

Bioseparations Engineering

CHEM ENG 3BM3

Term II, 2016/2017

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COURSE LOADING:

Lectures: 3 hrs per week

TEXTBOOK:

Principles of Bioseparation Engineering
(2006) R Ghosh, World Scientific Pte. Ltd.
ISBN 981-256-892-1

What is available on Avenue:

- Course outline
- Class notes (ppt slides)
- Tutorial notifications
- Assignment notifications/problems
- Midterm notifications

CALCULATOR:

Any calculator can be used on tests and examinations.

GRADING ASSESSMENT:

Mid-term test	= 20%
3 Assignments @ 10%	= 30%
Final exam	= 50%

All exams will be open notes/book

COURSE OUTLINE:

Introduction/Overview

Properties of biological material

Cell disruption

Precipitation

Centrifugal separations

Extraction

Adsorption, Affinity separations

Chromatography

Membrane based bioseparations

Assignment #1

Assignment #2

Assignment #3

Mid-term

COURSE POLICIES

- Electronic submission of assignment is not allowed.
- Assignments have to be submitted in class.
- There will be a 25% marks deduction on assignments submitted anytime after the scheduled class time till 3 pm on the submission day
- All late submissions are to be made at the Chemical Engineering Department office with time and date of submission duly recorded.
- The penalty for submission of assignments on the day after the scheduled submission day (3 pm deadline) is 50%. No assignments will be accepted after that.
- MSAF: Marks will be based on final exam
Assignment marks = Final exam marks x (1/5)
- An open notes/book policy is followed in the mid-term test and the final exam
- Missed Test – Absence without a valid excuse will result in a grade of zero for the test. Where there is a legitimate medical/personal reason for missing the test, the student *must* complete the McMaster Student Absence Form and forward it to the instructor to receive consideration for a waived test. A make-up mid-term test will not be arranged. If a student fails to take a mid-term test for a valid reason, the marks for it will be calculated based on the final exam marks using the following formula:
Midterm marks = Final exam marks x (2/5)
- The final grade percentage will be converted to letter grades using the Registrar's recommended procedure.
- Snow Day Policy – In the event of a snow day, the mid-term test will be rescheduled within one week after the snow day and assignments will due at the end of next class.
- The final grade percentage will be converted to letter grades using the Registrar's recommended procedure.
- Snow Day Policy – In the event of a snow day, the mid-term test will be rescheduled within one week after the snow day and assignments will due at the end of next class.

PREREQUISITE:

Registration in Level IV of a Chemical Engineering Programme; or CHEM ENG 2B03; or permission of the Department

ELECTRONIC COMMUNICATION:

Each student is expected to have a McMaster e-mail address. Occasionally, important information to the class will be transmitted by e-mail.

POLICY REMINDERS:

The Faculty of Engineering is concerned with ensuring an environment that is free of all adverse discrimination. If there is a problem, that cannot be resolved by discussion among the persons concerned, individuals are reminded that they should contact their Department Chair or the Sexual Harassment - Anti-Discrimination Officer, as soon as possible. Students are reminded that they should read and comply with the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office.

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/senate/academic/ac_integrity.htm

The following illustrates only three forms of academic dishonesty:

- 1. Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained. (Insert specific course information, e.g. style guide)*
- 2. Improper collaboration in group work. (Insert specific course information)*
- 3. Copying or using unauthorized aids in tests and examinations.*