

**BI314: Cell and Molecular Biology**  
**Fall Quarter 2016**

MWF 2:00-2:50pm  
Plus one weekly recitation

**Instructor:** Dr. Colin P. Johnson  
Assistant Professor of Biochemistry and Biophysics

I welcome you to contact me outside of class and student hours. You may email me or call my office to make an appointment.

**Learner Outcomes:**

Some of the specific skills I hope you will obtain in this course are listed below:

1. Identify and define terms commonly used to communicate in the field of cell and molecular biology.
2. Describe and explain detailed mechanisms of cellular regulation.
3. Apply concepts of cell and molecular regulation to predict cellular responses.

**Learner Expectations and Course Policies:**

You should attend every class, but extenuating circumstances arise that can make this difficult. If you cannot attend a class, please obtain notes and review the material with another student.

Please note the date and time of the three exams. All exams must be taken. Unfortunately, serious illnesses, death in the family or other traumatic events are part of life. Such events are unwelcomed and because I understand how difficult these times are, if you contact me within 24 h of the event and provide documentation, I will be happy to give you a make-up exam. Makeup exams will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments.

The following activities will result in a loss of 20 points

- Talking/consulting with another student during quiz or exam periods (any time before exam is turned in)
- Writing on the exam or scantron after the exam period has ended
- Missing name or incomplete scantron

**PREREQS:** (BI 211 or BI 211H) and (BI 212 or BI 212H) and (BI 213 or BI 213H) and (CH 331 or CH 334)

**Recitations:** T 8:00am LINC 307  
T 9:00am LINC 307  
T 4:00pm WNGR 149  
T 5:00pm LINC 314  
R 9:00am LINC 303  
R 4:00pm WGND 132

**Evaluation:** Final grade is based upon a total of 500 points.  
2 Exams – 100 points each  
Final – 200 points  
Recitations – 100 points

**Learning resources:**

*Essential Cell Biology*, Third or Fourth Edition, by Alberts et al.  
Canvas = some materials will be posted on Canvas.

**Study Guide:**

Slides highlighting key points from chapters will be posted on Canvas.

## BI 314 Course Topics

<u>Week</u>	<u>Topic/Book Chapter</u>
1	Introduction and DNA (Ch. 1, 5)
1	DNA and Chromosomes (Ch. 5)
2	DNA Replication, Repair, and Recombination (Ch. 6)
2	DNA Replication, Repair, and Recombination (Ch. 6)
2	From DNA to Protein: How Cells Read the Genome (Ch. 7)
3	From DNA to Protein: How Cells Read the Genome (Ch. 7)
3	From DNA to Protein: How Cells Read the Genome (Ch. 7)
3	Control of Gene Expression (Ch. 8)
4	Control of Gene Expression (Ch. 8)
4	Exam 1
5	Membrane Structure (Ch. 11)
5	Membrane Transport (Ch. 12)
5	Energy Generation in Mitochondria and Chloroplasts (Ch. 14)
6	Energy Generation in Mitochondria and Chloroplasts (Ch. 14)
6	Intracellular Compartments and Transport (Ch. 15)
6	Intracellular Compartments and Transport (Ch. 15)
7	Exam 2

7	Cell Communication (Ch. 16)
7	Cell Communication (Ch. 16)
8	Cell Communication (Ch. 16)
8	Cytoskeleton (Ch. 17)
8	Cytoskeleton (Ch. 17)
9	The Cell Division Cycle (Ch. 18)
9	The Cell Division Cycle (Ch. 18)
10	The Cell Division Cycle (Ch. 18)
10	Cellular Communities: Tissues, Stem Cells, and Cancer (Ch. 20)
10	Cellular Communities: Tissues, Stem Cells, and Cancer (Ch. 20)
11	Cumulative Final Exam

## University and Departmental Policies:

**Please note:** Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

**Please note:** The Biology Program follows the university rules on civility and honesty. Students are expected to be honest and ethical in their academic work. Cheating or plagiarism by students is subject to the disciplinary process outlined in the Student Conduct Regulations. These can be found at: <http://oregonstate.edu/studentconduct/http://%252Foregonstate.edu/studentconduct/code/index.php>

Academic dishonesty is defined below.

- (i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
- (ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
- (iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
- (iv) TAMPERING - altering or interfering with evaluation instruments or documents.
- (v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.