

Department of Biology

COURSE SYLLABUS

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|  | **Biology 498.3 – Current Topics in Molecular Biology** | | |
| Course code: | CRN 29481 | Term: | Winter 2021 |
| Course credits: | 3.0 | Delivery: | Seminar |
| Class session: | 01 | Start Date: | January 14, 2021 |
| Lecture room: | Remote delivery | Lab room: | Remote delivery |
| Lectures: | Thursday 1:30-4:30 |  |  |
| Website/notes: | via Canvas | Prerequisites | Biology 316.3 or permission of the instructor |
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**Calendar Description**

This course is being offered as an alternative to Biology 421.3, Functional Genomics, which cannot be offered in a remote environment.

An exploration of the primarily literature governing how organisms function at the molecular level. Specific topics will be determined based on participant interest and the course will rely heavily on student-led inquiry, and individual and group discussion and presentation.

Prerequisites: Biology 316.3 or permission of the instructor.

**Remote Learning Context**

This course is being offered for the first time remotely. We have strived to make the best of this, noting that the remote teaching and learning context is new to most. We ask that all participants in the course interact with empathy and care. The entire course has been designed for remote access. If you have any questions about how to do something, please feel free to ask one of the instructors.

Remote classes pose additional challenges for many students. The University put together information on tools and technologies to help students navigate the resources needed to be ready for this new delivery style and reduce stress. You can access these resources at: <https://students.usask.ca/study/remote-learning.php#Accessingcoursework>

We would also like to direct you to the USask Netiquette webpage and encourage you to be mindful of your online activities: <https://teaching.usask.ca/remote-teaching/netiquette.php>

If you are experiencing difficulty, please contact the instructors or lab coordinator as soon as possible

**Course Overview**

This course provides the opportunity for students to explore several aspects of plant molecular biology using a variety of approaches. Students will work individually and in teams to accomplish the learning objectives.

There is no specified order of topics for this course. Lecture, seminar, and discussion periods will be interspersed with student presentations in between. Students will be responsible for researching potential topics of interest and presenting material to the group individually and in teams. In the first week of the term the class will come up with and decide on a list of topics to be explored in detail throughout the term.

**Learning Outcomes**

By the completion of this course, students will be expected to:

1. have an understanding of, and be able to communicate, molecular mechanisms and principles (concepts) that govern how organisms function at the molecular level.

2. demonstrate and convey these principles using oral and written styles appropriate for the field.

3. integrate and correctly attribute ideas from published scientific sources in their work.

4. apply physiological and molecular principles and critical thinking to explain both challenges and solutions that organisms face in their physical environment.

Note: The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: <http://www.usask.ca/university_secretary/LearningCharter.pdf>

**Instructors and Contact info:**

Dr. Christopher Todd

Office: room CSRB 110.6

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Dr. Carlos Carvalho

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Office Hours: Specific appointments can be set by email.

**Instructor Profiles & Other Information:**

Dr. Todd is a regular faculty member and head of the Department of Biology. His research program focuses on plant molecular biology and physiology. His undergraduate training was in genetics and molecular biology and he holds a PhD in plant biology. Dr. Carvalho is a regular faculty member in the Department of Biology. He holds an MSc in molecular biology and a PhD in molecular genetics.

**Required Resources**

There are no specific textbooks. Students should be prepared to access the primary literature remotely through the UofS library. Some material may be delivered through the course Canvas page. The only document you are required to read is the course syllabus, however most course activities will not be able to be completed without first completing prior reading.

**Topics**

In the first week of class the students and instructors will come up with a potential list of topics to explore over the course of the term. Some of these will be presented by the instructors and other by the students, individually, and in groups. The Thursday afternoon time slot will be used.

**Weekly Schedule**

Students will be able to progress through the material as it is released via Canvas. Weekly topics indicate the suggested pace of the course and the corresponding topics to be addressed in the live session.

Grading Scheme

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| --- | --- |
| Group presentations | 10% (first presentation) 10% (2nd presentation) |
| Individual Journal Club Presentation | 10% |
| Individual 2 page summary | 10% |
| Group Review Paper | 40% |
| Final Exam | 20% |
| Total | 100% |

Evaluation Components

**Group Presentations:**

**Value**: 20% of final course grade   
**Date**: Variable – Feb 4, 11, or 25.

**Description:** Group presentation on a topic of interest.

**Format:** 30-40 minute presentation followed by a question period. In order to promote fairness the instructors may require all presentations to be submitted for the first week of discussion, even if the students will present in subsequent weeks.

**Individual Journal Club Presentation:**

**Value**: 10% of final course grade   
**Date**: Variable (March 11, 18, 25, April 1)

**Description:** Detailed presentation and discussion of a paper of interest to the student.

**Format**: 30-40 minute presentation followed by a question period. . In order to promote fairness the instructors may require all presentations to be submitted for the first week of discussion, even if the students will present in subsequent weeks.

**Individual 2-page summary:**

**Value**: 10% of final course grade

**Date**: One week following journal club presentation

**Description:** A summary of the general research area highlighting the specific contributions of the paper discussed in the journal club talk.

**Format**: Two page written summary, plus associated references.

**Group Review Paper:**

**Value**: 40% of final course grade; 10% annotated bibliography; 10% initial draft; 20% final review

**Date**: Bibliography Feb 18; 1st Draft March 18; Final Draft, April 8

**Description:** A review paper of a specific topic relevant to molecular biology.

**Format:** A written review of the topic presented as a group will be due after all oral presentations have been completed. A detailed format and rubric for evaluation will be presented in class and made available through the course website.

**Final Exam:**

**Value**: 20% of final course grade

**Date**: To be determined.

**Description:** Written Take-home Final Exam

**Format:** A take-home final exam to be completed during the student’s own time based on course material and library research. Instructions will include the desired format as well as a guide for grading.

Submitting Assignments

All assignments will be submitted through Sapling or Canvas and will be due at the specific date and time indicated.

Scheduling of Exams

Midterm and final examinations, and the lab exams, must be written on the date scheduled. Final examinations may be scheduled at any time during the examination period in December. Students should therefore avoid making prior travel, employment, or other commitments for this period.

In the event that a student is absent from the midterm exam through no fault of his/her own due to a medical emergency, death in the family, or other valid reasons, documentation must be provided explaining the absence, to assist in the determination of whether permission will be granted for the student to write a deferred mid-term exam. Students absent for the Mid-Term Lecture Exam must advise their Instructor in person or by telephone (not by email) and initiate arrangements for writing a Deferred Mid-Term Exam, within 3 working days of the missed exam, in order to avoid being assigned a grade of zero for the exam.

If a student is absent from the final exam through no fault of his or her own for medical or any other valid reason, he/she must apply to the Dean’s Office of the College in which he/she is registered for an opportunity to write a Deferred Final Exam, within 3 working days of the missed exam. Documentation must also be provided to explain the absence from the final exam. Deferred exams may utilize a different format than the regular exam, at the sole discretion of the instructors.

Students are encouraged to review all examination policies and procedures: <https://students.usask.ca/academics/exams.php>

University of Saskatchewan Grading System

Students in BIOL 498 are reminded that the University has established a grading system to be used in all of its courses. Information on literal descriptors for grading at the University of Saskatchewan (reproduced below) can be found at: <https://students.usask.ca/academics/grading/grading-system.php>

Required Components

Students must write the final exam in order to pass the course.

Late Assignments

* Assignments are due on the day and time indicated in Canvas. Extensions are only granted in extraordinary circumstances (notably as a result of family or medical emergencies) and upon receipt of adequate documentation. It is your responsibility to contact the instructors before the due date if possible or as soon after the due date if it was unfeasible to do so beforehand.

Student Feedback:

The Department of Biology or the instructors may survey students regarding the course. This is generally done through an assessment near the end of term.

Recording of the Course

Use of video and recording of the course:

Video conference sessions in this course, including your participation, will be recorded and made available only to students in the course for viewing via Canvas after each session. This is done, in part, to ensure that students unable to join the session (due to, for example, issues with their internet connection) can view the session at a later time. This will also provide you the opportunity to review any material discussed.

Please remember that course recordings belong to your instructor, the University, and/or others (like a guest lecturer) depending on the circumstance of each session, and are protected by copyright. Do not download, copy, or share recordings without the explicit permission of the instructor.

For questions about recording and use of sessions in which you have participated, including any concerns related to your privacy, please contact your instructor. More information on class recordings can be found in the Academic Courses Policy **https://policies.usask.ca/policies/academic-affairs/academic-courses.php#5ClassRecordings.**

Required video use:

At times in this course you may choose to have your video on during video conferencing sessions or be able to share your screen for a presentation.

Copyright

Course materials are provided to you based on your registration in a class, and anything created by your professors and instructors is their intellectual property, unless materials are designated as open education resources. This includes exams, PowerPoint/PDF slides and other course notes. Additionally, other copyright-protected materials created by textbook publishers and authors may be provided to you based on license terms and educational exceptions in the Canadian Copyright Act (see http://laws-lois.justice.gc.ca/eng/acts/C-42/index.html).

Before you copy or distribute others’ copyright-protected materials, please ensure that your use of the materials is covered under the University’s Fair Dealing Copyright Guidelines available at https://library.usask.ca/copyright/general-information/fair-dealing-guidelines.php. For example, posting others’ copyright-protected materials on the open web is not covered under the University’s Fair Dealing Copyright Guidelines, and doing so requires permission from the copyright holder.

For more information about copyright, please visit https://library.usask.ca/copyright/index.phpwhere there is information for students available at https://library.usask.ca/copyright/students/rights.php, or contact the University’s Copyright Coordinator at mailto:copyright.coordinator@usask.ca or 306-966-8817.

Integrity in a Remote Learning Context

Although the face of teaching and learning has changed due to covid-19, the rules and principles governing academic integrity remain the same. If you ever have questions about what may or may not be permitted, ask your instructor. Students have found it especially important to clarify rules related to exams administered remotely and to follow these carefully and completely.

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (https://secretariat.usask.ca/student-conduct-appeals/academic-misconduct.php#IXXIIAPPEALS)

For more information on what academic integrity means for students see the Academic Integrity section of the University Library Website at: https://library.usask.ca/academic-integrity#AboutAcademicIntegrity

You are encouraged to complete the Academic Integrity Tutorial to understand the fundamental values of academic integrity and how to be a responsible scholar and member of the USask community - <https://library.usask.ca/academic-integrity.php#AcademicIntegrityTutorial>. As part of the lab you are required to complete the first tutorial module.

Access and Equity Services (AES) for Students

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Access and Equity Services (AES) if they have not already done so. Students who suspect they may have disabilities should contact AES for advice and referrals at any time. Those students who are registered with AES with mental health disabilities and who anticipate that they may have responses to certain course materials or topics, should discuss course content with their instructors prior to course add / drop dates. In order to access AES programs and supports, students must follow AES policy and procedures. For more information or advice, visit https://students.usask.ca/health/centres/access-equity-services.php, or contact AES at 306-966-7273 or aes@usask.ca.

Students registered with AES may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through AES by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by AES.

For information on AES services and remote learning please visit https://updates.usask.ca/info/current/accessibility.php#AccessandEquityServices

Student Supports

Academic Help for Students

The University Library offers a range of learning and academic support to assist USask undergrad and graduate students. For information on specific services, please see the Learning page on the Library web site https://library.usask.ca/support/learning.php.

• Remote learning support information https://students.usask.ca/study/remote-learning.php

• Remote learning tutorial https://libguides.usask.ca/remote\_learning

• Study skills materials for online learning https://libguides.usask.ca/studyskills

• A guide on netiquette, principles to guide respectful online learning interactions https://teaching.usask.ca/remote-teaching/netiquette.php

Teaching, Learning and Student Experience

Teaching, Learning and Student Experience (TLSE) provides developmental and support services and programs to students and the university community. For more information, see the students’ web site http://students.usask.ca.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: (http://artsandscience.usask.ca/undergraduate/advising/)

Financial Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact Student Central (https://students.usask.ca/student-central.php).

Aboriginal Students’ Centre

The Aboriginal Students’ Centre (ASC) is dedicated to supporting Aboriginal student academic and personal success. The centre offers personal, social, cultural and some academic supports to Métis, First Nations, and Inuit students. The centre is also dedicated to intercultural education, brining Aboriginal and non-Aboriginal students together to learn from, with and about one another in a respectful, inclusive and safe environment. Students are encouraged to visit the ASC’s Facebook page (https://www.facebook.com/aboriginalstudentscentre/) to learn more.

International Student and Study Abroad Centre

The International Student and Study Abroad Centre (ISSAC) supports student success and facilitates international education experiences at USask and abroad. ISSAC is here to assist all international undergraduate, graduate, exchange and English as a Second Language students in their transition to the University of Saskatchewan and to life in Canada. ISSAC offers advising and support on matters that affect international students and their families and on matters related to studying abroad as University of Saskatchewan students. Please visit students.usask.ca or updates.usask.ca for more information.

Treaty Acknowledgement

As we engage in Remote Teaching and Learning, we would like to acknowledge that the Saskatoon campus of the University of Saskatchewan is on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another. We would also like to recognize that some may be attending this course from other traditional Indigenous lands. I ask that you take a moment to make your own Land Acknowledgement to the peoples of those lands. In doing so, we are actively participating in reconciliation as we navigate our time in this course, learning and supporting each other.