

## Cover Sheet: Request 12283

### VEM5XXX Diseases of Warm Water Fish Lab

#### Info

Process	Course New Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Ruth Francis-Floyd rffloyd@ufl.edu
Created	2/6/2018 10:48:59 AM
Updated	2/6/2018 1:45:23 PM
Description of request	When the Diseases of Warm Water Fish class was changed from a face-to-face delivery mechanism to on-line delivery, all laboratory activities were eliminated or modified for on-line learning. This one week "short course" provides students an elective opportunity to get the hands on training that can not be offered using the on-line delivery system.

#### Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	VM - Graduate Studies Committee 514925000	Thomas Vickroy		2/6/2018
DWWF Lab Syllabus, Draft.docx					2/6/2018
College	Approved	VM - College of Veterinary Medicine	Thomas Vickroy		2/6/2018
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			2/6/2018
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

## Course|New for request 12283

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**Submitter:** Ruth Francis-Floyd rffloyd@ufl.edu

**Created:** 2/6/2018 10:30:15 AM

**Form version:** 1

### Responses

**Recommended Prefix** VEM

**Course Level** 5

**Number** XXX

**Category of Instruction** Joint (Grad/Pro)

**Lab Code** L

**Course Title** Diseases of Warm Water Fish Lab

**Transcript Title** DWWF Lab

**Degree Type** Professional

**Delivery Method(s)** Off-Campus

**Co-Listing** Yes

**Co-Listing Explanation** This course is offered to graduate students and professional students in the veterinary curriculum.

**Effective Term** Summer

**Effective Year** 2018

**Rotating Topic?** No

**Repeatable Credit?** No

**Amount of Credit** 1

**If variable, # min** 0

**If variable, # max** 10

**S/U Only?** No

**Contact Type** Regularly Scheduled

**Weekly Contact Hours** 40

**Course Description** This is a one-week hands on laboratory course that complements the didactic material offered in the on-line Diseases of Warm Water Fish course.

**Prerequisites** Permission of Department

**Co-requisites** None

**Rationale and Placement in Curriculum** This is a lab that supports, but is not required, for the Diseases of Warm Water Fish course which is now an on-line program.

**Course Objectives** Designed to provide hands-on training and methodologies discussed in the regular (on-line) didactic course. Includes lab work, field trips, diagnostics and case assessment.

**Course Textbook(s) and/or Other Assigned Reading** Fish Disease: Diagnosis and Treatment, Second Edition\*. By E.J. Noga, 2010. Wiley- Blackwell, Ames Iowa.

**Weekly Schedule of Topics** • Comparative Anatomy of Fish

- Freshwater and Marine Systems Design
- Water Quality Analysis and Interpretation
- Diagnostic Procedures
- External Biopsy Techniques
- Identification of Common Ectoparasites
- Necropsy Procedures
- Sterile and Microbial Techniques
- Treatment Protocols and Strategies
- Drug and Chemical Regulations for Fish
- Principles of Biosecurity and Quarantine
- Introduction to Bacterial, Viral and Mycotic Diseases of Fish

- Development of Fish Health Management Programs

**Links and Policies** Honesty Policy:

All students registered at the University of Florida have agreed to comply with the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University." In addition, on all work submitted for credit the following pledge is either required or implied: "On my honor I have neither given nor received unauthorized aid in doing this assignment." To review the student honor code please visit:  
<http://www.dso.ufl.edu/judicial/honorcodes/honorcode.php>.

**Student Evaluation of Instruction:**

Evaluations are performed electronically at the end of the course. To evaluate the instructors, visit the UF Evaluation site at: <https://evaluations.ufl.edu/evals/>. We know these are tedious to complete, but because of their importance we ask you to take them seriously. Many aspects of the course have been adapted based upon prior student's comment and we find all feedback to be helpful.

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

**Policy Related to Make-Up Exams or Other Work:**

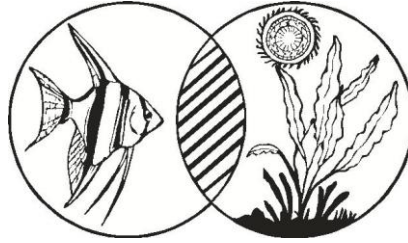
Because of the applied nature of this class, regular student participation is expected, implying that make-up quizzes and exams are not normally administered.

**Grading Scheme** The course is a five-day short course which includes wet labs, discussion sections and facility visits. There will be significant hands-on application of material covered in the didactic Diseases of Warm Water Fish class. Grades will be based on attendance, participation in laboratory exercises and discussion sections. Student will also complete a 15 minute presentation to their classmates on the final day of class on a topic of interest to them that is approved by the instructor.

90% or higher = A  
85.5 – 89.5% = B+  
80 – 85% = B  
75.5 – 79.5% = C+  
70 – 75% = C  
65.5 – 69.5% = D+  
60 – 65% = D  
< 59.5% = E

**Instructor(s)** Ruth Francis-Floyd – UF, Large Animal Clinical Sciences  
Kathy Heym – Florida Aquarium  
Eric Cassiano – UF, Tropical aquaculture Laboratory  
Debbie Pouders – UF, Tropical Aquaculture Laboratory  
Roy Yanong – UF, Tropical Aquaculture Laboratory

## Diseases of Warm Water Fish Lab



Graduate Students: FAS 5225L (1 credit)

Veterinary Students: VEM XXXX (1 credits)

Diseases of Warm Water Fish is designed to provide instruction in the methodology of diagnosis, treatment and management of parasitic, bacterial, viral, nutritional, and environmental diseases of warm water food fish and aquarium species. The laboratory course is open to graduate and veterinary students, veterinarians, fisheries biologists, aquaculturists, and professional aquarists who have previously completed, or are currently enrolled in, the regular didactic course. The laboratory course is designed to provide hands-on training in the methodologies discussed in the regular didactic course. The laboratory course is taught as a 5-day short course at the University of Florida Tropical Aquaculture Laboratory (Ruskin, FL). Daily laboratory training, discussion sessions and field trips are designed to teach the skill set appropriate for entry level fish disease diagnostics and case assessment. Expectations include the ability to run and interpret basic water quality analysis, basic necropsy skills, parasite identification and an understanding of basic microbiological tests (sterile organ culture and antibiotic testing techniques).

### **Course Coordinators:**

#### **Dr. Ruth Francis-Floyd**

Department of Large Animal Clinical Sciences and  
SFRC Program of Fisheries and Aquatic Sciences  
University of Florida  
7922 NW 71 Street  
Gainesville, FL 32653  
Phone: (386) 643-8904 (cell)  
Email: [rffloyd@ufl.edu](mailto:rffloyd@ufl.edu)

**Drs. Francis-Floyd will be available on-site while the course is in progress. She can be reached by cell phone, email, or a scheduled office visit before or after the class**

### **Course Faculty:**

Ruth Francis-Floyd – University of Florida; 386-643-8904 (cell)  
Kathy Heym – Florida Aquarium  
Eric Cassiano – UF, Tropical aquaculture Laboratory  
Debbie Pouder – UF, Tropical Aquaculture Laboratory  
Roy Yanong – UF, Tropical Aquaculture Laboratory

## **Course Goal:**

The goal of this class is to provide students an opportunity to practice the diagnostic techniques described during the Diseases of Warm Water Fish regular didactic class. Students will be expected to collect, run and interpret water quality samples, be able to identify basic organs in diverse species of fish as part of the necropsy training, be able to collect and have some ability to interpret external biopsy samples (gill, skin/ scale, fin) for parasite detection, and to collect organ samples appropriate for microbial culture, pathological and molecular analysis. In addition, discussion sections will provide realistic scenarios where students will be expected to identify and prioritize clinical problems, develop an appropriate clinical plan, and accurately calculate the amount of chemical needed to deliver appropriate treatments. Further, they will visit commercial fish farms and wholesale facilities. They will be expected to assess biosecurity and quarantine practices, recognize animals that are obviously ill, and discuss operations with facility managers.

## **Course Objectives:**

1. Students will be expected to run basic water quality analysis in both freshwater and marine systems, as well as outdoor (freshwater) ponds. They will be expected to collect and handle samples correctly, run analyses using HACH methodologies, and be able to use a secchi disc and dissolved oxygen meter. They will be expected to interpret data provided from water quality testing and be able to identify and develop management recommendations for common environmental diseases.
2. Students will be expected to know how to conduct a necropsy and be familiar with normal anatomy for common families of fish. This may include radiologic interpretation of key anatomical characteristics. They should be able to identify major organs in diverse family of fishes. They will learn how to collect organ samples for various types of diagnostic testing.
3. Students will be expected to collect biopsy samples of external structures (gill, skin/ scale and fin) for ectoparasite examination. They will be expected to correctly identify most common ectoparasites of freshwater fish. Further, there will be an expectation of correct interpretation of the significance of the finding.
4. Students will be expected to know anatomic locations used for blood collection in common fish families. They will also practice injection techniques, gavage feeding and sedation or anesthesia of fish to facilitate examination and handling.
5. Students will learn how to collect sterile tissue samples for microbial analysis
6. Students will be expected to be able to construct a problem list in which they define multiple factors contributing to a fish disease outbreak. They should be able to rank these factors in terms of the threat they pose to the affected population.
7. Students will be expected to understand regulations that pertain to use of drugs and chemicals to treat fish disease in the United States. They should be familiar with resources that provide current information in this rapidly changing area. They should understand proper use of drugs and chemicals and be able to develop appropriate treatment protocols for management of simple fish disease scenarios.
8. Students will be expected to conduct a site visit on a commercial facility and provide a basic assessment of biosecurity and quarantine protocols that are in use.

## **Subjects to be Covered:**

- Comparative Anatomy of Fish
- Freshwater and Marine Systems Design
- Water Quality Analysis and Interpretation
- Diagnostic Procedures
- External Biopsy Techniques
- Identification of Common Ectoparasites
- Necropsy Procedures
- Sterile and Microbial Techniques
- Treatment Protocols and Strategies
- Drug and Chemical Regulations for Fish
- Principles of Biosecurity and Quarantine
- Introduction to Bacterial, Viral and Mycotic Diseases of Fish
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## **Grading:** <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

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## **Required Texts:**

- *Fish Disease: Diagnosis and Treatment, Second Edition\**. By E.J. Noga, 2010. Wiley- Blackwell, Ames Iowa.

## **Supplemental Texts:**

- *Fish Medicine*, by Stoskopf (Ed), 1993, Saunders.
- *Merck Veterinary Manual, Tenth Edition*, by Kahn and Line (Eds), 2010, Wiley
- *Zoo and Wildlife Medicine, Current Therapy, Seventh Edition*, by E. Miller and M.E. Fowler (Eds), 2012, Elsevier.

## **Policies:**

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