

# School of Science and Technology

# Cell Biology, BIOL 3400K, Fall 2020

## Instructor Information

Instructor: Shoshana Katzman

Office: W-3227 (Fall 2020 all meetings will be virtual- please email me to set up a time)

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### Communication

The fastest way to connect with me is via GGC email. As this course will be hybrid, it is possible to set up individual meetings outside of class time, but this needs to be scheduled via email and meetings will be done virtually.

At any time, you can contact me by email, text message, or voicemail on my GGC cell phone. Note that my preferred method is email! Communications received Monday through Friday after 5 pm EST will be returned by the next day. On the weekend or when I am away from campus (i.e., at a conference), my response may be irregular.

When corresponding by email, I will communicate with you using only your GGC email. You should check your GGC email every day. Emails from other domains (yahoo.com, gmail.com, hotmail.com, etc.) will not receive replies due to the Family Educational Rights and Privacy Act (FERPA).

When you email me, you should consider the email as official correspondence. As such, the email should not appear as a text message but should have proper grammar and punctuation.

You should also check your Brightspace (Desire2Learn) course site every day as well.

#### Technology Covenant

Technology will be used to deliver content, provide resources, assess learning, and facilitate interaction, both within the classroom and in the larger learning community. This covenant provides a general guideline for the course. I reserve the right to make periodic and/or necessary changes to the covenant, including technology use and communication channels, to accommodate the needs of the class as a whole and fulfill the goals of the course.

#### Expectations of Students

All students at GGC **need to have access to a computer**. If you do not have one, computer labs are available on campus.

* Students can access the course materials and grades via Brightspace (Desire to Learn).
* Students should check GGC email regularly (at least twice a day).
* All student assignments will be communicated during class or by email. Assignments submitted via D2L will be on the D2L calender, check this regularly.

## Course Information

### Class Details

Course Details: BIOL 3400K

### Course Description

A study of cell structure and function at the cellular, subcellular and molecular levels. Upon completion of this course students will: (1) Explain the structure and function of macromolecules and cellular components; (2) Describe cell cycle regulation and DNA replication and apply them to cell function; (3) Explain and classify various methods of membrane transport; (4) Describe and apply the processes of gene expression and protein trafficking; (5) Apply concepts of intercellular and intracellular signaling; (6) Describe the steps leading to the development of an embryo and explain their relationship to stem cells; (7) Apply cell biological concepts and techniques to scientific research and real-world problems.

### Course Prerequisites

BIOL 1107K; BIOL 1108K; CHEM 1211K

### Course Resources

#### Required Texts

Text: The Fundamentals of Cell Biology – downloadable on the D2L course page. FREE access.

#### Additional Resources

Calculator: You are required to have a scientific calculator for this course. Any type *you know how to use* is acceptable. Bring your calculator to every lab session. If you need help using your calculator, please ask! Be sure to bring your calculator to all hour exams and the laboratory practical exam. Only individual calculators may be used during the exams. Calculators may not be shared. Cell phones, laptops, or other non-calculator devices may not be used as substitutes for calculators on quizzes or exams.

#### Technology Requirements

Reliable Internet: Students must have reliable internet. If you do not have usable internet at home, then you need to find an internet source (school, friend, job, etc.) to use. It is the responsibility of the student to meet these requirements for this Fall 2020 course.

### Web Conferencing and Online Quizzing

This course will use [Blackboard Collaborate/Microsoft Teams/Zoom] for online “virtual classroom” video conferencing sessions and collaboration activities. Some or all of the sessions may be recorded. The recordings will only be available to students enrolled in this course.

In addition, this course may require the use of LockDown Browser, Respondus Monitor, and a webcam for online exams (if the class went fully online for any reason). The webcam can be built into your computer or can be the type that plugs in with a USB cable. Watch this short video, [Introduction to Respondus LockDown Browser for Students](https://web.respondus.com/lockdownbrowser-student-video/). You can also download the [Student Quick Start Guide to LockDown Browser and Respondus Monitor](https://web.respondus.com/wp-content/uploads/2019/08/RLDB-Quick-Start-Guide-D2L-Student.pdf).

If you are unable to complete tests using a webcam, your alternative is to request a loaner computer from GGC. You must inform us immediately (within the first 1-2 days of classes). Faculty can request a GGC loaner computer, but cannot guarantee one. The earlier the request the more likely it is possible.

### Course Requirements and Grading

You can expect to access the course materials and grades via our course in Brightspace (Desire to Learn). Students should check this Brightspace regularly, as course changes will always be announced and recorded on the course site. [Add any other information about your grading policies]

#### Grading Scale

A (Excellent) 90-100

B (Good) 80-89

C (Fair) 70-79

D (Poor) 60-69

F (Failure) 59 and below

### Lecture

| Grading Category | Total grade (75%) |
| --- | --- |
| Final Exam (1) | 15% |
| Class Exams (4) | 50% (12.5% each) |
| Lecture Assignments | 10% |
| Total | 75% |

1. **Class Exams and Final Exam**:

* Four course exams will be given (see course schedule). These may consist of multiple-choice, matching, fill-in-the-blank, short answer, True/False or essay questions. The final exam is cumulative. All Exam dates are posted in the course schedule.
* **Any absence from a lecture exam is scored as a zero for the exam** unless the instructor excuses the absence. Excused absences are approved after documentation is submitted (Doctor note, jury summons etc.) Make-up exams will be allowed only due to extraordinary documented circumstances (accident, illness, etc.), and you must contact me **on the exam day via email with the documentation attached**. It is the **student's responsibility** to arrange with the instructor to take the exam within 48 hours after the missed exam. The **make-up exam will be different** from the class exam; it may take the form of essays, or short answers, or an oral exam. It is likely to be more difficult.

1. **Lecture Assignments**. There will be assignments associated with the lecture including worksheets that cover information in each chapter. All assignments will be submitted on D2L. Assignments are graded based on accuracy and depth. All will be accepted electronically on the D2L Assignments page by the set deadline. Point deductions for late submissions will follow the policy in the section below.

### Lab

Laboratory grades will be determined by Labster module assignments and a cumulative final laboratory exam. Each lab assignment will be due at the date set for that assignment. There are **NO MAKE-UP LABS**. You must keep up with your lab assignments and Labster deadlines.

1. **Labster Assignments**. Labster will be accessed online and deadlines will be posted in the course schedule. First attempt scores will be recorded in the D2L gradebook.
2. **Oral or written assignment**: Students will complete an oral or written assignment based on lab content. More details will be provided on D2L (Brightspace).
3. **Laboratory Practical Exam:** A final comprehensive laboratory practical exam will be given at the end of the semester. **Lab practical exams cannot be rescheduled.**

#### Assessment Tools

The final exam will contain content assessment questions that measure a students overall understanding of the Cell Biology Course outcomes. These questions are graded and count for a portion of the final exam score.

K Course Grading Policy

K course Grading Policy:

| Lecture | Lab | Final Grade in Class |
| --- | --- | --- |
| A or B or C | A or B or C | A or B or C |
| D | A or B or C or D | D |
| A or B or C or D | D | D |
| F | A or B or C or D or F | F |
| A or B or C or D or F | F | F |

This K course is an integrated classroom and laboratory learning experience with a single final course grade determined from the proportional weight of the classroom and laboratory experience. The grade received in BIOL 3400K includes 75% classroom and 25% laboratory. However, students must earn a C or higher in both class and laboratory to earn a single final course grade of C or higher. As an example, single final grade calculation, a student in BIOL 3400K earns a 95% (A grade) in the classroom experience and a 55% (F grade) in the laboratory experience. Although the proportional percentage is [(0.75x95) + (0.25x55)] = 85%, the student’s single final grade will be a D for the course. Proportional percentages below 60% result in an overall final grade of F in the K course. If a student requires a single final course grade of C or higher to progress in a course sequence, meet prerequisites, satisfy academic program requirements, etc., they must earn at least a C in both the classroom and the laboratory experience. In this case, if a D or F is earned in either portion and the student must repeat the course to satisfy course sequence or academic program requirements, the student must repeat both the classroom and laboratory experience.

## Attendance policy:

You are expected to attend and to be an active participant in every class and every lab. Only Exams will require the need for documentation and communication about missing class. The instructor determines if the excuse is valid or not. If you are unsure whether or not your absence will be excused, ask before you plan to miss class.

* *Examples of excused absences:* illness (you must provide a doctor's note), mandatory court appearance (you must provide documentation from the court), attending a scientific meeting or GGC field trip (you must provide documentation from the meeting and/or a note from your faculty advisor)
* *Examples of unexcused absences:* vacations, work commitments, inability to find parking, traffic, car problems.

### Final Exam Details

The final exam will be given sometime during the week of November 17-23. The date and time of the final exam is set by the registrar and will be posted at midterms. The exam schedule cannot be changed at the convenience of the student. You should not plan to be absent anytime during that week. A make-up final exam will only be given in cases of a verifiable excused absence.

### Course Changes

This course syllabus provides a general plan for this course. The instructor reserves the right to make changes to the syllabus, including changes to assignments, projects, examinations, etc., in order to accommodate the needs of the class as a whole and fulfill the goals of the course.

| **DATES** | **Lecture Schedule:** Tentative and subject to change. Overflow time has been included in case lectures or discussions run over and dates need to be shifted |
| --- | --- |
| Week 1  Aug 10-14 | M/W: Review of important topics from BIOL 1107K |
| Week 2  Aug 17-21 | M: Ch 1 Cytoskeleton  W: Ch 2 DNA Condensation |
| Week 3  Aug 24-28 | M: Ch 3: Transcription  W: Finish Ch 3 and Start Ch4: Translation |
| Week 4  Aug 31-Sept4 | M: Chapter 4 Translation  W: Start Ch5 Gene Expression Regulation |
| Week 5  Sept 7-Sept 11 | *M: No class Labor Day*  W: Ch 5 Gene Expression Regulation |
| Week 6  Sept 14-18 | M: Ch 6 Membrane Structure  W: Ch 7 Membrane Transport |
| Week 7  Sept 21-25 | M: Ch 8 Electrochemical Gradient  W: Start Ch 9 Protein Trafficking |
| Week 8  Sept 28-Oct 2 | M: Ch 9 Protein Trafficking  W: Ch 10 Vesicles |
| Week 9  Oct 5-9 | M: Ch 11 Cell Signaling Overview  W: Ch 12 GPCRs and RTKs |
| Week 10  Oct 12-16 | M/W: Ch 13 Cell Cycle Regulation |
| Week 11  Oct 19-23 | M/W: Ch 14 DNA replication |
| Week 12  Oct 26-30 | M/W: Ch 15 Cell Death and Cancer |
| Week 13  Nov2-6 | Ch 16: Stem Cells |
| Week 14  Nov 9-13 | TBD: Overflow time |
| Week 15  Nov 16 | M: Final Exam Review |
| Nov 17-23 | Final Exam Week |