

Aquaculture

Certificate of Specialization Requirements Checklist

15-unit certificate (Effective Fall 2025)

Aquaculture is a growing field that requires a skilled workforce with a background in a variety of academic disciplines and applied trade skills. This certificate builds upon the Aquarium Science Certificate to specialize in the cultivation of aquatic organisms for use in food production, stock restoration for conservation purposes, propagation of ornamental species, organisms for research purposes, and other potential applications. Course content will focus on applying animal husbandry, water quality, and life support to high density production in recirculating aquaculture systems (RAS).

Courses	Units
<i>Aquaculture Required Courses: Need to complete each of the following courses</i>	
<input type="checkbox"/> MRSC A120 Marine Aquarium Science	2.0
<input type="checkbox"/> MRSC A135 Aquarium Water Quality	2.0
<input type="checkbox"/> MRSC A140 Aquarium Life Support Operations & Maintenance	2.0
<input type="checkbox"/> MRSC A145 Introduction to Aquaculture	3.0
<input type="checkbox"/> MRSC A146 Introduction to Aquaponics	2.0
<input type="checkbox"/> MRSC A245 Practical Experience in Aquaculture I	2.0
<input type="checkbox"/> MRSC A246 Practical Experience in Aquaculture II	2.0
Certificate Units Required: 15.0	

Program Outcomes:

1. Describe how a properly designed recirculating aquaculture system can be used in large-scale production of aquatic organisms.
2. Identify commonly kept aquacultured organisms and explain what critical aspects of their anatomy, physiology and life history a well-trained aquaculture technician must know to be successful with their growth and potential reproduction.
3. Demonstrate the ability to design, set-up, operate, maintain and trouble-shoot recirculating aquaculture systems to provide adequate growing environment.
4. Demonstrate the ability to manage aquaculture recirculating system facilities including proper biosecurity protocols, nutrition to maximize fish growth, techniques for reproduction, and best business practices for the aquaculture industry.