INSTRUCTOR: Spencer Gibson, Ph.D.
CancerCare Manitoba
675 McDermot Ave.
Email: Spencer.Gibson@umanitoba.ca
204-787-2051

Geoff Hicks, Ph.D.
Regenerative Medicine
Basic Medical Sciences Building 6th floor
Email: Geoff.Hicks@umanitoba.ca
204 318-5287

Dr. Damien Rivers (Lab Portion)
414B Buller Building
Email: Damien.Rivers@umanitoba.ca
204-474-6542

TIME/LOCATION: Monday/Wednesday/Friday 9:30-10:20 a.m.
418 Machray Hall

OFFICE HOURS: By appointment only

COURSE OBJECTIVE AND DESCRIPTION:

Isolation, fractionation, structure and function of cellular membranes and subcellular components. The central role of these elements in the biochemistry of cellular processes will be stressed.

TEXTBOOKS:

*Alberts et al, Molecular Biology of the Cell*
*Lehninger, Principles of Biochemistry*

** All examinable material will be presented in the lecture notes and the textbooks are meant solely as a means of clarifying materials presented during the lecture.

EVALUATION:

The course evaluation will include two mid-term exam, a laboratory component, and a final exam which will be cumulative. The dates and value of these components are as follows:
Two Mid-term tests: Wednesday October 4th, and November 1st in class, 50 minutes………………………………………………………………………………………………………………………30%

Laboratory: A minimum of 10/20 must be achieved in order to pass the course...20%

Final Exam: Date to be determined by the Registrar’s Office, 3.0 hours………………50%

OTHER IMPORTANT DATES:

Monday October 9th, 2017: no class, Thanksgiving
Friday, November 10th, no class
Monday November 13th, 2017: no class, Remembrance Day
Friday, November 17th, no class
Wednesday November 15th, 2017: Last Day for Voluntary Withdrawal
Wednesday December 6th, 2017: Last Day of Classes (review only)

FACULTY OF SCIENCE STATEMENT ON ACADEMIC DISHONESTY:

The Faculty of Science and The University of Manitoba regard acts of academic dishonesty in quizzes, tests, examinations, laboratory reports or assignments as serious offences and may assess a variety of penalties depending on the nature of the offence.

Acts of academic dishonesty include, but are not limited to bringing unauthorized materials into a test or exam, copying from another student, plagiarism, and examination impersonation.

Note: cell phones, pagers or electronic translators are explicitly listed as unauthorized materials, and must not be present during tests and examinations.

Penalties that may apply, as provided for under the University of Manitoba’s Student Discipline By-Law, range from a grade of zero for the assignment or examination, failure in the course, to expulsion from the University. The Student Discipline By-Law may be accessed at: http://umanitoba.ca/admin/governance/policies/section_1200/1202.shtml Suggested penalties assessed by the Faculty of Science for acts of academic dishonesty are available on the Faculty of Science webpage: http://umanitoba.ca/faculties/science

All Faculty members (and their teaching assistants) have been instructed to be vigilant and report all acts of academic dishonesty to the Head of the Department.

REGISTRATION RESTRICTIONS

PLEASE ENSURE THAT YOU, THE STUDENT ARE ENTITLED TO BE REGISTERED IN THIS COURSE:

THIS MEANS THAT YOU, THE STUDENT HAVE:

-the appropriate prerequisites, as noted by the calendar description, or have permission from the instructor to waive these prerequisites
not previously taken, or are concurrently registered in this course and another that has been identified as “not to be held with”

The registration system may have allowed the student to register but it is up to the student to ensure that they have met all the requirements.

Consequences may be the student being withdrawn from the course part way through the term, or the course not used in the degree program. There will be no fee adjustment. This is not appealable.

DEFERRED EXAMINATIONS:

Deferred exams will not be administered. In the presence of a valid medical certificate or for compassionate reasons when accompanied by a note from a clergy member or another accredited source the value of the mid-term will be added to the weight of the final exam. Failure to provide such reasoning will result in a grade of zero for the missed examination.

List of Topics Covered: **Please note that the order in which these topics are covered may be different than what is shown below.

Membrane Structure

Membrane Proteins

Membrane Components

Cellular Fractionation

Chromatography

Microscopy

Clathrin and Cholesterol

Glycosylation

Membrane Transport

Gated Ion Channels

Signal Transduction

Cell Death

Spectroscopy