

## SAMPLE SYLLABUS

### AQUACULTURE PRODUCTION - ANSC/OCN 450

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Instructor: Andre P. Seale  
Office: Ag. Sci. 314G  
Office hours: By appointment  
Office phone: (808) 956-8961  
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Class hours: 3 credits; Tuesdays and Thursdays, 3:00 to 4:15 PM  
Location: BIL 335 (Bilger Hall)

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#### A. DESCRIPTION AND LEARNING OBJECTIVES

Aquaculture is one of the most ancient forms of livestock husbandry and production in human history, and is poised to become a major source of sustainable protein for human nourishment. This class focuses on the history, concepts, science, trends and challenges of aquaculture production, with emphasis on the major species of interest in aquaculture, globally and in Hawai'i. The purpose of the course is to provide an introductory understanding of practical and technical aspects of culture systems and their design, main species used in culture systems and their specific culture and production requirements, current issues and impediments, and the importance of aquaculture models for sustainable food production, resource management, and its impact in the local and global economy.

#### B. TEXT AND COURSE MATERIALS

Reading assignments and course materials will be drawn from the scientific literature, technical reports and Power Point lecture notes. These resources will be available at the Laulima website. While no textbook is required for this course, the following are recommended and may be used as references and resources for course topics:

- Stickney, R. 2009. Aquaculture: an introductory text, 2nd Edition. Cambridge University Press.
- Pillay, T.V.R., and M. N. Kutty. 2005. Aquaculture Principles and Practices, 2nd Edition. Blackwell Publishing.
- Parker, Rick 2012. Aquaculture Science, 3rd Edition. Delmar Cengage Learning.

#### C. COMMUNICATION POLICIES:

I am happy to communicate with you about course material, grades, and your experiences in the course; however, it is not feasible to respond to every email immediately and I will be away from the office some this semester. I will respond to all emails within 48 hours whenever possible and will let the class know via email or announcements through Laulima when I will be unreachable by email.

For discussion of class contents, a forum has been set up in the Laulima course site under "Discussion and private messages" to discuss the material with each other and the instructor. Oftentimes, this may be a faster way to get questions about course material and basic

housekeeping questions answered. I will be checking the forums at least twice a week, but likely more frequently. Thus, the forums should be your first choice for questions of a general nature and class topic discussions.

## B. ORGANIZATION

The course involves lectures organized into 3 main parts, each followed by an exam. Exams, direct participation, and a group assignment centered on the discussion of themes presented and current issues in aquaculture will provide an opportunity to understand the content and develop presentation and discussion skills while learning the topic. The instructor reserves the right to make changes to the syllabus and schedule as deemed necessary. Any changes to class contents will be reflected on the power point notes.

## C. SCHEDULE OF CLASSES

		Date	Topic
<i>Part 1</i>			
Week 1:	1	Aug 27	Get acquainted, syllabus, Introduction
	2	Aug 29	Introduction and history of aquaculture: ancient to modern practices
Week 2:	3	Sep 3	Culture systems - Ponds, Raceways and net pens
	4	Sep 5	Water Quality Management/ Recirculating aquaculture systems
Week 3:	5	Sep 10	Aquaculture vs. Agriculture I: medium, industry sectors, domestication, competition - <i>Guest lecture (TBA)</i>
	6	Sep 12	Aquaculture vs. Agriculture II: Polyculture, genetics, fecundity, growth patterns, energy levels - <i>Guest lecture (TBA)</i>
Week 4:	7	Sep 17	Current status and distribution of aquaculture / Nutritional benefits of aquaculture products
	8	Sep 19	Physiology of aquatic animals – osmoregulation, respiration – <i>Guest lecture</i>
Week 5:	9	Sep 24	Growth and metabolism I
	10	Sep 26	Growth and metabolism II – FCR, CF, Fish Nutrition
		Sep 27-30	<b>EXAM 1</b>
<i>Part 2</i>			
Week 6:	11	Oct 1	Reproduction and controlled spawning – <i>Guest lecture</i>
	12	Oct 3	Health, stress and diseases of aquaculture species – <i>Guest lecture</i>
Week 7:	13	Oct 8	Critical standing crop, carrying capacity, yield
	14	Oct 10	Farm Economics -profit equation, harvesting, hauling, processing,

			stocking, marketing
Week 8:	15	Oct 15	Environmental Issues, sustainability and biotechnology
	16	Oct 17	Salmon and trout
Week 9:	17	Oct 22	Salmon - GMO
	18	Oct 24	Tilapia
Week 10:	19	Oct 29	Catfish, Carp
	20	Oct 31	Eels, mullet – other marine fish
		<i>Nov 1-4</i>	<b>EXAM 2</b>

*Part 3*

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Week 11:	21	Nov 5	Shrimp and prawns
	22	Nov 7	Practice session for presentations.
Week 12:	23	Nov 12	Mollusks - Oysters, Clams, Mussels
	24	Nov 14	Algae
Week 13:	25	Nov 19	Group presentations
	26	Nov 21	Group presentations
Week 14:	27	Nov 26	Fish and invertebrate sustainable mariculture in Micronesia - MERIP
		<i>Nov 28</i>	<i>Thanksgiving (no class)</i>
Week 15:	28	Dec 3	Aquaculture and Aquaponics in Hawaii - <i>Guest lecture</i>
		Dec 5	
		Dec 10	
		Dec 12	
		<i>Dec 16-20</i>	<b>FINAL EXAM – Covers everything</b>

**E. EVALUATION AND EXAMINATIONS**

Students will be graded based on: 1) Three exams (60% of grade); and 2) attendance, professional attitude, participation and engagement in group discussions, quizzes, and special assignments (40%). Exams 1 and 2 will be inclusive of new material up to that particular exam (i.e. Exam 1 covers Part 1, Exam 2 covers Part 2). The final exam will include both new material (Part 3) and cumulative material (Parts 1 and 2).

**F. GRADING:**

Exam 1:	60 points (15%)
Exam 2:	60 points (15%)
Final comprehensive Exam:	120 points (30%)
Group assignment:	60 points (15%)
Class attendance, professional attitude, class participation and engagement:	100 points (25%)

Total: 400 points (100%)

Letter grades are based on the percentage of total points earned out of 400 possible points:  $\geq 97\%$  = A+; 94-96% = A; 90-93% = A-; 87-89% = B+; 84-86% = B; 80-83% = B-; 77-79% = C+; 74-76% = C; 70-73% = C-; 67-69% = D+; 64-66% = D; 60-63% = D-;  $< 60\%$  = F

#### F. GUIDELINES AND EXPECTATIONS:

Students are expected to attend all classes, to complete all assigned work and examinations promptly, and to participate in whatever class discussion may occur. It is assumed that any information given out in class has been delivered to all students. Absence from more than 10 percent of the scheduled class sessions, whether excused or unexcused, is excessive and may result in a grade penalty.

##### **Class attendance, professional attitude, class participation and engagement**

Attendance is required; come to all the classes and have a professional approach. Greater than three unexcused absences may result in an "F" for the course at my discretion. Each unexcused absence will result in a reduction of your final grade. If you must be excused for a valid medical or personal reason (3 max), please contact me directly to let me know the general reasons for your absence. You must provide advance notice for such absences. Ask good questions, be alert, challenge points in a professional way. Instructor Seale likes to interact with students and discuss topics, especially challenges to points that are made in lecture and challenges to the intra-term exam questions during the post mortem sessions discussed below. Personal contact aspect of the lectures are very important and discussion is encouraged in class, online through "Discussion and private messages" tab in the Laulima course site, and especially during the practice and assignment presentation sessions.

##### **Group Assignment**

No matter what field that you enter into as a professional, you should be skilled at reading the primary literature of that field and conveying the information to an audience. This assignment is also a good opportunity to thoroughly read the text material or other material related to class and correlate it to the lecture material. The assignment consists of preparing a short oral presentation (10 -15 min) in groups of 2-3 based on any topic covered in class. The length of presentations and group sizes will be dependent on class size and schedule. Each group must base their presentation on at least one scientific article and one newsy item from a major newspaper or online news outlet that relates to the scientific article and the topic chosen. These articles should be drawn from the primary literature (i.e. the journals listed in the introduction lecture) but may also be drawn those available in the class text material posted in Laulima site. Prior to the presentations, groups will need to turn in a written summary of their presentation (1 page max) along with a copy of the primary literature and news articles. This written summary and articles will be due 3 weeks prior to the presentation and should be uploaded to the Laulima class site under "assignments" by Oct 25. Each group will also have the opportunity to conduct an in class practice session with each other on Nov 1.

Below are general guidelines for the assignment:

##### Written portion:

- Post on Laulima, under assignments, a copy of the scientific article (full article, PDF file) and news article (reference to the url web site is acceptable for the news article) to be used in the oral presentation

- Attach or add to inline up to one page summary of the presentation. Identify the class topic to be discussed and summarize both the scientific report and news article and how it addresses the topic. Summarize the problem, the main findings to be presented and conclusion.
- Quality of your summary and writing: Use specific analytical language and your own words. Summarize what will be presented after critiquing the material. For example, say why one position/ idea is to be defended or not, why it's wrong, why it's right. Analyze and critique, make substantive comments within your summary. Use proper English syntax, style and punctuation. Use professional language, spell check, and proofread.

#### Oral presentation:

- **Format:** Presentations should be made using PowerPoint or similar presentation software.
- **Title:** Title of article, authors and their affiliations, journal name and year of publication. Headline of news article.
- **Introduction:** What is the problem? Why is it important? What are the specific objectives (article) ? Explain the background necessary for your audience to understand the articles you selected.
- **Materials and Methods:** Present highlights of methods so that the listener can get a general idea of what was done and how. Specific details of the methods are usually not necessary to understand the article. If a component of the methods is critical to the objectives of the article, it can be covered in more detail. Evaluate whether methods are appropriate to address the objectives.
- **Results:** What results were obtained? Present all results necessary to understand the conclusions made by the authors.
- **Discussion/conclusions:** What are the main findings and how do they relate to the objectives. How does the news article relate to the scientific article and the class topic ? Were the methods appropriate to attain the objectives in the scientific article ? Are the claims in the news article well substantiated ? Does the scientific article support or refute the news article ? What are limitations/weaknesses in both articles that may affect its interpretation? What conclusions are drawn? What are the practical implications?
- **Closing:** Brief summary, thank the audience, and offer to accept questions.

#### Class notes, attending lecture, taking notes

You are expected to come to all the lectures and take notes from the Power point notes posted for that lecture on the Laulima site. You can do this in two ways as follows.

1. Bring your computer to class and take notes in Power Point

Access the Power Point lecture note file on the class Laulima site using the University wireless connection available in the classroom OR download the notes to your computer before class. This allows you to write on the Power point slide itself using the Notes function or on the slide itself if can manage this. **You will need to get permission, using**

**the agreement form as the end of this document, to use a laptop in class (see policy on electronic devices below)**

2. Bring a downloaded lecture note hard copy to class and annotate It

You can download the Power Point class notes before each lecture and bringing a hard copy of the notes to class to annotate them as the lecture is given. The lecture notes will be posted before each lecture usually no later than 5 pm on the previous day before lecture. Please note:

*No hard copy of the notes will be handed out in class.*

The class notes will be in a compressed Power Point file and will be labeled as the “Handout” version of the lecture notes. This is because the Power Point “Handout” version of the lecture notes will contain numerous blank places and omitted areas that you are to copy in from the “Presentation” version of the Power Point slides that will be shown in the lecture. Class lecture notes will be posted under “Resources” on the Laulima class web site.

**Hints on annotating hard copy notes**

It is strongly advised that you bring in hard copy Power Point Notes with only two or three slide images per page. For complicated tables and charts etc. you should print this material as a “slide” image so that it occupies the entire page and you can read it in the lecture. To print out these versions open the Power Point file and click on “Print” print menu item where you will be given a choice of printing “Slides” or “Handouts”. Click on “Handouts” and you will be given a choice of “two per page”, “four per page”, etc. Click on the choice “two per page”. To print out a slide on the entire page click on “slides” and type in the slide number you wanted printed out on the entire page. If you print out the slide images with four or more images per page you will not be able to easily read the text on the hard copy during lecture. The words will be too small in the darkened room.

**Class start time and front door entry**

We will start class at 3:00 pm sharp! People straggling in are disruptive to the class. If you will have, or are having, a difficult time making the class on time advise the instructor.

**Electronic devices in class**

**Absolutely no cell phone, iPad, tablet, (etc.) use allowed in class.** You must keep these devices off and out of sight. **No exceptions.** If you want to use a cell phone, iPad, or tablet etc. please step outside of the classroom.

Only laptop computers, to take notes from the Power Point slides, are allowed with a signed agreement. The agreement form is found at the end of this document. Bring it to the first class to be allowed to use your laptop.

**Text material**

The text material for the course is listed above in the course schedule and posted on the Laulima site. This consists of text papers and other information related to the lecture topics. The text

material is posted under “Resources > Text material” on the main menu of the class Laulima web site. You are responsible for reading and mastering all the text material.

Questions relating to the text material can be on the exams even though this material is not *explicitly* covered in class. You can read the posted text material online and/or download a hard copy of it.

## **Exams**

Intra-term exams (120 points, - 30 % of course grade)

Final Exam (120 points, - 30 % of course grade)

Each intra-term exam during the semester is a like a mid-term exam. There will be 60 points for each exam obtained from multiple choice questions. Many questions will contain the images that appear in the Power Point slides shown in the lecture presentations and in the figures, tables, charts that appear in the text material. This means you must have a mastery of the lecture and text material. Remember the exams are open book and can be taken on line at the Laulima web site at your leisure anytime during the exam period, so it is not necessary to memorize the lecture material and text material but you must be familiar with it to do well on the exam. This means having your text and annotated lecture notes in an organized form so you can quickly reference them during the exam.

Each intra-term exam covers:

- Lecture material since the last exam or the beginning of the course.
- The text material posted on the Laulima site that pertains to the lecture material.
- A few items not specifically covered in the lecture and readings but which a person who has a good command of the lecture material and reading content will be able to answer.

The exams will be posted on Laulima web site on the days listed in the course schedule:

**Exam - 1** September 21-24, covers lectures up to Sep 20.

**Exam - 2** October 26-29, covers lectures between Sep 25 and Oct 25.

**FINAL EXAM** December 3 – 7, **covers everything !**

To take the exams you should log on to the Laulima site and go to the “**Test and Quizzes**” menu item and take the exam anytime during the open period. There is no time limit, during the open period, for taking the exams. You can keep the exam open during the entire open period so you can return to it at your leisure. But once you submit the exam ***that is it! Be careful.*** Don’t click on “submit” unless you mean it.

## **Studying for the exams**

This can be done by reviewing the power point lectures with your notes, and keeping up with reading the text material for every class.

## **Intra-term exam “post mortem” discussions**

A part of class time after each intra-term exam may be devoted to discussing the exam questions in an exam “post mortem” discussion, if time permits. *Class participation and challenges are encouraged.* Intra-term exams and the post mortem discussions that follows prepares you for the final comprehensive exam given in class during final exam week. The post mortems are very important since you can challenge the “official” answer. If your challenge is accepted and the consensus of the class you-and everybody else with that answer-will be given credit, as well as the people with the original “correct” answer. We argue in these sessions and its fun....so bring your tolerance and a keen, cooperative, spirit to the post mortem sessions.

### **Exams are “open book”**

Examinations are “open book” and you can use any professional material. **You must take the exam by yourself. You are on the honor system and are required to abide by the academic integrity guidelines (below) and acknowledge this at the beginning of each exam.**

### **Course evaluation:**

It would be greatly appreciated if you would evaluate the course through the College of Tropical Agriculture and Human Resources (CTAHR) CAFÉ evaluation system. This is a web based system that takes only a few minutes to answer evaluation questions by checking boxes. The CAFÉ system will be open towards the end of the semester at <http://www.hawaii.edu/ecafe>. Course evaluations are important for improving the course from year to year. The evaluations are voluntary and your cooperation will not only be greatly appreciated but, more importantly, will help improve the course.

### **Academic Integrity**

Students are expected to follow the UH Student Conduct code and to affirm the Honor Pledge that they will neither give nor receive unauthorized aid on tests or assignments. Violation of the Code or Pledge will constitute academic dishonesty, with serious consequences, including a grade of “0%” on the assignment in question. I will strictly follow the guidelines laid out in the Student Conduct Code:

[http://studentaffairs.manoa.hawaii.edu/policies/conduct\\_code/proscribed\\_conduct.php](http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/proscribed_conduct.php)

All cases of academic dishonesty will be referred to the Office of Student Affairs.

### **Students with disabilities**

Reasonable accommodations will be made for students with verifiable disabilities. Any student who feels s/he may need an accommodation based on the impact of a disability is invited to contact me privately. I would be happy to work with you, and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in room 013 of the Queen Lili'uokalani Center for Student Services.

Please see the following website about procedures for disabilities:

<https://www.hawaii.edu/kokua/>

### **Title IX Statement and Reporting Responsibilities**

The University of Hawaii is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is

free of all forms of sex discrimination and gender based violence, including sexual assault, sexual harassment, gender based harassment, domestic violence, dating violence, and stalking. If you or someone you know is experiencing any of these, the University has staff and resources on your campus to support and assist you. Staff can also direct you to resources that are in the community.

Here are some of your options:

If you wish to remain anonymous, speak with someone confidentially, or would like to receive information and support in a confidential setting, contact the confidential resources available here:

<http://www.manoa.hawaii.edu/titleix/resources.html#confidential>

If you wish to REPORT an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact:

Dee Uwono  
Director and Title IX Coordinator  
Hawai'i Hall 124  
2500 Campus Road  
Honolulu, HI 96822  
(808) 956-2299  
t9uhm@hawaii.edu

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need. For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to:

<http://www.manoa.hawaii.edu/titleix/>

**AGREEMENT**

**USE OF LAP TOP COMPUTERS and POWERPOINT FILES in Aquaculture Production (ANSC/OCN 450), Fall 2018**

I, \_\_\_\_\_ (print your name) agree to use my laptop computer in the Aquaculture Production (ANSC/OCN 450) lecture class only for taking notes from the Power Point slides presented in class.

I understand that the class has a zero tolerance policy that does not allow the use of any other electronic device in class.

Moreover, I will not disseminate Power Point files or its contents without prior consent from the course instructor.

Signed

\_\_\_\_\_ (signature)

\_\_\_\_\_ (date)