Course Description
A study of cell biology and aspects of related biochemistry. Topics include membranes, the endomembrane system, the cytoskeleton, cellular motility, the extracellular matrix, intercellular communication and intracellular regulation. Three lecture hours. Prerequisite: One of the following: (1) SC/Biol 2020 4.00, (2) SC/Bchm 2020 4.00, (3) SC/Biol 2020 3.00, (4) SC/Bchm 2020 3.00, (5) SC/Biol 1010 6.00 and SC/CHEM 2050 4.00, (6) SC/Biol 1000 3.00 and SC/Biol 1001 3.00 and SC/CHEM 2050 4.00. Course credit exclusions: SC/Biol 2021 4.00, SC/Bchm 2021 4.00.

Prerequisites
Prerequisite: One of the following: (1) SC/Biol 2020 4.00, (2) SC/Bchm 2020 4.00, (3) SC/Biol 2020 3.00, (4) SC/Bchm 2020 3.00, (5) SC/Biol 1010 6.00 and SC/CHEM 2050 4.00, (6) SC/Biol 1000 3.00 and SC/Biol 1001 3.00 and SC/CHEM 2050 4.00.

This course cannot be taken at the same time as BIOL2020.

Course Instructors and Contact Information
Course Instructor: Dr. Julie Clark
Email Contact: jclarkj@yorku.ca - Please include BIOL 2021 in the subject line
Office Hours: Typically after lecture or by appointment. Additional office hours will be scheduled near midterms.

*Please see policy on email etiquette below in course policy section before sending an email

Schedule
Lecture Schedule
September 6 to December 4 (Fall)
Tuesdays and Thursdays 8:30am to 10:00am. CLH I
Lectures are not recorded

Fall Reading Week (October 6 to 12) – No classes

See Course Content below for tentative topics schedule

Evaluation
| Midterm Test 1: | 25% | In-class Thursday Oct. 4, 8:30am start (1 hour 15 minutes) |
| Midterm Test 2: | 30% | In-class Tuesday Nov. 13 8:30am start (1 hour 15 minutes) |
| Final exam: | 40% | Scheduled by Registrar’s Office December 6 to 21 (3hrs) |
| Activities* | 5% | Includes in-class questions and other activities |

* The lowest 20% of in-class activities (including zeroes) will be dropped from your grade. This is to account for an occasional missed class (e.g., due to illness or other reasons) or for a forgotten/malfunctioning electronic device, etc. Documentation for lecture absences are not required and are generally covered by this 20% buffer.
**Policy for a Missed Midterm Test 1 or Midterm Test 2**

- You **must** email me within two days (48 hours) of missing the test (the sooner the better).
- Valid and appropriately detailed documentation supporting the events (typically medical or emergency related) preventing your attendance must be uploaded to the Department of Biology Document Submission System within seven (7) days of the missed test. The link to the document submission system is available on the Moodle site. Documentation should cover the date of the missed test.
  - Medical (illness) related: You **must** see a physician while you are ill - within 24 hours of the missed test – ideally on the same day - so that the physician can confirm you are too ill to attend the test based on medical examination. If you see the physician when you are not ill, he/she cannot confirm the illness and I will not accept such documentation. Valid documentation for medical situations consists of an “Attending Physician’s Statement” (July 2017 form only) from the registrar petitions package [http://www.registrar.yorku.ca/petitions/academic/package](http://www.registrar.yorku.ca/petitions/academic/package) or letter/document of similar detail. A note that simply says you were seen in the clinic will not be accepted.
  - Death of an immediate family member: letter from the funeral director is acceptable.
  - Other circumstances: Email me to determine the appropriate documentation required.
- If appropriate documentation is **not** provided within seven (7) days, a zero will be earned on the missed midterm.
- Not all situations will be accommodated, meaning that a zero may be earned on the missed test. Circumstances not accommodated include, but are not limited to, schedule confusion, sleeping in, missing the bus, personal endeavours (including a job), and busy lives.
- Where appropriate and possible, makeup tests will be scheduled. These may differ in format from the original test (i.e., include more short/long answer questions).

**Policy for a Missed Final Exam**

- If you miss the final examination you must petition for deferred standing. The decision to grant deferred standing will be made by the appropriate committee and not the instructor. Instructors will not grant deferred standing via a Deferred Standing Agreement Form (DSA).
- See “Deferred Standing Guidelines for Final Exam Only” on the course Moodle site for further details.
- The format of the make-up final exam for this course may be essay, short answer, multiple choice, or a mix of these options.

### Important Dates

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Percentage</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Test 1</td>
<td>25%</td>
<td>In-class Thursday Oct. 4, 8:30am start (1hour 15minutes)</td>
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<td>In-class Tuesday Nov. 13, 8:30am start (1hour 15 minutes)</td>
</tr>
<tr>
<td>Final exam</td>
<td>40%</td>
<td>Scheduled by Registrar’s Office Dec 6 to 21 (3hrs)</td>
</tr>
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</table>

**Last Day to drop the course without receiving a grade:** November 9, 2018

**Last Day to withdraw from the course and receive “W” on transcript:** December 4, 2017

**NOTE:** For additional information on withdrawing from a course refer to [http://secretariat.policies.info.yorku.ca/policies/withdrawn-from-course-w-policy-and-guidelines/](http://secretariat.policies.info.yorku.ca/policies/withdrawn-from-course-w-policy-and-guidelines/)

**NOTE:** For additional important dates such as holidays, refer to the “Important Dates” section of the Registrar’s Website at [http://registrar.yorku.ca/enrol/dates/](http://registrar.yorku.ca/enrol/dates/)

### Resources

**Textbook**

- This textbook is on reserve in the Steacie library under “BIOL 2021”

**Personal response system – via your own mobile device or computer**

- This is a free application which is required to participate in in-class questions. Participation in
these questions contribute to your Activity grade.

- Details regarding how to create an account will be posted on the Lecture Moodle course website.

**Course Moodle Site:** [http://moodle.yorku.ca](http://moodle.yorku.ca)

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### Learning Outcomes

Upon successful completion of BIOL 2021, students will be able to demonstrate an understanding of:

- the internal organization of the cell
- major cellular functions at the molecular level
- aspects of the interactions between cells in multicellular organisms.

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### Course Content

Chapters correspond to Alberts, 6th ed. (2015). Coverage of chapters will **not** be complete, and the lectures will cover only selected topics from the chapter. Midterm/Exam questions will relate to the topics covered during lecture and will **not** cover material in the chapters that was not mentioned during lectures.

**Tentative Lecture Schedule (Subject to change depending on how much is covered each week)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Meet</th>
<th>Chapter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 6</td>
<td>1</td>
<td>9</td>
<td>Introduction, Visualizing cells</td>
</tr>
<tr>
<td>Sept 11 &amp; Sept 13</td>
<td>2, 3</td>
<td>9,10</td>
<td>Visualizing cells, Membranes</td>
</tr>
<tr>
<td>Sept 18 &amp; Sept 20</td>
<td>4, 5</td>
<td>11,12</td>
<td>Transport of small molecules, Compartments and Protein Sorting</td>
</tr>
<tr>
<td>Sept 25 &amp; Sept 27</td>
<td>6,7</td>
<td>12,13</td>
<td>Compartments and Protein Sorting, Vesicular trafficking</td>
</tr>
<tr>
<td>Oct 2</td>
<td>8</td>
<td>13</td>
<td>Vesicular trafficking</td>
</tr>
<tr>
<td>Thursday Oct 4</td>
<td>9</td>
<td></td>
<td>Midterm 1</td>
</tr>
<tr>
<td>Oct 8 to 12</td>
<td></td>
<td></td>
<td>Reading Week – No Classes</td>
</tr>
<tr>
<td>Oct 16 &amp; Oct 18</td>
<td>10,11</td>
<td>13,15</td>
<td>Vesicular trafficking, Cell Communication</td>
</tr>
<tr>
<td>Oct 23 &amp; Oct 25</td>
<td>12,13</td>
<td>15</td>
<td>Cell Communication</td>
</tr>
<tr>
<td>Oct 30 &amp; Nov 1</td>
<td>14,15</td>
<td>15,16</td>
<td>Cell Communication, Cytoskeleton and Molecular motors</td>
</tr>
<tr>
<td>Nov 6 &amp; Nov 8</td>
<td>16,17</td>
<td>16,17</td>
<td>Molecular motors, Cell Cycle</td>
</tr>
<tr>
<td>Tuesday Nov 13</td>
<td>18</td>
<td></td>
<td>Midterm 2</td>
</tr>
<tr>
<td>Nov 15</td>
<td>19</td>
<td>17</td>
<td>Cell Cycle</td>
</tr>
<tr>
<td>Nov 20 &amp; Nov 22</td>
<td>20,21</td>
<td>17,18</td>
<td>Cell Cycle, Cell Death (apoptosis)</td>
</tr>
<tr>
<td>Nov 27 &amp; Nov 29</td>
<td>22,23</td>
<td>18,19,20</td>
<td>Junctions &amp; Adhesion, Cancer</td>
</tr>
<tr>
<td>Dec 4</td>
<td>24</td>
<td>20</td>
<td>Cancer</td>
</tr>
<tr>
<td>Final exam</td>
<td></td>
<td></td>
<td>Will be schedule between Dec 6 and 21.</td>
</tr>
</tbody>
</table>
Copyright Information

- **Copyright Note:** All material associated with this course is the intellectual property of the instructor and/or protected under Canadian copyright law. All material, including lecture slides, are to be used for personal study purposes only. Unauthorized distribution can lead to a violation under Copyright law.

Course Policies

**E-mail Policies**
I will try to respond to email within 24 hours, but it may not always be possible. You may also post questions on the Moodle Student Forum, as a classmate may know the answer.

Subject Line: Please place “BIOL 2021” in the subject line.
Email Body: Please include your name and student number.

**Grading**
- Grades will be posted in Moodle grade book as they become available.
- There are no “extra credit” assignments. Marks for assignments and tests are not “rounded” or “bell-curved”.
- See above, “Evaluation”

University Policies

**Academic Honesty and Integrity**
York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty ([http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/](http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/)). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards. There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students’ research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website at – [https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/](https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/)

**Access/Disability**
York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University. Student's in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs. Additional information is available at the following websites:
Counselling & Disability Services - [http://cds.info.yorku.ca/](http://cds.info.yorku.ca/)
Counselling & Disability Services at Glendon - [http://www.glendon.yorku.ca/counselling/](http://www.glendon.yorku.ca/counselling/)
York Accessibility Hub - [http://accessibilityhub.info.yorku.ca/](http://accessibilityhub.info.yorku.ca/)

York University issued Accommodation Letters should be emailed to jclarkj@yorku.ca

**Ethics Review Process**
York students are subject to the York University Policy for the Ethics Review Process for Research Involving Human Participants. In particular, students proposing to undertake research involving human
participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an Application for Ethical Approval of Research Involving Human Participants at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

**Religious Observance Accommodation**
York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at https://registrar.yorku.ca/sites/registrar/files/pdf/exam_accommodation.pdf (PDF)

**Student Conduct in Academic Situations**
Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - http://secretariat-policies.info.yorku.ca/policies/disruptive-and-or-harassing-behaviour-in-academic-situations-senate-policy/