

ADVANCED AQUACULTURE

FAS 6932

3 CREDITS

SPRING 2016

This class is offered online only. Students may access modules as they are made available by the instructor.

INSTRUCTOR: Dr. Matthew A. DiMaggio
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OFFICE HOURS: Office hours are by appointment only. You may also reach me by email and telephone.

COURSE WEBSITE: The course will be accessed through the UF Canvas e-learning website [<http://lss.at.ufl.edu>] using your GatorLink account.

COURSE COMMUNICATIONS: All communication with the instructor should occur using the course management system or via email (mdimaggi@ufl.edu).

REQUIRED TEXT: There are no required textbooks for this course. A computer with internet access and speakers is required to view online lectures. Access to all supplementary course materials will be provided online.

COURSE DESCRIPTION: Advanced aquaculture will build upon the foundations of the Introduction to Aquaculture course (FAS6932). Students will be exposed to more advanced concepts including aquaculture engineering and system design; broodstock management; live feeds and algae production; economics and marketing; as well as biosecurity. Application of principles and concepts presented in this class will be emphasized. At the conclusion of this course students should have a firm grasp of critical concepts in aquaculture and be better prepared for careers in private, state, and federal organizations as well as academia.

PREREQUISITE KNOWLEDGE AND SKILLS: Introduction to Aquaculture (FAS6932) is required unless permission is granted by the instructor. A strong foundation in biology, chemistry, marine science, and fish biology/ichthyology is recommended but not required.

COURSE GOALS:

By the end of this course, students will be able:

- To design and engineer aquaculture systems for a wide variety of commercially important species
- To explain the complex relationships between the animal and its culture environment and how these interactions influence growth, disease, survival, and reproduction
- To better describe the role of aquaculture in stock enhancement and restoration efforts
- To formulate a comprehensive biosecurity plan for an aquaculture production site using risk identification and management strategies
- To apply principles and concepts from this course to solve problems that may be encountered in aquaculture research and commercial production

COURSE POLICIES:

ATTENDANCE POLICY: As this course is administered online, attendance records will not be maintained. To ensure satisfactory progress in the course, it is the responsibility of the student to access on-line lectures, readings, quizzes, and exams in a timely manner.

QUIZ/EXAM POLICY: Missed quizzes and exams cannot be retaken after the scheduled date without the prior written consent of the instructor. Cases of serious illness, bereavement, or activities covered under the Twelve-Day Rule will be considered for make-up although appropriate documentation must be provided in all cases. Computer hardware or software failures, except failure of the UF E-Learning system, will not excuse students for missing quizzes and exams. Please refer to the “GETTING HELP” section below for details on getting technical assistance from the UF Help Desk and how to document UF e-learning system failure.

ASSIGNMENT POLICY: Assignments are to be turned in by the stated deadlines. Late assignments will not be accepted and will receive a grade of “0” except in the case of extenuating circumstances or prior approval by the instructor.

GRADING POLICIES:

Course grades will be calculated based on performance on weekly quizzes, a mid-term exam, a written assignment, and a final exam.

Assessments	Points	Due Date
14 quizzes (3 points each)	42	See "Course Schedule"
Midterm	20	February 26, 2016
Assignment	13	April 3, 2016
Final Exam	25	April 28, 2016
Total	100	

A total of 100 points are available from all assessments. Letter grades will be assigned according to the table below.

Total Points	Grade	Total Points	Grade
90 - 100	A	70 - 74.99	C
85 - 89.99	B+	65 - 69.99	D+
80 - 84.99	B	60 - 64.99	D
75 - 79.99	C+	<60	E

QUIZZES: A total of 14 quizzes will be administered online over the course of the semester covering material presented from that week. Quizzes will be multiple choice and questions will come from lecture, readings, and other supplementary materials provided by the instructor. Students will only be able to access quizzes once.

MID-TERM EXAM: The mid-term exam will cover all material presented from weeks 1 through 8. The exam format may include multiple choice, short answer, and essay questions and will be administered online.

ASSIGNMENT: Details of the writing assignment will be provided to students during the second week of classes.

FINAL EXAM: The final exam will be cumulative and cover all material presented from weeks 1 through 15. The exam format may include multiple choice, short answer, and essay questions and will be administered online.

COURSE SCHEDULE:

FINAL EXAM: *The final exam must be submitted by 11:59pm on April 28, 2016.*

All quizzes, assignments, and exams must be submitted by 11:59pm of the due date.

Week	Date	Topic	Assignment	Due Date
1	Jan 5 - 9	Aquaculture overview; Water quality/chemistry (ponds and RAS)	Quiz 1	Jan 10
2	Jan 11 - 16	Aquaculture engineering	Quiz 2	Jan 17
3	Jan 19 - 23	Recirculating system design and considerations	Quiz 3	Jan 24
4	Jan 25 - 30	Broodstock management	Quiz 4	Jan 31
5	Feb 1 - 6	Induced spawning and captive reproduction of fishes	Quiz 5	Feb 7
6	Feb 8 - 13	Larval systems/production	Quiz 6	Feb 14
7	Feb 15 - 20	Live feeds culture	Quiz 7	Feb 21
8	Feb 22 - 26	Algae culture; Aquaponics and integrated multi-trophic aquaculture (IMTA)	Mid-Term Exam	Feb 26
9	Mar 7 - 12	Stock enhancement; Restoration aquaculture	Quiz 8	Mar 13
10	Mar 14 - 19	Protozoan and metazoan parasites in aquacultured fishes	Quiz 9	Mar 20
11	Mar 21 - 26	Bacterial diseases and viruses in aquacultured fishes	Quiz 10	Mar 27
12	Mar 28 - Apr 2	Molluscan biology and aquaculture	Quiz 11	Apr 3
13	Apr 4 - 9	Comprehensive and integrated aquaculture health planning	Quiz 12	Apr 10
14	Apr 11 - 16	Aquaculture economics and marketing	Quiz 13	Apr 17
15	Apr 18 - 20	Applied physiology for aquaculture; Biotechnology in aquaculture	Quiz 14	Apr 20
16	Apr 25 - 28	NO LECTURE	Final Exam	Apr 28

Disclaimer: This syllabus reflects my present plans for this course. This syllabus is subject to change as the need arises and such changes, communicated clearly, are not unusual and should be expected. It is the responsibility of the student to regularly visit the course website for course communications.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

GETTING HELP:

For issues with technical difficulties for E-learning in Sakai, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.