# AQUACULTURE AND FISHERIES SCIENCE

*EFFECTIVE FALL 2024*

**Student:** _____ **ID No.:** _____ **Advisor:** _____

## I. GENERAL EDUCATION *(min 40 cr)*

| | Course No. | Grade | Cr. |
|---|---|---|---|
| **Knowledge** | | | |
| A1. STEM | BIO 101/102 | | |
| A2. Social & Behavioral Science | EEC 105 | | |
| A3. Humanities *(e.g. MAF300)* | | | |
| A4. Arts & Design | | | |
| **Competencies** | | | |
| B1. Written Communications | | | |
| B2. Communicate Effectively | | | |
| B3. Math, Stats, & Comp. Literacy | MTH ____ | | |
| B4. Information Literacy | | | |
| **Responsibilities** | | | |
| C1. Civic Knowledge & Responsibility *(e.g. MAF100,220)* | | | |
| C2. Global responsibilities | | | |
| C3. Diversity & Inclusion *(e.g. MAF300, SAF383)* | | | |
| **Integrate & Apply** | | | |
| D1. Integrate & Apply (*e.g. AFS300,440)* | | | |
| **Grand Challenge** | | | |
| G. Grand Challenge | AFS105G | | |

## II. PRE-PROFESSIONAL & BASIC SCIENCES

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

**Course Credits Required:** 120
**Course Credits Completed**:

## 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) | | | *S* |
| Fisheries Science | AFS 215 (2,1) | | | *Alt.F(o)* |
| **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(o)* |
| 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 | | | *Alt.F(e)* |
| Fisheries Ecology (3) | AFS 415 | | | *S* |
| Fisheries Stock Management (3) | AFS 531 (3) | | | *S* |
| 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(e)* |
| 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** | | | | |

## IV. INTERNSHIPS/INDEPENDENT PROJECTS *(min 3, <12 )*

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|---|---|---|---|---|
| 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)* | | | | |
| Basic Scuba Diving | AFS 270 (3) | | | *F,S* |
| Small Boats: Equipment & Operation | AFS 290 (3) | | | *F* |
| Laboratory Research Skills | AFS 291 (1) | | | *F* |
| Underwater Photography & Film | AFS 395 (3) | | | *S* |
| Underwater Photography & Film Lab. | AFS 397 (1) | | | *S* |
| Research Diving Methods | AFS 433 (3) | | | *F,S* |
| **Additional supporting and other electives** | | | | |
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| Planning for Academic Success | URI101 (1) | | | *F* |

*& Part of the Marine Technology Certificate (15 cr. total)*

* **Suggested Basic Science (check General Education catalog):** 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 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 Aquaculture (AFS), Marine Biology (BIO), Oceanography (OCG), Ecology/Ecosystem (NRS), Marine Affairs (MAF), and Economics (EEC).

*** **Suggested Supporting Electives**: courses 200 or above in Economics (EEC, ECN), Business (ACC, BAI, FIN, INE, MGT, MKT, SCA ), Marine Affairs (MAF), Anthropology (APG), Marine Bio (BIO), Geology (GEO), Natural Resource Sciences (NRS), Oceanography (OCG), Animal and Veterinary Sciences (AVS), and Sustainable Agriculture & Food Systems (SAF). Additionally, any courses required for the Innovation and Entrepreneurship Certificate are accepted (INE149, INE247, INE249, INE349)

**B.S. Aquaculture and Fisheries Science- Effective Fall 2024**
**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 | |
| | 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 | Introduction Chemistry Lecture/Lab | 4 | |
| | Supporting Elective | 3 | |
| | Concentration (*e.g. AFS 321/322)* | 3 | |
| * From General Education Course Offerings | | **16** | |

**Sophomore Year *Spring* Semester**

| Course Code | Description | Cr | |
|---|---|---|---|
| e.g. AFS 362/432 | Concentration Course | 3 | |
| | Concentration Course | 3 | |
| | Basic Science (Ecology/Ecosystem) | 4 | |
| | Supporting Elective | 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 dicuss major, internships and research opprtunities.

**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**

| 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 | |
| | *Gen Ed or Free 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 | |
| | *Gen Ed or Free Elective | 3 | |
| | | **15** | |

**Senior Year *Spring* Semester**

| Course Code | Description | Cr | |
|---|---|---|---|
| e.g. AFS 584 | Concentration Course | 3 | |
| e.g. AFS 488 | Supporting Elective | 3 | |
| | Supporting Elective | 3 | |
| | *General Education | 3 | |
| | *Gen Ed or Free 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 2024

**Total Credits to Graduate = 120**

**Please Note:** This document is for **planning purposes only** and does not equate or replace your major specific curriculum sheet. **This is NOT your Curriculum Sheet.** This tool can be used to map out your individual 4-year plan while at URI. **This form is not to be turned in as part of your Graduation Application.**

**Name:** _____ **Student ID:** _____

**Major:** _____ **Subplan:** _____

| First Year Fall Semester (20XX) | | | |
|---|---|---|---|
| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem** | **Cr** |
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| First Year Spring Semester (20XX) | | | |
|---|---|---|---|
| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Sophomore Year Fall Semester (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem** | **Cr** |
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| Sophomore Year Spring Semester (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Junior Year Fall Semester (20XX) | | | |
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| **Course Code** | **Description** | **Sem** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem** | **Cr** |
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| Junior Year Spring Semester (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Senior Year Fall Semester (20XX) | | | |
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| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
|---|---|---|---|
| **Course Code** | **Description** | **Sem** | **Cr** |
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| Senior Year Spring Semester (20XX) | | | |
|---|---|---|---|
| **Course Code** | **Description** | **Sem.** | **Cr** |
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| Summer / J-Term (20XX) | | | |
|---|---|---|---|
| **Course Code** | **Description** | **Sem.** | **Cr** |
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| **Total Credits Earned:** | 0 |

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| **Total Credits Remaining for Graduation:** | 120 |

**B.S. Aquaculture and Fisheries Science**

| Advising Notes |
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