

## Course Outline

**Course Title:** Shellfish Nursery Systems

**Course Code:** AQUA 551T

**Total Hours:** 35 (lecture)

**Description:** The Shellfish Nursery Systems program provides hands-on training, designed for the shellfish farmer who wishes to have greater control over quality and cost of seed production. The topics cover the biology, life cycle and culture methods of many shellfish species such as: oysters, clams, scallops, mussels, and geoducks. This program also provides field site visits to examine techniques for remote setting, phytoplankton culture, hatchery techniques, nursery methods, upwelling units, and FLUPSY design.

### Course Objectives:

The student will develop knowledge and skills in:

- The role of nursery systems in the culture of shellfish;
- How nursery systems can assist the farmer in producing quality seed;
- The design of nursery systems appropriate for shellfish culture in BC;
- The construction and use of a shellfish nursery system;
- The commercial nursery systems currently used successfully in BC;
- The technical aspects of design and construction of a shellfish nursery system;
- Constructing a simple nursery system;
- Using a nursery system for rearing shellfish larvae; and
- Evaluating the technical aspects of a constructed nursery system.

### Course Modules:

Module 1: Introduction to Shellfish Nursery Systems

Module 2: Species Cultured in BC

Module 3: Bivalve Reproduction, Larval Stages and Feeding Mechanisms

Module 4: Nursery System Design

Module 5: Forced Water Systems

Module 6: Suspended Systems

Module 7: Intertidal Nurseries for Clams and Oysters

Module 8: Nursery Systems for New Species

Module 9: Integration of Nursery Systems with Final Production: Review and Case Studies

**Prerequisites:** None

**Evaluation:** Participation, laboratory exercises, written and practical examinations.