

Course Description

BIOL 330 offers an introduction to the cellular basis of biological variation. The course explores the control of cell function exerted by the nucleus, the pathways for building and fuelling cells, and the control of integrative cellular events.

This is a unique term, being held remotely during a pandemic. Now more than ever, you will be expected to take an active and independent role in your learning as well as your time management. This course is more than just memorizing cell biology concepts – **emphasis is placed on critical thinking and synthesis**. Assessments are designed to help you appreciate the scientific method in practice, including how experiments are designed and how results are interpreted. Students are expected to read the appropriate sections in the textbook and are encouraged to ask questions during study sessions, tutorials, and regularly in the online forum.

Learning Outcomes

To complete this course, students will demonstrate their ability to:

- Describe structural, biochemical, molecular, and regulatory aspects of the cell, including processes common to all cells and processes unique to certain specialized cells.
- Describe the flow of genetic information from DNA to protein in a cellular context.
- Design a molecular cloning experiment.
- Critically evaluate scientific literature and communicate the main conclusions to a general audience.

Course Materials

The following material is available from the [Queen's Campus Bookstore](#):

- Cooper, GM. *The Cell: A Molecular Approach*, 8th edition.

Suggested Time Commitment

Students can expect to spend approximately 10-12 hours a week in study/practice and online activity for this course.

Topics

- Introduction to Cell Biology
- Unit 1 - The Flow of Genetic Information
- Unit 2 - Methods in Cell Biology
- Unit 3 - Cell Structure & Function
- Unit 4 - Cell Regulation

Weighting of Assessments

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| • Quizzes (10 x 1.5% each) | 15% |
| • Tutorial Assignments (4 x 5%) | 20% |
| • Assignment 1 - Press Release | 15% |
| • Assignment 2 - Virtual Cloning | 10% |
| • Assignment 3 - Specialized Cell Infographic | 15% |
| • Midterm Exam (Units 1 and 2) | 10% |
| • Final Exam (Cumulative) | 15% |

Assessments and Activities

Lectures

To offer the most flexibility, ALL lectures are pre-recorded and posted in the relevant Unit sections. We have taken the opportunity to also assign optional or recommended online lectures when appropriate, in order to support the learning objectives of the course. Please do NOT binge - you will learn the material much better if you pace yourself according to the timeline.

Quizzes

To assist with pacing, there will be weekly reading quizzes. Ten times this term, a quiz will be released on Friday at 09:00; students have until 21:00 the following Sunday to complete it (Quiz #10 is one exception as it will be open from Thursday at 09:00 and close on Friday at 21:00). Because the quizzes will be open for several days, there will be no make-up quizzes offered unless proper documentation for academic consideration is provided. Quizzes are designed to keep pace with the assigned readings - they are typically not very challenging. Students will have 90 mins to complete the quiz. The quiz can be completed in 45 mins but 90 mins is allotted to accommodate individuals that may need extra time. Most quiz questions are marked automatically, so it is important to

be careful with spelling and to follow the instructions precisely. Don't lose marks because you didn't follow the instructions!!! Each quiz is worth 1.5% of your final grade.

Live Study Sessions

To offer some live face-time with the course instructor, there will be live study sessions throughout the term, as outlined in the Timeline. In these sessions, we will go over the most discussed topics in the Forums and also go over some problems together. These sessions will be recorded and posted for those who are not able to attend.

Tutorials

We have designed four tutorials for this course. You have been assigned a section already through timetabling (either Mondays 8:30-11:00 or Tuesdays 11:30-13:00), but we have scheduled an additional section as well (Wednesdays 15:30-17:00). **Because of this, even if you are not planning to change from your assigned section, you need to register for a tutorial session in the Tutorial tab under 'Zoom'**. Assessments associated with the tutorials are worth 20% of your final grade.

Assignments

We have designed three major assignments to support the learning objectives of this course:

- (1) Press Release - 15%
- (2) Virtual Cloning - 10%
- (3) Specialized Cell Infographic - 15%.

Please note that a short informational quiz is due weeks before Assignments 1 and 3, each worth 1% of your final grade. The questions are already available for these quizzes – please see the respective Assignment information sheets.

All assignments can be completed in a number of days but several weeks are allotted to accommodate individuals that have a special need for extra time. Because all information regarding the Assignments is released at the beginning of the course, no extensions will be approved unless appropriate documentation is provided. Otherwise, late assignments will be accepted with a penalty of -5% per day, up to a maximum of 5 days (-25%). More details are provided in the "Assignments" folder on onQ.

Midterm Exam

A midterm exam, focusing on material from Units 1 and 2, will be released at 09:00 on Monday November 1 and close at 21:00 on Tuesday November 2. Students will have 3h to complete the midterm. The exam can be completed in 1.5h but 3h is allotted to accommodate individuals that may need extra time. Because the exam will be open for two days, there will be no make-up exam unless proper documentation for academic consideration is provided. Many questions are marked automatically, so it is important to be careful with spelling and to follow the instructions precisely. Don't lose marks because you didn't follow the instructions!!!

Final Exam

A final, cumulative exam will be released at 09:00 on Wednesday December 8 and will be due by 21:00 on Friday Dec 10. Students will have 3h to complete the exam. The exam can be completed in 1.5h but 3h is allotted to accommodate individuals that may need extra time. Because the exam will be open for two days, there will be no make-up exam unless proper documentation for academic consideration is provided. Some questions are marked automatically, so it is important to be careful with spelling and to follow the instructions precisely. Don't lose marks because you didn't follow the instructions!!!

Grading

All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale.

Late Policy

Late assignments will be accepted with a penalty of -5% per day, up to a maximum of 5 days (-25%), unless the instructor is aware of a documented accommodation or extenuating circumstance as soon as possible before the deadline. Please see the Accommodations and Considerations buttons on the course homepage for further details on accommodations and considerations.

Contacting the Teaching Team

For general questions about the course, please post to the [Course Questions Forum](#), (located under Help in the navigation bar). Feel free to help answer your peers' questions on this forum. Most questions are answered within 24 hours.

Please use your Queen's email for inquiries that are more personal in nature, or for issues such as academic accommodations or marking. If you need to have a more detailed conversation, please contact your instructor at jacqueline.monaghan@queensu.ca.

Netiquette

You are expected to maintain respect in your dealings with fellow students and the teaching team in any course. The following guidelines are a reference to guide your online communication in this course.

1. Make a personal commitment to learn about, understand, and support your peers.
2. Give others the benefit of the doubt.
3. Ensure your writing is respectful and inclusive.
4. Recognize and value the experiences, abilities, and knowledge that each person brings.
5. Carefully re-read your writing before posting or sending to others.
6. It's okay to disagree with ideas, but personal attacks will not be tolerated.

Queen's Email

The university communicates with students via Queen's email. Please check your email regularly to ensure you do not miss important information related to your course.

Copyright

The material in this course is the property of the instructor unless otherwise stated. Third party copyrighted materials (such as book chapters and articles) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this material for distribution (e.g. uploading material to a commercial third-party website) can lead to a violation of Copyright law. More information [here](#).

Accessibility/Accommodations

Queen's University is committed to achieving full accessibility for all students. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. The Senate Policy for Accommodations for Students with Disabilities was approved at Senate in November 2016.

If you are a student with a disability and think you may need academic accommodations, you are strongly encouraged to contact the Queen's Student Accessibility Services (QSAS) and register as early as possible. For more information, including important deadlines, [please visit the QSAS website \(click here\)](#).

To register your academic accommodation for this course, please select the Accommodations button on the course homepage and follow the instructions.

Academic Considerations for Students in Extenuating Circumstances

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances that are beyond their control and are interfering with their ability to complete academic requirements related to a course for a short period of time. [Click here to view the Senate Policy on Academic Consideration for Students in Extenuating Circumstances](#).

Please see the Academic Consideration Requests button on the course homepage to apply for an academic consideration in this course. Note that you will be taken to the student request portal where you will be required to provide the name and email address of the instructor/coordinator. For this course, please be sure to use the following email address: jacqueline.monaghan@queensu.ca.

Academic Integrity

Academic integrity is constituted by the [six core fundamental values](#) of honesty, trust, fairness, respect, responsibility, and courage.

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see [Academic Regulation 1](#)), on the [Arts and Science website](#), and from the instructor of this course.

Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Turnitin Statement

Queen's University has engaged the services of Turnitin to collect personal information on its behalf under the authority of the Queen's University Royal Charter, 1841, as amended. Please read Turnitin's Privacy Pledge, Privacy Policy, and Terms of Service (link below). The Terms of Service constitute a legal agreement between you and Turnitin so please read these documents carefully. Please note that Turnitin uses cookies and other tracking technologies; however, Queen's has negotiated with Turnitin such that neither Turnitin nor its third-party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see Turnitin's Privacy Policy (link below). By continuing to use Turnitin, you consent to the collection, use and disclosure of your personal information as described above. Turnitin may provide other services that are not connected to the purpose for which Queen's University has engaged Turnitin. Your independent use of Turnitin's services is subject solely to Turnitin's [Terms of Service](#) and [Privacy Policy](#), and Queen's University has no liability for any independent interaction you choose to have with Turnitin.

Grievances

It is the student's responsibility to contact Dr. Monaghan within 2 weeks of receiving a grade if there are any problems.

Computer Requirements

Microsoft Windows Client

Vista/Windows 7/Windows 8

Intel Core 2 Duo processor

4 GB RAM

Soundcard with speakers and microphone or preferably a headset

Webcam

Mac Client

OS X 10.8 or higher

Intel i5 processor

4 GB RAM

Internal, USB or external iSight microphone or preferably a headset

Webcam

Supported Browsers

Chrome (latest version)

Firefox (latest version)

Safari (latest version on 64-bit Intel processors only)

Internet Connection

Wired high speed access: Cable or better
(wifi is not recommended)

Java

Latest version

Media Player

Flash (latest version)

Adobe Reader

Latest Version