

Course Content and Outcome Guide for AQS 295

Course Number: AQS 295

Course Title: Aquarium Science Internship

Credit Hours: 12

Lecture Hours: 0

Lecture/Lab Hours: 0

Lab Hours: 360

Course Description

Provides the experience of daily diligence, responsibilities and rewards of the aquatic animal husbandry profession at an aquatic animal facility. Presents daily animal care and facility readiness routines, assisting life support staff and animal health management professionals, and evaluation of operational aspects of the facility.

Intended Outcomes for Course

1. Apply aquatic animal husbandry skills with aquatic systems and captive aquatic animals.
2. Evaluate and participate in the delivery of aquatic animal nutrition, sanitation and biosecurity programs at an aquatic animal care facility.
3. Enter data and extract information within record keeping and databases used by the industry.
4. Discuss historic and current animal health management of captive aquatic animals within an aquatic animal care facility.
5. Evaluate and participate in the delivery of water quality management program within an aquatic animal care facility.
6. Identify components, configuration and operational requirements of life support systems within an aquatic animal care facility.
7. Identify and discuss aquarium exhibits in regard to their design, thematic delivery and operational requirements at an aquatic animal care facility

Course Activities and Design

The format for this course is a combination of off-campus experiential work place learning at an aquatic animal care facility or institution of choice, with online distance learning based discussions and assignments. Emphasis will be placed on the skills needed for performing normal job duties in a variety of fields related to the aquarium sciences, including scientific research, aquaculture, and/or educational display. Students participating in the course are responsible for pursuing and attaining the internship through the application and selection process administered by the internship site of their choosing. Placement into the course is based on successful completion of the Aquarium Science Program core curriculum and/or approval by the program director.

Outcome Assessment Strategies

- Work log for hours spent with professional mentors developing husbandry skills as well as professional workplace personal interaction and task performance.

- Employee-style evaluations twice per term evaluate student performance at off-campus internship site and growth throughout the internship duration.
- On line distance learning discussions and written assignments reflective of learning outcomes for course (i.e. husbandry techniques, operational strategies, nutrition, animal health and water quality management, record keeping, life support systems and exhibits).

Course Content (Themes, Concepts, Issues and Skills)

Themes

- Applied aquatic animal husbandry skills, knowledge and techniques.
- Record keeping and data collection for aquarium systems and animal care.
- Food preparation and feeding for aquatic animals in controlled environments.
- Water quality testing and analysis for aquarium systems.
- Life support system layout, equipment and operation of aquarium systems.
- Aquatic animal health management and programs.
- Exhibit development, design and operational requirements.

Concepts

- Maintenance and cleaning of exhibits and associated work areas using site available materials and techniques.
- Practical application of record keeping and data collection for feeding, maintenance, animal inventories, animal health/treatment, life support systems, water quality and general husbandry.
- Considerations for food preparation and feeding of aquatic animals within the aquatic animal care industry.
- Identification and function of life support components and devices at an aquatic animal care facility within the industry.
- Industry standards for the collection, testing and analysis of water quality and water quality instrumentation at aquatic animal care facilities.
- Principles of aquatic animal health management programs such as quarantine, disease recognition/treatment and bio-security at aquarium facilities.
- Exploration of exhibits and their design, development and execution at aquatic animal care facilities.
- Considerations for time management and prioritization of tasks related to daily operations and husbandry at aquarium facilities.
- Working as an effective team member within a professional aquatic animal care team.

Issues

- Diverse applications of animal husbandry techniques and methods across aquarium science industry.
- Time management and prioritization of animal husbandry related tasks.
- Safe working practices related to animal husbandry and operational expectations within organizations.

- Communication and organization within aquatic animal care teams.

Skills

- Routine maintenance and cleaning of aquarium enclosures, systems and components.
- Routine record keeping and data collection.
- Food preparation and feeding of aquatic animals (i.e. commercially prepared, fresh frozen, and/or live foods).
- Identify disease, disease agents and associated treatments within the animal health management plan of a facility.
- Calculate commonly used medications including anesthetics, antibiotics and anti-parasitic compounds.
- Administer medications via tube feeding, injection, topical and bath immersive techniques.
- Identify components and map the water flow through life support systems.
- Collect water samples and test for water quality results using industry standard laboratory instrumentation.
- Assess effective exhibit design and make recommendations for exhibits.
- Work as an effective member of an aquatic animal husbandry team.