University of Illinois at Chicago
BIOS 100-Biology of Cells and Organisms
Syllabus

2017 Biology of Cells and Organisms
BIOS 100 Spring Semester
Lecture Section 36536: 12:00 pm to 12:50 pm in 250 SES

Faculty Information

a. Lecture Instructor: Sandra Gibbons
b. Office: 3466 SES
c. Office Hour: MWF 8:30 am to 9:30 am in 3466 SES
d. E-mail: GibbonsS@uic.edu
e. Laboratory Instructor: Michael Muller
f. Office: 3092 SEL

Course Identification

a. 5 credit hours
b. This course is intended for science majors. Animals will be used in the laboratory.

Textbooks/Reading List

Required:

Textbook: Biological Sciences, 6th Edition. Freeman 2017. Etext with mastering biology. This package includes access to Learning Catalytics that is needed during lecture.


Learning Catalytics: Lecture questioning software. You will need to have a device that connects to the internet for use during lecture. You may use a laptop, notebook, cell phone, etc. The price of learning catalytics is included in the etext / mastering package sold at the UIC bookstore. An upgrade fee may be required to use learning catalytics if you didn't purchase the package through the UIC bookstore.

Packback subscription. Go to packback.co/questions to register. The cost is $18 and is required for the course. The access code for our community is: 597136AC-89E6-7045-A1D9-63D5A126655F
This package cannot be substituted with other materials.

Students are required to have their materials on the first day of the semester and will not be granted extended time to complete assignments due to late registration or a failure to purchase materials in a timely fashion.
Course Goals:

a. The student shall demonstrate knowledge of common biological terms, facts and principles through exams, discussion, laboratory, and written assignments.

b. The student shall demonstrate an understanding of the "scientific approach" by its application in class discussions, written responses to problems and interpretations of data presented during class and laboratory.

Career Development Skills:

a. Follow instructions.

b. Organize notes and ideas for formal, semiformal, and informal presentation.

c. Estimate, apply, and solve problems involving fractions, decimals, percentages, and real numbers.

d. Check, edit, and revise for correct information, appropriate emphasis, grammar, spelling and punctuation.

e. Compile and maintain laboratory records, logs, notebooks, and other documents.

f. Access, navigate and use on-line services.

g. Utilize problem-solving skills.

h. Participate in team tasks.

i. Maintain openness to life-long learning.

Course End Competencies:

a. The student shall demonstrate competence in:

1. biology and the tree of life,
2. the chemical basis of life,
3. the structure and function of cells and membranes,
4. the relationship between photosynthesis and cellular respiration,
5. the molecular basis for life,
6. cell division and development,
7. plant and animal organ system structure and physiology,
8. plant and animal reproductive system structure and physiology.

b. The student shall develop an appreciation of the use of science and the role of biology in everyday life.
**STUDENT SUCCESS:**
The following list includes methods you can use to improve your chances of success in the biology course you are taking this semester.

- Come to every class, discussion, and laboratory.
- Complete all work on time.
- Read the textbook and complete the study guide for each chapter.
- Form a study partnership with your team members.
- Use the student resources available at the study area of our mastering site.
- Search the web using key words and concepts from the readings.
- Make study flash cards and use them.
- Meet with the TAs or myself during office hours.
- View a video associated with a difficult objective topic.
- Ask questions in class and through packback.
- **Study early and often, no cramming.**

**Course Websites**

a. [http://uic.blackboard.com](http://uic.blackboard.com)
   if you need to access mastering and blackboard is down use
   
   [https://www.packback.co/questions](https://www.packback.co/questions)

b. Please check the course blackboard website or your UIC email often for important announcements.

**Classroom Policies/Procedures:**

a. **Student Conduct:**
   Each student is responsible for adhering to the Code of Student Conduct as stated in the college catalog. Students are expected to demonstrate mature and appropriate behavior when interacting with each other, with the professor, and with the teaching assistants. Any student being disruptive during class, discussion, laboratory, or during an office hour will be asked to leave.

**Notice of Copyright**

Materials in this course—unless otherwise indicated—are protected by United States copyright law [Title 17, U.S. Code]. Materials are presented in an educational context for personal use and study and should not be shared, distributed, or sold in print—or digitally—outside the course without permission.

As a student your ability to post or link to copyrighted material is also governed by United States copyright law. The law allows for students to post or link to copyrighted materials within the course environment when the materials are pertinent to course work. Instructors—or other staff of the institution—reserve the right to delete or disable your post or link if in their judgment it would involve violation of copyright law.
b. **Attendance:**
The lecture, discussion, and laboratory meetings are mandatory. During lecture you may be using the learning catalytics (LC) system that is worth points toward your grade. If you cannot attend lecture due to a religious holiday, student athletic event, or professional school interview you must alert me one week before the event. I will then provide you with an alternative assignment to make up the missing LC points from the date you missed. This alternative assignment is due the following class period. **Late registration, studying for another class, being stuck in traffic, etc. will not excuse missed assignments or LC. All late penalties will still apply to mastering assignments.**

c. **Withdrawal:**
A student who does not withdraw officially from a course may receive a grade of "F", depending on course progress or course attendance, which will become a part of the student's permanent record. **March 17, 2017** is the last day to drop a course(s) offered by all colleges.

d. **Cheating and Plagiarism:**
Any student caught cheating on an exam, mastering microbiology assignment, discussion quiz, laboratory assignment, packback assignment, or any other assignment may be immediately dismissed from the course and given a final grade of "F" regardless of the student's total points in the course. **Writing your answers on the exam question booklet large enough for others to see will be considered cheating and will result in a zero for the exam.** Only registered students are able to take the exam. **Your UIC photo ID will be checked on exam dates.** You will be given an assigned seat to take your exam in so please take care to study the exam-seating chart that will be made available soon after the last day to add classes in the semester. Students who are not registered for the course and who attempt to take the exam will be considered in breach of academic integrity and dealt with accordingly.

e. **Cellular Phones and Computers:**
Students and college visitors may not use and must silence cell phones, pagers, and other communication devices in all instructional areas that include: all labs and classrooms during instructional sessions unless using the learning catalytics program. Continued disruption of the course will result in a cessation of the lecture and students will be required to learn the missed content on their own. Computers must be used for note taking and learning catalytics only.

f. **E-mail Policy:**
Due to the large number of students that I teach (over 600 this semester) it is important that you follow this email policy or you may not receive an answer to your question. I will only read and respond to email send through your UIC email account. You must have your course and section number in the subject line of the email so that I know exactly which class you are in. You must have your full name as it appears in blackboard in your email message. Failure to follow this policy may lead to your email and questions being deleted and not answered. Additionally, do not expect and immediate reply to your email. The fastest way to get help with your questions / concerns is to attend office hour.

g. **Disability statement:**
Students with disabilities must inform the instructor of the need for accommodations. Those who require accommodations for access and participation in this course must be registered with the Disability Resource Center and present the instructor with their written accommodation request.
Grading Policies / Procedures

a. **Exams:**

There are four unit exams and one cumulative final exam for the course worth 150 points each consisting of 50 multiple-choice questions. You are required to bring several sharpened number 2 pencils to each exam and are not allowed to leave the classroom once the exam begins. The date for each exam is posted in the course schedule at the end of the syllabus. Students who arrive late for an exam will **not** be given additional time to complete the exam. Students who arrive late after other students have already completed the exam and left the room with their exam booklet will not be allowed to take the exam. **Failure to fill in your name on the computer sheet properly may result in a 5-point deduction from your exam score.** This includes a failure to fill in the bubbles for your name properly. **Failure to sit in your assigned seat on exam day may result in a five-point deduction from your exam score.**

Exams cannot be made up nor can they be taken early. One exam is dropped. This may be the final exam if you have not missed any of the unit exams and are satisfied with your unit exam scores.

Students will take each exam twice. The student working alone without the aide of any books or notes will first take exams as usual, in the classroom or DRC. This is known as the solo exam and will count for 80% of your unit exam score. Students will then take the exam again with their team members during discussion. Students may use their textbook and notes, but **MAY NOT** use any cell phones or electronic devices outside of the etext. This is known as the group exam and is worth 20% of your unit exam score. Note that with exam 4 there will be no group exam given during discussion that week. I will take the average of your previous group exam scores and count that as the exam 4 group exam score. Team members are still encouraged to meet on your own time to go over the exam and learn from each other. During the final exam the first hour will be time for the solo exam and the second hour will be for the group exam.

b. **Discussion, Review Quizzes, and Labs:**

The discussion hour portion before each lab is required. Discussion will include two components - a review quiz and a class exercise reviewing some aspects of the lecture material. **On weeks when there are group exams, these will be given during discussion and there will be no review quiz or in class exercise.** The lecture review quiz will consist of 10 questions relating to the upcoming lab as well as material covered in lecture. You will take the discussion quiz with your team however you **MAY NOT** use any books, notes, or electronic devices. There will be 10 review quizzes worth 5 points each and the lowest score will be dropped, for a total of 45 points. Additionally, there will be 10 discussion sessions with required in class activities. Your TA will grade you based on participation - each session will be worth 5 points and the scores from the lowest one will be dropped; thus a total of 45 points are possible for the discussions activities.

c. **Laboratory:**

There are 11 laboratory exercises, each worth 10 points. The lowest laboratory grade will be dropped; thus, there will be a total of 100 points for labs possible. The last week of lab is the fetal
pig mini-practical. This is worth 10 points and CANNOT be dropped. No make-ups for labs will be allowed – this is the reason we allow one of the labs to be dropped.

Each student will work with their team members to complete the lab activity, however all answers to the lab questions and graphs must be completed individually. Lab teams with identical answers / graphs will be given a grade of zero for all members of the team. Once the lab data is collected students must have their teaching assistant sign off on their lab.

Students who arrive late to lab may not be allowed to complete the lab. All students are expected to stay to complete all lab activities. Lab safety is a priority. Attention to the teaching assistant’s laboratory safety directions is required. Any spills or broken glassware / items must be reported to the TA immediately.

d. **Group Service Learning Project:**
There is a group service-learning project that you and your team will present to the class. Detailed directions along with the rubric by which you and your team will be graded can be found in Blackboad. You and your team will prepare a 25-minute presentation followed with a Q & A session. This will be worth 50 points. Attendance to the other groups’ presentations is mandatory, as you will be assessing their presentations. If you fail to attend and perform peer evaluations, you will lose 10 points from your project score. Any team member missing from the presentation will not be allowed to present at a later date and will lose the points for that portion of the project.

Point structure:
5 points – paragraph length summary of your service-learning project due in discussion week 3.
5 points – rough draft of your service-learning project due in discussion week 6.
10 points – evidence of completion of service associated with your service-learning project due as soon as completed but no later than discussion week 15.
30 points – service-learning presentation due week 9/10 during lab.

e. **Mastering Microbiology Assignments**

There will be Mastering Biology exercises to perform associated with each chapter / topic we cover in class. They will be worth 100 points total. You have two chances to answer each question correctly. Late assignments will have a penalty of 10% off per day late. **This penalty will not be waived for any reason including late registration for the course.**

f. **Learning Catalytics**

There will be will in class learning catalytics sessions where you will work individually and with your team to complete questions pertaining to lecture content. Students will need to bring their own Internet accessing device (smart phone, iPod, tablet, or laptop computer) to answer questions using the learning catalytics program. **The learning catalytics program access comes with your purchase of mastering access with the etext. If you did not purchase the etext you will need to pay an upgrade fee to use learning catalytics.** Learning catalytics is worth 30 points. Half of the score is obtained from your individual score and half by your team score.

g. **Packback questions / answers**

Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online curiosity community
where you can curious, and ask the BIG questions about how what we're studying relates to life and the real world.

2 points per week will go towards your participation in the community. In order to receive these points, you must post 1 Question and 2 Answers per week relevant to our class subject matter that week. You grade is determined based half on participation and half on length, sources, and presentation (grammar, etc.). Additionally, I will develop three exam questions based on student’s questions / answers that appear in the PackBack Featured posts section.

There will be a Sunday 11:59 PM deadline for submissions in your community each week. Each week is treated as an assignment and you must participate each week - consistency is important for us to foster a great community for learning and curiosity. You may ask and answer more than the required amount, however these will not count for future week’s requirements. Additionally, there is no way to post and have something count late so make sure to complete your work each week or you will lose points. Late registration or a failure to sign up for the PackBack community will not exempt you from PackBack posting requirements.

To start posting on Packback Questions:

1. Navigate to Packback.co/Questions and click “Register as a new student”.
   Note: If you already have an account on Packback Books (our rental site) you can log in with your login credentials.

2. Make sure to register with your SCHOOL email address and real first name and last name as listed in blackboard, or I won’t be able to grade your participation and you won’t receive your points.

3. Enter our class community’s access code into the “Join a new Community” module on your dashboard.

   Our Community access code: 597136AC-89E6-7045-A1D9-63D5A126655F

4. Follow the instructions on your screen to finish registration, and then click into our class Curiosity Community. You can make your first post by clicking the gold “Ask a Question” button

   For a brief introduction to Packback Questions and why we are using it in class, watch this video: vimeo.com/packback/Welcome-to-Packback-Questions

h. Extra Credit:

   Students may complete the unit study guides for 2.5 extra credit points each. In order to obtain the full extra credit amount students must:
1. legibly hand write their answers to all study guide questions,
2. write their name, discussion day and time, and TA’s name on the first page of the completed study guide,
4. and turn them into the correct TA folder on the day of the unit exam.

Late study guides will not be accepted.

i. **Grading Policy:**
Grade determination is based on the number of points earned compared to the maximum number of points possible which is 1000 points. The breakdown of points is as follows:

Exams 600 points total
Discussion quizzes 45 points total
Discussion activities 45 points total
Laboratory assignments: 100 points total
Group service-learning project: 50 points total
Mastering Microbiology assignments: 100 points total
Learning catalytic assignments 30 points total
Packback questions / answers 30 points

Determination of the final grade will be based on accumulation of total points. The following grading scale will be used:

- 900 – 1000 points = A Final Grade
- 899 – 800 points = B Final Grade
- 799 – 700 points = C Final Grade
- 699 – 600 points = D Final Grade
- 599 points and below = F Final Grade.

The course will **not** be curved and grades are **NOT** negotiable.

j. **Incomplete:**
An incomplete grade will be given only in cases of documented prolonged illness or an accident/death in the family during the last few weeks of the semester that prevents a student from completing their work. Students must have been making **satisfactory progress** (a C or higher) in the course prior to requesting an incomplete. A request for an incomplete must be made **before** the end of the semester. An incomplete grade will **not** be given due to missing exam or homework scores or to prevent a low grade.

**Course Lecture Schedule**
You will be advised of any changes made during the semester in class and through a blackboard announcement if they need to take place. **All mastering biology assignment due dates are listed on the calendar on the mastering biology course homepage.**

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Readings in Freeman 6th Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 9</td>
<td>Course Introduction</td>
<td></td>
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<tr>
<td></td>
<td>11</td>
<td>Biology and the Tree of Life</td>
<td>1</td>
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<tr>
<td></td>
<td>13</td>
<td>Water and Carbon</td>
<td>2</td>
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<td>2</td>
<td>16</td>
<td>Martin Luther King Jr. Holiday</td>
<td>No Class</td>
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<tr>
<td>Week</td>
<td>Discussion Topic</td>
<td>Laboratory Topic</td>
<td>Lab Manual Chapter</td>
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<tr>
<td>1</td>
<td>Introduction to Class, Ice Breaker Activity, and Laboratory Safety</td>
<td>NO LAB</td>
<td></td>
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<tr>
<td>2</td>
<td>Group Service-Learning Project Overview</td>
<td>Quantitative Techniques and Statistics</td>
<td>1</td>
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<tr>
<td>3</td>
<td><strong>Paragraph Length Group Service-Learning Summary Due</strong>&lt;br&gt;Chemistry Review</td>
<td>Techniques in Microscopy</td>
<td>2</td>
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<tr>
<td>4</td>
<td>Cells and Membranes Review</td>
<td>Determining the Properties of the Enzyme</td>
<td>5</td>
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Discussion and Laboratory Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Discussion Topic</th>
<th>Laboratory Topic</th>
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<tbody>
<tr>
<td>3</td>
<td>Exam 1 - Covers Weeks 1-4</td>
<td>No Classes</td>
</tr>
<tr>
<td>5</td>
<td>Exam II - Covers Weeks 5-7</td>
<td>March 20 – March 24</td>
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<tr>
<td>8</td>
<td>Exam III - Covers Weeks 8-11</td>
<td>No Classes</td>
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<tr>
<td>11</td>
<td>Exam IV - Covers Weeks 12-15</td>
<td>No Classes</td>
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<tr>
<td>12</td>
<td>Spring Break</td>
<td>No Classes</td>
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<tr>
<td>16</td>
<td>Final Exam Both Solo and Group</td>
<td>No Classes</td>
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<tr>
<td>QUIZ</td>
<td>Turnip Peroxidase</td>
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<tr>
<td>5</td>
<td>Exam 1 Group Exam</td>
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<td></td>
<td>NO QUIZ</td>
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<tr>
<td></td>
<td>Cellular Structure Reflects Function</td>
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<tr>
<td>6</td>
<td>Rough Draft of Group Service-Learning</td>
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<td>Project Due</td>
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<td></td>
<td>Photosynthesis Review</td>
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<td>QUIZ</td>
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<td></td>
<td>Photosynthesis</td>
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<td>7</td>
<td>Cell Respiration and Fermentation Review</td>
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<td>QUIZ</td>
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<td></td>
<td>Cellular Respiration</td>
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<td>8</td>
<td>Exam 2 Group Exam</td>
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<td>NO QUIZ</td>
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<td></td>
<td>Paternity Testing in Whooping Cranes</td>
<td>9</td>
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<td>9</td>
<td>DNA and the Gene Review</td>
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<td>QUIZ</td>
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<td></td>
<td>Group Project I</td>
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<td>10</td>
<td>Transcription and Translation Review</td>
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<td></td>
<td>QUIZ</td>
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<td></td>
<td>Group Project II</td>
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<td>11</td>
<td>Cell Cycle Review</td>
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<td>QUIZ</td>
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<td>Mitosis and Meiosis</td>
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<td>12</td>
<td>Exam 3 Group Exam</td>
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<td>NO QUIZ</td>
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<tr>
<td></td>
<td>Plant Reproduction</td>
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<td>13</td>
<td>Plant Form and Function Review</td>
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<td>QUIZ</td>
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<td></td>
<td>Animal Anatomy &amp; Physiology</td>
<td>13</td>
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<tr>
<td>14</td>
<td>Plant and Animal Reproduction Review</td>
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<td>QUIZ</td>
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<td></td>
<td>Pig Practical</td>
<td>10</td>
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<tr>
<td>15</td>
<td>Last chance to turn in evidence of service completion due</td>
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<td></td>
<td>Animal Organ Systems Structure and Functions Review</td>
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<td>QUIZ</td>
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