

AQUACULTURE

Course Information and Syllabus

Instructor:

Dr. Mohammad Al-Zibdah

Lecture time and location:

Monday, Wednesday 11:00- 12:15 AM

Office and contact information: Faculty of Marine Sciences office

Phone, 2090450/35075

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Office hours:

Monday, Wednesday 9:30- 11:00 AM, or by appointment

Course Description and Purpose

This is a reading-intensive course designed for advanced undergraduate students interested in aquaculture. The objective of the course is for students to understand aquaculture systems (biology and husbandry), the opportunities they offer to increased food production, and their limitations and potential environmental impacts. General principles and practices will be covered first, followed by lectures on specific topics and fish species. Lecture outlines will be based primarily but not exclusively on the content of a class textbook (see **required reading**). Students will be expected to independently study all required readings. Optional extra credit will be available. Students enrolling in this course are expected to have prior knowledge of basic biology and chemistry.

Expected Learning Outcomes

Upon completion of this course, it is anticipated that students will have an understanding of:

1. The history of aquaculture and its future outlook;
2. The principles of aquaculture;
3. The important target species (focus is on fishes);
4. The general biology and husbandry of these species; and
5. The environmental and ecological concerns associated with aquacultural operations.

Assessment of Learning Outcomes

Learning outcomes will be assessed through Graded Exams and Pop Quizzes. The final exam will contain selected questions repeated from the midterm exams (see **Grading**), and the grade differential for these repeat questions will also be used as measure of overall learning progress.

Attendance

Class attendance will be recorded and may will count towards grade. However, regular attendance is critical to the learning success of students. In addition, graded quizzes will not be announced and if a student misses lectures where quizzes are given, he/she will earn 0 points for each missed quiz (see **Grading**). Therefore, students are strongly advised to attend all lectures. Make-up exams or quizzes may be given for absences due to medical reasons, but only if a signed physician's note is provided on official stationary that includes the physician's contact information. Make-up exams or quizzes may also be given for absences due to extraordinary nonmedical reasons (e.g., scheduling conflicts with other class field trips, etc.), but

only if the student lets the instructor know of the anticipated absence in advance and provides adequate proof of the scheduling conflict.

In the event the instructor is late to class without prior notice, students should wait a minimum of 10 minutes before leaving the classroom.

It is the responsibility of students who miss any lectures to ensure that they have knowledge of the material covered during the missed lectures and of all assigned readings. Office hours will not be used to re-teach the content of missed lectures.

Grading

There will be two written exams (one midterms and one final). The final exam will be comprehensive and will consist of 30% material from the first term, 20% from the lab works term, and 50% from the last term. Exams will worth a total of 80 % exam points.

At least five pop quizzes will be given over the semester to worth points of a total of 10 points.

Extra Credit

Students will be offered the opportunity of brief, individual meetings with instructor within the first 3 weeks of the first day of classes to discuss student and instructor expectations. A 2.5-point extra credit over the final grade will be given to students who chose this voluntary option.

Required Reading

1. Selected chapters or chapter sections from Lucas, J.S. and Southgate, P.C., editors. 2003. Aquaculture. Farming Aquatic Animals and Plants. Blackwell Publishing Co.
2. Additional required reading materials may be assigned during class lectures.

Course Outline

Week 1-2 Chapter 1: General Introduction/Chapter 3: Water Quality

Week 3 Chapter 2: General Principles/Chapter 4: Environmental and Other Impacts

Week 4 Chapter 5: Water-limited aquaculture/Chapter 6: Reproduction, Life Cycles and Growth

Week 5 Chapter 6 (continued)/**Mid-Term Exam– March 4th week**

Week 6 Chapter 7: Genetics and Stock Improvement/Chapter 8: Nutrition

Week 7 Chapter 9: Feeds and Feed Production/Chapter 10: Diseases

Week 8 Chapter 10 (continued)

Week 9 Fish Stress and Aquaculture

Week 10 Chapter 14: Carps/Chapter 15: Salmonids

Week 11 Chapter 16: Tilapias/Chapter 17: Channel Catfish

Week 12 Chapter 18: Barramundi/Chapter 19: Marine shrimp

Week 13 Chapter 20: Freshwater crustaceans/Chapter 21: Bivalves

Week 14 Chapter 21-22 to be identified

Week 15 Chapter 23: The Future/Last lecture topic to be arranged

Week 16 General review – May last week

Final Exam – to be determined

Revisions to this schedule are possible depending on progress. Any changes made would be discussed in class.

Other information

1. The Department, College, and University endorse UJ Aqaba branch regulations. Students with disabilities are encouraged to inform the faculty member so that any needed help can be provided. An effort will be made to maintain confidentiality. Any student who requires special arrangements in order to meet the course requirements should contact the instructor to make necessary arrangements.
2. The office of department chair is available to assist students with any conflict or problem that has to do with being a student at Aqaba Jordan University. You may visit the chair person in his office at the office hours or by appointment.
3. Professional maturity and familiarity with ethical standards are taken for students attending the University. They are expected to behave professionally and respectfully toward student colleagues and the class instructor and to assist in maintaining a classroom environment which is conducive to learning. In order to assure that all students have an opportunity to learn from time spent in class, students are prohibited from using cellular phones or beepers, eating or drinking in class, making offensive remarks, reading newspapers, sleeping or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in, minimally, a request to leave classroom. The university policy on the classroom environment should be known to all students.