt.F(o)
Advanced Aquaculture Systems		AFS 584 (3)			AltS(e)
Suggested Courses in Fisheries (choose from):					
World Fishing Methods and Lab (3,1)		AFS 321/322			F
Fisheries Ecology		AFS 415/416			Alt.F(e)
Fisheries Stock Management		AFS 531 (3)			Alt.S(e)
Ecosystem Based Fisheries Sci. & Mngt		AFS 560 (3)			Alt.S(o)
Common courses (choose from):					
Diseases of Aquatic Organisms		AFS 300 (3,1)			S
Aquaculture and the Environment		AFS 425 (3)			F
Aqua. Food Production, Philippines		AFS 440 (3)			J-term
General Oceanography		OCG 301 (3)			F
Marine Biology		BIO 360 (3,1)			F,S
Fish Physiology		AFS 486 (3)			F
Additional Concentration Course***					
Additional Concentration Course***					
Additional Concentration Course***					
Additional Concentration Course***					

II. PRE-PROFESSIONAL & BASIC SCIENCES		Course No	Grade	Cr.
A. Introductory Professional Courses (10 credits)				
Foods from the Sea (3,1; F)		AFS105G/106		
Intro to Resource Econ (3; F,S)		EEC105		
Natural Resource Conserv (3; F,S)		NRS100		
B. Basic Sciences (24 credits)				
<i>Biology (8 cr)</i>				
Principles of Biology I (3; F,S)		BIO 101		
Principles of Biology I Lab (1; F,S)		BIO 103		
Principles of Biology II (3; F,S)		BIO 102		
Principles of Biology II Lab (1; F,S)		BIO 104		
<i>Chemistry (4 cr)</i>				
CHM 101 or 103 (3, F,S)		CHM__		
CHM 102 or 105 (1; F,S)		CHM__		
<i>Additional Basic Sciences** (min 12 cr)</i>				
Mathematics (MTH103/111/131/141)		MTH__		
Additional Basic Sci (Physical Sciences)				
Additional Basic Sci (Ecology/Ecosystem)				
Additional Basic Sci (Computational/Stats)				

IV. INTERNSHIPS/INDEPENDENT PROJECTS (min 3, <12)		Course No.	Grade	Cr.	Off:
Special Project/Independent Study		AFS391/2(1-3)			F,S,Sm
Special Project/Independent Study		AFS391/2(1-3)			F,S,Sm
Special Project/Independent Study		AFS491/2(1-3)			F,S,Sm
Special Project/Independent Study		AFS491/2(1-3)			F,S,Sm

V. SUPPORTING***(min 15) AND OTHER ELECTIVES		Course No.	Grade	Cr.	Off:
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

* 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 2019

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 (e.g. AFS132)	3	
	*General Education (WRT or COM)		
URI 101	Planning for Academic Success	1	
		15	

* Counting for General Education

Freshman Year Spring Semester

Course Code	Description	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	
		16	

* From General Education Course Offerings

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	
	*General Education	3	
		16	

Sophomore Year Spring Semester

Course Code	Description	Cr	
	Concentration Course	3	
	Concentration Course	3	
e.g. BIO 262	Basic Science (Ecology/Ecosystem)	4	
	Supporting Elective (skills)	3	
	*General Education	3	
		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	
	Concentration Course	3	
	Concentration Course	3	
	Supporting Elective	3	
	Basic Science (Computer Sci/Stats)	3	
	*General Education	3	
		15	

Junior Year Spring Semester

Course Code	Description	Cr	
	Concentration Course	3	
	Concentration Course	3	
	Supporting Elective	3	
	**Special Projects or Internship	3	
	*General Education or Elective	3	
		15	

** could be done in the Summer

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	
	Concentration Course	3	
	Concentration Course	3	
	Supporting Elective	3	
	Basic Science	3	
	*General Education or Elective	3	
		15	

Senior Year Spring Semester

Course Code	Description	Cr	
	Concentration Course	3	
	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.

Total Credits to Graduate = 120

Effective Fall 2019