

- Instructors:** Dr. Deb Court, Dr. April Gislason, Dr. Teri de Kievit  
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 The expectation is that under normal circumstances emails will be answered within two business days. Prior to exams, FAQ will be posted in UMLearn. Please check your myumanitoba.ca email address regularly for updates and use it to correspond with instructors.
- Web Site:** UMLearn: [www.umanitoba.ca/d2l](http://www.umanitoba.ca/d2l)  
**Zoom:** For synchronous activities (some lectures, in-class assignments) your zoom username must include your first and last names so you can be identified as a member of the class if necessary. All interactions on zoom must be respectful to all and reflect behaviours you would use in a work or classroom setting.
- SAS:** Course instructors are willing to meet with students to discuss the accommodations recommended by Student Accessibility Services, but extended exam times can only be provided with approval from SAS.
- Reference material:** There is no required textbook. Research papers and reviews will be provided on UMLearn to support classroom teaching.

**Course layout and approach:**

The goal of the course is to teach you to understand and apply molecular biology to methods commonly used in many facets of current microbiology. To really understand how to apply something, you need to use it as well as understand it. The course will be made up of formal lectures, in-class exercises and take-home assignments that allow you to apply molecular biology to

- i) CRISPR technology in eukaryotic systems (Court)
- ii) Bacterial Tn-Seq approaches (Gislason)
- iii) Reporter gene systems (de Kievit and Court)

The general breakdown of the course will reflect this approach: (50% assignments, 10% in-class quiz, 40% written final exam).

<b>Activity</b>	<b>Date / Details</b>	<b>% of final grade</b>
Assignment #1 Crispr 1	Mon. Feb 1 at 10 pm; UMLearn	7.0
Assignment #2 Crispr 2	Wed. Feb 10 at 10 pm; UMLearn	7.0
Assignment #3 Crispr 3	Wed. Feb 24 at 10 pm; UMLearn	7.0
Assignment #4 Crispr 4	Wed. Mar 3 at 10 pm; UMLearn	7.0
Assignment #5 Crispr 5	Mon. Mar 8 at 10 pm; UMLearn	7.0
<b>Quiz (CRISPR only)</b>	Tues Mar. 9 in class	10
Assignment #6 Tn-Seq 1	Wed. Mar 24 at 10 pm; UMLearn	7.5
Assignment #7 Tn-Seq 2	Wed. Mar 31 at 10 pm; UMLearn	7.5
<b>Final exam: Part 1</b> – reporter systems “take-home” assignment	Due same day as final exam	10
<b>Final exam: Part 2</b> – Tn-seq theory and basic applications	Scheduled by Registrar’s Office and offered through UMLearn only	30

The VW date is **March 31** and you will have written feedback on the quiz and assignments 1-6 before that date.

Lectures will be presented either synchronously or asynchronously via Zoom. Recordings of the lectures will be available on UMLearn. It is very strongly recommended that you keep up with the lecture material as indicated in the schedule, so that you have the background information needed to efficiently complete the assignments. There will be class time available for working on the assignments and the instructor and TA will be available during those class times. While you may be able to complete the assignments outside of class time, it is strongly advised that you attend to receive prompt answers to questions.

The section on reporter plasmids may be presented synchronously or asynchronously, depending on the progress through the first two modules.

There are no deferrals for the in-class quiz or the assignments. If you miss the in-class test, the marks automatically will be added to the final exam. Medical notes or other documentation are not required for missing the in-class test. Missed assignments will be dealt with on a case-by-case basis.

Letter grades will be assigned by taking into consideration the grade distribution in the class and the University of Manitoba's descriptors A<sup>+</sup> (Outstanding), A (Excellent), B<sup>+</sup> (Very Good), B (Good), C<sup>+</sup> (Satisfactory), C (Adequate), D (Marginal), F (Failure); see <http://umanitoba.ca/student/records/grades/686.html>. The goal is to provide grades that represent performance in the context of the class; the grades will not be curved to meet an expected distribution, but conversion of percentages to letter grades will be at the discretion of the instructors.

For this course, **a grade of 45% on the final exam is required to pass the class**. The grading scheme generally, but not always, will be close to the following: A<sup>+</sup> (>90%), A (80-89.9%), B<sup>+</sup> (75-79.9%), B (70-74.9%), C<sup>+</sup> (65-69.9%), C (60.0-64.9%), D (50-59.9%), F (<50% total, or <45% in final exam). Note that in some courses, an A<sup>+</sup> is received only for numerical grades of >93% (Nursing, Asper) so there is precedent for shifting grade boundaries higher than those listed above.

### Assignments

- Can be completed by groups of 2-4 students, but EACH STUDENT must submit individually the answers on UMLearn (this is appropriate collaboration!)
- There will be several versions of the assignment – each student will be assigned a group number via UMLearn; this is the same as the version of the assignment.
- If students are working as teams, ONE student of the team must be assigned the version of the assignment that is completed. For example, if there are 3 students in a group and they have assignments 1, 2, and 3, then they must work on assignment 1 or 2 or 3 (4 is not allowed)
- For the in-class assignments, the assignments will be answered in “quiz” format. If your group decides to work on assignment #3, then everyone responds to that version of the quiz.
- Pools of randomized questions will be used in some cases so members of a team will not receive identical assignments. All questions in the pool will be provided with the instructions for the assignment.

The **Final examination** will consist of two parts:

Part 1 will be a take home reporter system assignment, due on the same day as the Final written exam;

Part 2 will be a written exam covering the Tn-seq lectures and will be scheduled by Student Records during the April examination period.

As per University of Manitoba policies, students are not permitted to access any unauthorized materials during an examination. Details on materials that can be access individually will be provided before the exam.

Communication of any kind with people other than the instructor or IST, or with any web-based services, during an exam is absolutely forbidden in all cases.

**Academic integrity and dishonesty:** guidelines are stated in your calendar regarding University policy with respect to academic dishonesty (particularly plagiarism, impersonation and cheating), as well as behaviour and absence from final exams. All exams are to be written individually, without any discussion in person or electronically. Acceptable resources (notes, research papers) will be noted in class prior to the exam. In cases of cheating or collaboration during in-class examinations, the test(s) in question will be given a grade of 0% and the student will be reported to the appropriate authorities for disciplinary action. Dishonesty during final exams will be reported directly to the Faculty of Science.

The Faculty of Science web page has **detailed information**, with which you must become familiar. (<https://sci.umanitoba.ca/students/undergraduate-students/academic-resources/academic-integrity-2>) Please read and follow these guidelines and ask if you have any questions.

**Watch the Faculty of Science video** outlining issues regarding academic integrity in the context of on-line examinations, and the consequences of cheating: (7 min) <https://youtu.be/Ok-lilm4SeE>

Permission to write a **deferred final exam** is granted by your Faculty - the instructor is not involved in this process. If it is necessary for you to write your final exam at an alternate date, you must email your Faculty office ([sciadv@umanitoba.ca](mailto:sciadv@umanitoba.ca) for Science students) to request permission for a deferred exam. This is a strict university policy, and there are no exceptions. If a deferral is granted it is your responsibility to contact the instructor as soon as possible for the date of the deferred exam.