LIFS4360 Aquaculture Biotechnology
Course Outline - Spring 2018

1. Instructor(s)
_Name: Prof. Joseph T.Y. WONG
Contact Details: Room 5454 / Tel : 2358 7343 / Email : botin@ust.hk

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:_

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

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<td>Project</td>
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<td>Final Examination</td>
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<td>Quiz</td>
<td>1, 3, 5</td>
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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.