

## Course outline

**CHEM 209/4 AA    Discovering Biotechnology    Winter 2017**

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**Office Hours**                      Monday 12:00 – 13:00, Thursday 10:00 – 11:00 or by appointment

### **Objectives**

This course is an introduction to biotechnology designed for non-specialists. The objectives of the course are to:

1. provide the scientific background necessary to understand the ongoing revolution in biotechnology
2. critically examine applications of biotechnology in modern society
3. instill some appreciation for the scientific method
4. examine ethical, legal, and regulatory issues associated with biotechnology

**Recommended Textbook** W.J. Thieman and M.A. Palladino, “Introduction to biotechnology”, 3<sup>rd</sup> ed., (2<sup>nd</sup> ed. also acceptable).

### **Moodle Website**

You are responsible for information posted here

### **Grading Scheme**

In-class quizzes (clickers)	20 % (10% for participation, 10% for correct answers)
Take-home assignment	10%
Term Paper	20%
Final Exam	50% (course notes on paper allowed)

Assignment and term paper: The assignment is due February 14<sup>th</sup> and the term paper April 4<sup>th</sup>. A paper copy must be handed in on time, there will be deductions (10% per day) if they are handed in late. More information will follow.

## CHEM 209 Discovering Biotechnology

DATE	TOPICS, Tentative
January 10	Introduction to Discovering Biotechnology
January 17	Basic biochemistry and cell biology
January 24	Classical genetics and discovery of DNA
January 31	Molecular biology and manipulation of genes
February 7	Genomics and Bioinformatics
February 14	Metagenomics, Cloning and transgenic animals
February 21	Study break
February 28	Polymerase chain reaction (PCR) and forensics
March 7	Plant biotechnology *
March 14	Ethical Implications of Biotechnology *
March 21	Health and Diagnostics
March 28	Biotechnology and the environment
April 4	Industrial biotechnology
April 11	Biowarfare, Biotechnology in society

### ACADEMIC CONDUCT:

You must do your own work. The academic code of conduct can be found in section 17.10.3 of the academic calendar in either printed or online versions <http://www.concordia.ca/academics/undergraduate/calendar/current/17-10.html>. Please ensure that you are familiar with the definitions of academic dishonesty as outlined in the Code of Conduct. Any form of cheating, copying or plagiarism found in this course will be reported and the appropriate sanctions applied. The Department of Chemistry and Biochemistry offers a seminar on the academic conduct code and the appropriate use of information sources which aims to clarify what practices will be considered unacceptable with regards to work submitted for grading in Chemistry and Biochemistry courses. Attendance at this seminar is highly recommended and represents a clear and fair opportunity to learn what our faculty regards as academic misconduct. Failure to take part in this learning opportunity and thus ignorance of these regulations is no excuse and will not result in a reduced sanction in any case where academic misconduct is observed. As space for each of the seminars is limited by the room size, please sign up at the Chemistry and Biochemistry Departmental Office (SP201.01) for your preferred time.