## Schedule:

<table>
<thead>
<tr>
<th>DATE</th>
<th>Lab Schedule</th>
<th>Assignment:</th>
<th>Due on this date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 18/19</td>
<td>No labs 1st week of classes</td>
<td></td>
<td></td>
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<tr>
<td>Jan 25/26</td>
<td>Lab 1. Phenotype and Genotype</td>
<td>Assignment #1 (5pts)</td>
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<tr>
<td>Feb 1/2</td>
<td>Lab 2. Sea Urchin Fertilization and Development</td>
<td>Assignment #2 (10pts)</td>
<td>Assignment #1</td>
</tr>
<tr>
<td>Feb 8/9</td>
<td>Lab 3. Effects of UVR on Sea Urchin Development</td>
<td>Writing Assignment #1(10pts)</td>
<td>Assignment #2</td>
</tr>
<tr>
<td>Feb 15/16</td>
<td>Lab 4. <em>Drosophila</em> Mating and Embryogenesis</td>
<td>Assignment #3 (10pts)</td>
<td>Writing Assignment #1</td>
</tr>
<tr>
<td>Feb 22/23</td>
<td>Lab 5. Gametogenesis</td>
<td>Assignment #4 (10pts)</td>
<td>Assignment #3</td>
</tr>
<tr>
<td>Mar 1/2</td>
<td>Lab 6. <em>C. elegans</em> Genetics: RNA interference</td>
<td>Assignment #5 (10pts) Writing Assignment #2 (10pts)</td>
<td>Assignment #4</td>
</tr>
<tr>
<td>Mar 8/9</td>
<td>Lab 7. <em>C. elegans</em> Genetics: Mutants</td>
<td></td>
<td>Assignment #5</td>
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<tr>
<td>Mar 15/16</td>
<td>No Labs: Spring Break</td>
<td></td>
<td>Writing Assignment #2</td>
</tr>
<tr>
<td>Mar 22/23</td>
<td>Lab 8. Human Development and Disease</td>
<td></td>
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<tr>
<td>Mar 29/30</td>
<td>Lab 9. Frog and Chick Development</td>
<td>Assignment #6 (10pts)</td>
<td>Practical #2 (Labs 5-8) (20pts)</td>
</tr>
<tr>
<td>Apr 5/6</td>
<td>Lab 10. Planaria Regeneration</td>
<td>Assignment #7 (10pts) Writing Assignment #3 (10pts)</td>
<td>Assignment #6</td>
</tr>
<tr>
<td>Apr 12/13</td>
<td>Lab 11. Zebrafish Development</td>
<td>Assignment #8 (10pts)</td>
<td>Writing Assignment #3</td>
</tr>
<tr>
<td>Apr 19/20</td>
<td>Lab 12. <em>C. elegans</em> Chemotaxis</td>
<td>Assignment #8</td>
<td></td>
</tr>
<tr>
<td>Apr 26/27</td>
<td>Lab 13. Angiosperm Development and Enzyme Induction</td>
<td>Assignment #9 (10pts)</td>
<td>Assignment #7</td>
</tr>
<tr>
<td>May 3/4</td>
<td>Lab 14. <em>Arabidopsis</em> Mutants</td>
<td>Assignment #10 (10pts)</td>
<td>Assignment #9 Assignment #10 Practical #3 (Labs 9-14) (20pts)</td>
</tr>
</tbody>
</table>
BZ 311 Developmental Biology
Laboratory Course Syllabus Spring 2017

General Course Information

Welcome to the BZ 311 laboratory! This part of the course is intended to provide you with hands-on experience that will complement the lecture portion of the course. This course investigates cellular and molecular mechanisms that regulate animal and plant development. Topics include fertilization, cleavage, gastrulation, axis specification, organogenesis, morphogens, patterning and stem cells. Laboratory sessions focus on experimental manipulations of early invertebrate and vertebrate embryos.

Lab Manual: The Laboratory Manual for BZ 311-Developmental Biology is required. The lab manual is available at the CSU Bookstore.

Other Sources: If you are having difficulty understanding a concept, reading a second author’s take on the topic can be remarkably clarifying. The National Center for Biotechnology Information maintains “The Bookshelf”, a growing collection of biomedical books that can be searched directly by typing a concept into the query field and selecting “Go”. The Bookshelf is online at http://www.ncbi.nlm.nih.gov/sites/entrez?db=books.

Laboratory attendance is mandatory. Lab exercises are designed to help you better understand lecture topics, so it is essential that you come to lab and fully participate. If you cannot attend your assigned lab section, you may arrange to attend another lab section that same week (to avoid receiving a “0” for that week’s lab). To do this, you must ask permission of both your regular lab instructor and the instructor of the lab section you wish to attend. Please do not abuse this privilege. Because lab is so important to your complete understanding of BZ 311, missing more than two laboratory sessions during the semester will result in the assignment of a 0% of the laboratory portion of the course, which accounts for 25% of your total course grade. If you have a university excused absence, please contact your GTA at least one week before your absence to see what arrangements can be made.

Cleanup: You are responsible for cleaning up your work area and returning supplies to their appropriate location. You should complete the following items before leaving the laboratory:

1. All glassware should be washed and returned to the appropriate location.
2. All used slides should be washed, dried, and returned to the appropriate box.
3. Your bench top (work area) should be wiped down with paper towels and the cleaning solution provided.
4. Any trash you generate should be disposed of properly (in the trash receptacle, glass waste container, or hazardous waste container provided).
** NO FOOD OR DRINK PERMITTED IN LAB!**

Electronic devices must be turned OFF during the lab period!

**Grading Policy: Lab is out of 185 points (1/4 of the total points for BZ311)**

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
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<tbody>
<tr>
<td>Lab Assignments</td>
<td>5pts</td>
</tr>
<tr>
<td>Lab Quizzes/Practicals</td>
<td>60pts</td>
</tr>
<tr>
<td>Writing Assignments</td>
<td>30pts</td>
</tr>
<tr>
<td>Total</td>
<td>185pts</td>
</tr>
</tbody>
</table>

**You will be responsible for completing weekly assignments.** These assignments will consist of some combination of properly labeled diagrams, a summary of experimental results (graphs, tables, etc.), a short discussion of the experimental results, and/or short-answer discussion questions. At semester’s end, your laboratory grade will be calculated from these lab assignments, quizzes/practicals, and written assignments. Absences result in a score of 0 points for that week. There are no make-up labs, quizzes, or assignments.

**Note:** Your weekly assignment and quizzes/practicals will not be graded if you do not complete all of the lab exercises and clean up your work area at the end of the laboratory period.

**Academic dishonesty of any kind will not be tolerated and must be reported to student judicial affairs.** Quotes are not allowed, and for any commentary or assignment involving a journal article, podcast, online talk, etc., you are required to write in your own words and cite the source article or you will receive a 0 for the assignment (see the following page for the BZ311 citation policy and examples on how to properly cite sources). We adhere to the CSU policies on academic integrity and classroom behavior which can be found in the CSU General Catalog for 2015-2016 at:

http://catalog.colostate.edu/general-catalog/policies/students-responsibilities/#academic-integrity

* If you have any general questions or concerns regarding the BZ311 Laboratory, you may contact Alpana Damle, Assistant Laboratory Coordinator: Office: 210 Yates Phone: (970) 491-0860 Email: apdamle@colostate.edu (please include your name, course number, lab section number, and lab instructor’s name in emails or phone messages)

**Important Information about your Laboratory Instructor**

Name: __________________________________________________________________________

E-mail Address: ___________________________________________________________________

Office Location: ___________________________________________________________________

Office Hours: _____________________________________________________________________
BZ311 policy on using citations and direct quotes:

WHY: Learning how and when to use citations is good scholarship. Why bother citing? Here are four thoughtful reasons to use citations in your work:

- You can use citations to compare and contrast the perspectives or opinions put forth by different sources, which might not always agree.
- Citations can push you to think more deeply, and to make sure you are contributing original content to your writing, rather than simply listing one idea after another, all obtained from your source(s).
- Using citations allows you (the writer) to clarify which ideas are not your own, and to give credit where it is due.
- Using citations helps other readers know where to go to find more information on the interesting stuff you are writing about!

Read more about the above ideas here: Using Sources. Retrieved from URL: http://writing.yalecollege.yale.edu/advice-students/using-sources

Source citation: When you consult any published literature (journal articles, websites, books, podcasts, etc.) to support your writing, they must be properly cited.

These are the two types of sources that are both REQUIRED for the assignments:

1. In-text citations
2. Literature cited reference list

In-Text citations:
Within the body of your text or below any picture (photograph, table, graph, etc.), citations must be given. If you fail to include in-text citations within the text or below a visual, you will receive a zero for your entire assignment grade.

How to cite in text in APA:

Structure: (Lastname, Year) – up to 5 authors list last names, more than 5 put “et. al”

Example: (Lowry, Rosebrough, Farr & Randall, 1951), (Atlschul et. al, 1997)
**Literature Cited Reference List:**
A full list of literature citations of all materials you consulted to write assignments must be included.

**How to cite a website in APA:**

**Structure:**

Lastname, F. M. (Year, month date published). *Article title*. Retrieved from URL.

**Example:**


**How to cite a journal article in APA:**

**Structure:**


**Example:**


**How to cite a book in APA:**

**Structure:**


**Example:**