

2018F Biol 4650/APBI 4650 Course Outline

Biology 4650: Issues in Biotechnology (Credit Weight: 0.5)

Cross-List: Applied Bio-Molecular Science APBI 4650.

Offering: 3-0; or 3-0.

Instructor: Dr. Wensheng Qin

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Office Hours: Mondays 4:00-5:00 PM or by appointment

Meetings: 3 Hours/Week

Time: Mondays and Wednesdays 2:30 PM-4:00 PM

Location: ATAC 1010

Final Day for registration: September 17, 2018, Final Day for withdrawal: November 9, 2018

Textbook: <<Alcamos Microbes and Society-4th Edition>> by Jeffery C. Pommerville
[Strongly encouraged to buy the textbook but not required].

Course Goals:

- (1) Understand the historical, technical, and societal context of biotechnology.
- (2) Familiarize with the wide range of technologies and applications.
- (3) Understand controversial biotechnology issues and how they are viewed by different societal stakeholders.

Description: Current technical and ethical issues in biotechnology will be discussed in the class.

The course will mainly consist of

[1] Instructor's lectures

[2] Guest speaker's lectures when available

[3] Instructor-assigned literature reading for class discussion (The literature will be sent to the class after the final date for registering this course (September 17, 2018) but before the Fall Reading Week (October 9-12, 2018) starts (October 9, 2018).

Fall 2018 Term Course	
First Day of Classes	Tuesday, September 4, 2018
Final Day of Classes	Monday, December 3, 2018
Final Date to Register (Add)	Monday, September 17, 2018
Final Date to Withdrawal (Drop)	Friday, November 9, 2018
Examination Period	December 6 - December 16, 2018 (includes two Sunday exam days)
Exam Contingency Date	Monday, December 17, 2018
Marks Due	Friday, December 21, 2018

Course Schedule

Chapter 9: Growth and Metabolism: Running the Microbial Machine (1 week)

Chapter 10: Microbial Genetics: From Genes to Genetic Engineering (1 week)

Chapter 11: Controlling Microbes: From Outside and Within the Body (1 week)

Chapter 12: Microbe and Food: A Menu of Microbial Delights (1 week)

October 3, 2018 Wednesday in the 5th Week: Mid-term Exam (30%, Chapters 9-11)

October 8, 2018 Monday: Thanksgiving Day

October 9-12, 2018 Tuesday-Friday (Fall Reading Week, 6th Week)

Chapter 13: Food Preservation and Safety: The Competition (1 week)

Chapter 14: Biotechnology and Industry: Microbes at Work (1 week)

Chapter 15: Biotechnology and Agriculture: No Microbes, No Hamburgers (1 week)

Chapter 16: Microbes and the Environment: No Microbes, No Life (1 week)

November 12 for 2 student group presentations

November 14 for 2 student group presentations

November 19 for 2 student group presentations

November 21 for 2 student group presentations

November 28 for 2 student group presentations

Notes: [1] Only students who do not have a time conflict with any other course and/or part-time job should register in this course, because each student has to be actively involved in the class discussions. [2] Guest speaker lecture(s) may be arranged, depending on whether suitable speakers are available.

Grading Scheme: (The lecture PowerPoint slides do not cover all the information for exams, so intensive reading and understanding of the lectured book chapters are very necessary).

1. Mid-term exam [October 3, 2018: 30%, Chapter 9-11, three chapters]: The midterm exam may include (1) Fill in the blank questions, (2) Multiple choice questions, (3) True/False questions, (4) Essay questions, etc. TA will help administer and mark the exam. Duration is 90 minutes.

2. Final exam (40%, Chapter 12-16) [40%]. The final exam may include (1) Fill in the blank questions, (2) Multiple choice questions, (3) True/False questions, (4) Essay questions, etc.

3. Class participation [10%]: It includes your participation in class discussion and/or a few pop quizzes.

4. Group PPT slides presentation [20%]: Each group should have 5 students and select one student as the group leader. The students are responsible to select a topic for the own group. The group leaders have to email the presentation topic for your group to wsteaching@gmail.com before November 1, 2018 for receiving the group leader's bonus points. Each group will evaluate all other groups except your own group. The group leaders have to email your average marks from your group evaluations to wsteaching@gmail.com within 48 hours after the presentations.

5. Bonus points: Class attendance will be taken at random and each signature of attendance will award students with one bonus point. The value of each bonus point depends on the class average marks from the exams and class participation. The quizzes are pop quizzes with very low weight of bonus points, so please do not ask the quiz time.

Notes: If you miss any examination (mid-term exam or final exam), we strictly follow the university regulations of "Missed Examinations Due to Illness or Other Extenuating Circumstances". If you are permitted to write your missed exam, an alternative test paper (Test B) will be made. Test B will be different in questions and/or format from the test questions for the class (Test A).