

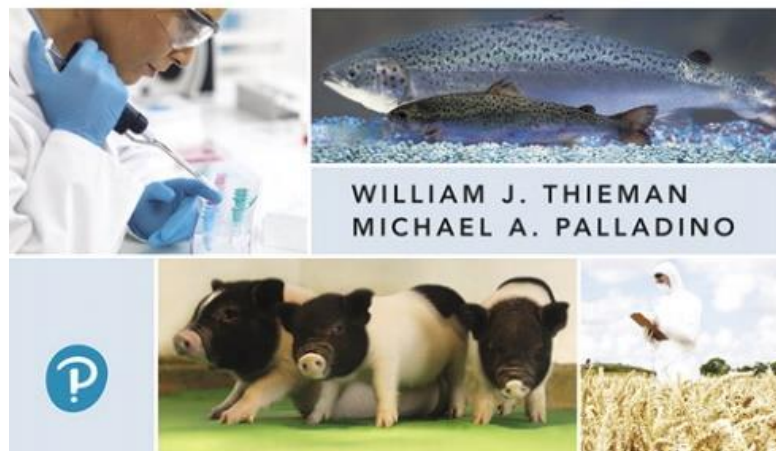
## 2020F Biol 4650 Course Outline (2020-09-11)

Instructor:	Wensheng Qin (wqin@lakeheadu.ca) Office: CB 4016, Tel: 807-343 8467
Meeting Time:	08: 30 AM-10: 00 AM
Meeting Days:	Tuesday & Thursday
Meeting Place:	RC-1002
Instructional Type:	Lecture
Course ID:	124137
Teaching Assistant (TA)	Chris ChonLong Chio: <a href="mailto:cchio@lakeheadu.ca">cchio@lakeheadu.ca</a> Office: CB 3037, Tel: 807-766 7141

Textbook: Introduction to Biotechnology 4th Edition Textbook by W. J. Thieman & M. A. Palladino (Pearson). This textbook is required for each student to have a copy.



# Introduction to **Biotechnology**



Introduction to Biotechnology brings the latest information to students who need to understand the science and business of biotechnology. The popular text emphasizes the future of biotechnology and the biotechnology student's role in that future with balanced coverage in basic cell and molecular biology, fundamental techniques, historical accounts, new advances, and hands-on applications. The 4th Edition features content updates in every chapter that reflect the most relevant, up-to-date changes in technology, applications, ethical issues, and regulations. Additionally, every chapter now includes an analytic Case Study that highlights current research and asks students to use what they've learned about the key chapter concepts to answer questions. New Career Profiles, written by biotech professionals and available on the Companion Website along with additional career resources, highlight potential jobs in the biotech industry.

**Chapter 1 The Biotechnology Century and Its Workforce**

Chapter 2 An Introduction to Genes and Genomes

Chapter 3 Recombinant DNA Technology and Genomics

Chapter 4 Proteins as Products

**Chapter 5 Microbial Biotechnology**

**Chapter 6 Plant Biotechnology**

**Chapter 7 Animal Biotechnology**

Chapter 8 DNA Fingerprinting and Forensic Analysis

Chapter 9 Bioremediation

**Chapter 10 Aquatic Biotechnology**

**Chapter 11 Medical Biotechnology**

Chapter 12 Biotechnology Regulations

Chapter 13 Ethics and Biotechnology

The textbook has 13 chapters, 6 chapters (1, 5, 6, 7, 10, 11) will be lectured in class.

Lecturing schedule:

Date	Contents	Notes
September 8 Tuesday	Chapter 1 The Biotechnology Century and Its Workforce	
10 Thursday	Chapter 5 Microbial Biotechnology	
15	Chapter 5 Microbial Biotechnology	
17	Chapter 6 Plant Biotechnology	
22	Chapter 6 Plant Biotechnology	
24	Chapter 7 Animal Biotechnology	
29	Chapter 7 Animal Biotechnology	
October 1	Chapter 7 Animal Biotechnology	
6	Chapter 10 Aquatic Biotechnology	
8	Chapter 10 Aquatic Biotechnology	
13	Reading week	
15	Reading week	
20	Chapter 11 Medical Biotechnology	
22	Midterm exam (25%)	Covers chapters 1, 5, 6, 7 and two journal article critiques
27	Chapter 11 Medical Biotechnology	
29	Chapter 11 Medical Biotechnology	
November 3	Individual student PPT presentation (4 students)	Aho, Alyssa Al-Okaili, Thekraiat

	***The 4 students who will present in the same day, please determine one as your evaluation group leader and email to me at <a href="mailto:biot.teaching@gmail.com">biot.teaching@gmail.com</a> . The group leader will receive 2 bonus points (each bonus point can be lower or higher than 1% to be added to the final grade, depending on the class average marks. You can recommend yourself or someone else as evaluation leader. This is to make presentation marking be fairer. Thanks!	Armiento, Christopher V Bedi, Simran
5	Individual student PPT presentation (4 students)	Brosseau, Celena J Caddo, Chelsea R Carby, Cerene Costanzo, Nicole M
10	Individual student PPT presentation (4 students)	Davidson, Hailey M Dlaymi, Shaalin Falah, Adam Fleming, Lola M
12	Individual student PPT presentation (4 students)	Gray, Natasha Guo, Feng Himmelman, Emma L Ho, Alexander J
17	Individual student PPT presentation (4 students)	Ji, Wen Kibiuk, Catherine A Lagrange, Mason A Melo, Kathryn S
19	Individual student PPT presentation (4 students)	Milenko, Natacha O Munro, Alistair D Newman, Camryn J Nuwagaba, Francis M
24	Individual student PPT presentation (4 students)	Sethumadhavan, Ambili Smith, Julian T Steinberg, Chantee L Tucker, Riley R
26	Final exam (30%), 90 minutes	Covers chapters 10, 11
December 1	Individual student PPT presentation (4 students)	Williams, Brennan R Williamson, Lexie C Yan, Jiahe Zhou, Jingyi
3	Individual student PPT presentation (4 students) (Last class for the course)	<b>(APBI 4650 Students):</b> Cross, Mario F Dumasia, Kaizerin Zubin Perera, Lakshan P Sidhu, Amol S

First Day of Classes	Tuesday, September 8, 2020
Final Day of Classes	Monday, December 7, 2020
Final Date to Register (Add)	Monday, September 21, 2020
Final Date to Withdraw (Drop)	Friday, November 6, 2020
Examination Period	Thursday, Dec. 10, 2020 - Sunday, Dec. 20, 2020 (11 Days)
Exam Contingency Date	Monday, December 21, 2020
Marks Due	Thursday, December 24, 2020
Fall Reading Week	October 12 to 16, 2020

Grades: Total 100% (Midterm exam 25%, Final exam 35%, PPT presentation 30%, Attendance 10%).

Notes:

[1] For individual student PPT presentation: Each student selects one topic of your own choice in the current biotechnology field and makes high-quality PPT slides (no more than 15 slides for your presentation). Each student presents for 10 minutes and uses up to 5 minutes for questions and answering. The slides have to be emailed to both [biot.teaching@gmail.com](mailto:biot.teaching@gmail.com) and [blebeverybodyuse@gmail.com](mailto:blebeverybodyuse@gmail.com) forty-eight (48) hours before your presentation, with email subject: Your complete name (First and Last Name) followed by : “topic title”).

Your presentation will be evaluated by 9 Student Rating Groups (the students present in the same day as a group, group members select a group leader and tell me as early as possible, you do not evaluate your own group) plus instructor and teaching assistant (TA) evaluations (we use the average of the student groups, instructor, and TA evaluation marks). The presentation will be in alphabetical order by the students' last names (See the attached table). The highest scores and lowest scores of student's group evaluations will be removed and not used for making average marks of each individual student. The student evaluation group leaders will be determined later and may be accredited 1% bonus marks in the final grades. The presentation evaluation criteria form is attached below for your reference. Student list form will be sent to you before the presentations.

[2] Midterm exam will be a take-home exam. You have to email your answers to both [biot.teaching@gmail.com](mailto:biot.teaching@gmail.com) and [blebeverybodyuse@gmail.com](mailto:blebeverybodyuse@gmail.com) before 11:59 pm of October 30, 2020. The earlier the better. The midterm exam will be deducted 20% per day after the deadline of 11:59 pm of October 30, 2020. The midterm exam consists of multiple choices questions from Chapter 1, 5, 6, and 7 (15%), plus the critiques of the two assigned journal papers (5% each). The two papers and the Basic Guidelines for Your Critique Writing of the Two Assigned Papers have been posted in the D2L website, you can start to read and write critiques now but submit with question exam together.

[3] The 10% of attendance: I encourage you to turn on your video and unmute your sound if you are OK. I made a box of cards with one student's name on each card. I will randomly pick cards for asking questions to the selected students. If you are not in the Zoom meeting room, you will lose 1% each class, but if you answer the question(s), you will get up to 1% bonus mark. This is to encourage and avoid some students may join the Zoom meeting room but not listen to the lectures or away from the class. If you have reason(s) not to agree with my arrangement, please email me now. Thanks!

[4] Final exam (35%): Covers the chapters 10 and 11 and consists of multiple choices and essay questions or other questions (will email you the exam formats days before the exam), by using timed online or Zoom for exam.

### Presentation Evaluation Form

**Evaluator's Name** \_\_\_\_\_ **Student Number** \_\_\_\_\_

Participants - Your opinion matters to us. Using the survey instrument below, please circle one answer for each question. There is space below for additional comments. If you run out of space, please feel free to write on the back of this form. Thanks for attending today.

The presenter			Your evaluation
1	Delivered the materials in a clear and structured manner	Up to 3%	
2	Was knowledgeable about the topic and any related issues	Up to 3%	
3	Maintained my interest during the entire presentation	Up to 3%	
4	Answered questions effectively	Up to 3%	
5	Was enthusiastic about the topic	Up to 3%	
6	Was well organized and prepared	Up to 3%	
The presentation			
7	Was concise and informative	Up to 3%	
8	Contained practical examples and useful techniques or knowledge that applied to current work	Up to 3%	
9	Had effective visual aids	Up to 3%	
10	Provided a great deal of novel information	Up to 3%	
Total		Up to 30%	