

LIFS4360 Aquaculture Biotechnology
Course Outline - Spring 2018

1. Instructor(s)

Name: Prof. Joseph T.Y. WONG

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2. Teaching Assistant(s)

Name:

Contact Details:

3. Meeting Time and Venue

Lectures:

Date/Time: Tuesday (4:30pm – 5:50pm) and
 Thursday (4:30pm – 5:50pm)

Venue: Room 6573 (Lift 29/30)

4. Course Description

Credit Points: 3

Pre-requisite: LIFS 2040 or LIFS 2060

Exclusion: NIL

Brief Information/synopsis:

Overview of aquaculture for food production and biotechnology, including problems and prospects. Examples of aquacultured aquatic species and aquaculture biotechnology enterprises. Aquaculture biology and practices: larval rearing, nutritional practices and feeds, reproductive control, application of genetics and genetic manipulations. *Prerequisite(s):* LIFS 2040 or LIFS 2060.

5. Intended Learning Outcomes

Upon successful completion of this course, students should be able to:

ILOs

- | | |
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| 1 | Explain fundamental principles of aquaculture biotechnology. |
| 2 | Identify the roles of aquaculture biotechnology in society. |
| 3 | Examine the relationship between science and biotechnology. |
| 4 | Apply independent judgment to critically |

	analyze ongoing research, evaluate the reasoning and judgment of others and apply scientific knowledge to reach conclusions and justify choices.
5	Assess the interrelationships between biotechnology and other disciplines, such as business, engineering, humanities and social science.
6	Apply the principles of scientific knowledge to day-to-day decision making and problem solving.

6. Assessment Scheme

Assessment	Assessing Course ILOs
Project	1 - 6
Final Examination	1, 3, 5
Quiz	1,3, 5

7. Course Schedule

Wk 1:	Introduction to the course Introduction to Aquaculture: Global Perspectives, Aquaculture Systems I
Wk 2:	Aquaculture of Salmon and Production Biology
Wk 3:	Aquaculture of Grouper and Production Biology
Wk 4:	Larval Feeds Biotechnology
Wk 5:	Applications of Nutritional biotechnology in Aquaculture
Wk 6/7:	Aquaculture of Prawns and Production Biology
Wk 7/8:	Biotechnology and Biology of Reproductive Control in aquaculture
Wk 8:	Mid-Term
Wk 9/10:	Presentation Research Project and Presentations
Wk 10/11:	Applications of Genetics + Genetic Manipulations in Aquatic Organisms
Wk 11/12:	Disease control in aquaculture. Aquaculture Systems II
Wk 13:	Problems and Perspectives

The exact dates/weeks are not fixed.

N.B.

A separate group-based research project would be required after mid-term and topics before midterm will also be included in the Final.