

# *Fish and Crustacean Nutrition*

## *FAS 6932 (3 credits) Fall 2015*

### **Course Description**

This course will acquaint students with basic principles of nutrition and formulation of diets for fish and crustaceans in aquaculture. Lectures will cover digestive physiology, nutrients, feed formulation, and specific nutritional requirements for numerous aquatic organisms.

Students will be required to give one oral presentations on assigned topics using PowerPoint and narrating it in Voicethread. Students will watch the other student lectures and participate in online discussion of the topics covered. The course is entirely web-based, with narrated PowerPoint lectures followed by readings and other resources for each learning topic.

### **Instructor:**

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*772-577-7348*

*Office hours: Available by email or phone; office visits available by appointment*

### **Student Learning Outcomes**

At the end of this course, each student will:

- Have an understanding of the basic principles of fish and crustacean nutrition
- Have an understanding of nutrients and their utilization in fish and crustaceans
- Have an understanding of dietary requirements for various species and life stages of fish and crustaceans
- More effectively communicate through giving lectures
- Have a foundation for graduate studies in aquaculture or a career in aquaculture or fisheries related fields

### **Course Meeting Times**

This course is entirely web-based and students may access lectures, readings, and supporting materials at their own pace. Exams are available only on the dates listed in the syllabus.

## Required Texts/Readings

There is no required text for the course. Online readings will be provided for each learning topic. A computer with internet connection and sound speakers are required. The UF Sakai E-Learning site can be accessed at <https://lss.at.ufl.edu/> using your Gatorlink account.

## Class Format, Policies on Attendance and Make-up Exams

The class is in an asynchronous, web-based format. There are no pre-requisites for taking this course. Attendance records will not be maintained. **It is the responsibility of the student to access on-line lectures, readings, quizzes, and exams and to maintain satisfactory progress in the course.** Two exams are scheduled (see schedule below) and are only available on the days scheduled. **Missed exams cannot be taken after the scheduled date without prior written consent of the instructor except under exceptional circumstances.** Cases of serious illness, bereavement, or activities covered under the Twelve-Day Rule will be considered for make-up. Appropriate documentation must be provided in all cases. Computer or other hardware failures, except failure of the UF E-Learning system, will not excuse students for missing exams. For computer, software compatibility, or access problems call the HELP DESK phone number—352-392-HELP = 352-392-4357 (option 2). A writing assignment is due. Late writing assignments will be penalized 10% for the first day and 5% per day thereafter unless prior written arrangements are made or there is an exceptional circumstance.

### Assignments

- *Learning modules consisting of a lecture, readings, supporting material, and a quiz are provided online for each topic. Learning modules build on previous modules so you should complete the learning modules in the order presented.*
- *Learning modules covered on the mid-term exam (modules 1-8 and 9 the video field trip) will be available from the beginning of the semester. Learning modules covered on the final exam (modules 10-17) will be available after the mid-term exam. You may access and complete learning modules at your own pace.*
- *Each learning module will have a narrated PowerPoint presentation. Each presentation will have numerous photographs or diagrams and will summarize important information for each topic. You will be able to go back and view and listen to each slide as many times as you wish during the initial viewing of the lecture or at a later date.*
- *Each learning module has required readings beyond the lecture. This information will be covered on quizzes and exams. These files will all be made available for you to view on your computer, save, or print. There will also be references to additional (optional) readings if you desire further investigation of a topic.*
- *Each learning module will have a five to ten question quiz. The questions will require the student to go through the PowerPoint presentation, watch any attached videos, and read the assigned readings to answer the questions correctly.*

*These quizzes will contribute to the grade. All quizzes will be taken from your computer.*

- *Mid-term and final exams: Each exam will consist of 50 questions. Some of the questions will come directly from the lecture quizzes. These exams will consist of multiple choice questions and maybe a few matching questions. The mid-term will consist of questions from the first half of the learning modules. The final exam will consist of questions from the last half of the learning modules. The exams will be taken on your computer. Exams are only available on the days indicated.*
- *A PowerPoint presentation will be developed by the student on an assigned topic and it will be presented and narrated online through a program called Voice Thread. This presentation will be critiqued and discussed online by other students. This presentation and discussion will be equivalent to an exam in points.*

### Evaluation of Student Learning

<i>40% or 180 points</i>	<i>Quizzes (10 points each)</i>
<i>20% or 100 points</i>	<i>Mid-term exam (Learning modules 1-9)</i>
<i>20% or 100 points</i>	<i>PowerPoint and Voice Thread lecture and discussion</i>
<i>20% or 100 points</i>	<i>Final exam (Learning modules 10-18)</i>

*480 points total*

### Grading Scale

<b>Grade</b>	<b>Percentage</b>	<b>Points</b>
<b>A</b>	90-100	≥ 432
<b>B+</b>	85-89.99	408-431
<b>B</b>	80-84.99	384-407
<b>C+</b>	75-79.99	360-406
<b>C</b>	70-74.99	336-359
<b>D+</b>	65-69.99	312-335
<b>D</b>	60-64.99	288-311
<b>E</b>	< 60	≤ 287

### Schedule of Class Topics

#### Learning Modules

1. Digestive Physiology
2. Energy, Digestibility, Proximate Analysis
3. Lipids and Fatty Acids
4. Proteins and Amino Acids
5. Carbohydrates

6. Vitamins and Minerals
7. Feed Formulation
8. Feed Manufacture
9. Virtual Field Trip: Feed Mill Video Tour
10. Catfish
11. Hybrid Striped Bass
12. Tilapia
13. Salmon
14. Shrimp and Prawns
15. Marine Fish
16. Larval Diets and Live Feeds
17. Broodstock

***Important Dates:***

***August 24 – Classes start***

***October 1 – Mid-term exam available***

***October 19 – PowerPoint and Voice Thread lecture due***

***December 9 – Comments and discussion on Voice Thread lectures due***

***December 9 – Classes end***

***December 12-18 – Final exam available***

## **Other Information**

### **Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities**

In 1995 the UF student body enacted an [honor code](#) and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

**The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.**

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

*(Source: 2010-2011 Undergraduate Catalog)*

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor.

This policy will be vigorously upheld at all times in this course.

### **Software Use:**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

### **Campus Helping Resources**

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/)*

Counseling Services

Groups and Workshops

Outreach and Consultation

Self-Help Library

Training Programs

## Community Provider Database

- *Career Resource Center*, First Floor JWRU, 392-1601, [www.crc.ufl.edu/](http://www.crc.ufl.edu/)

## **Students with Disabilities**

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.

0001 Reid Hall, 352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)