UNIVERSITY OF TORONTO SCARBOROUGH

BIOC19H3 – Animal Developmental Biology

Instructor: Daman Bawa

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Teaching Assistant: Catherine Deane

Office Hours: Thursdays 3:30 PM – 5:30 PM

Office hours may be held in the library if required and any changes to the location will be announced in class and on Blackboard.

Please be prepared and consult lecture materials prior to coming to the office. Appointments outside these hours can be arranged by e-mail. If the hours need to be changed during the semester, you will be notified by an announcement Blackboard.

Lecture: **Thursday 1:00 PM – 3:00 PM**

Room: AA 112

Textbook (recommended):

Development Biology (11th edition)

Scott F. Gilbert and Michael J. F. Barressi

Sinauer Press

ISBN: 978-1-60535-470-5

The best way to reach me outside the office hours is by e-mail. Please use your UTSC or UTORONTO e-mail account and include your course code in the subject. Emails sent from non-university accounts will not be answered.

Lectures:

BIOC19 will provide an overview of cellular and molecular events involved in embryonic development. We will cover topics that include different model systems to study development, with an emphasis on regulation of gene expression. Topics related to growth, differentiation, organogenesis and morphogenesis will also be covered. The lecture material will come from a number of sources including the textbook, primary papers, reviews and other sources.

Video recording of the lectures is not permitted.

Each student is encouraged to ask questions and participate in class. Often times a question can lead to an interesting discussion for all students.

Accessibility:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Access*Ability* Services Office as soon as possible. I will work with you and Access*Ability* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC Access*Ability* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Academic integrity/plagiarism:

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (http://www.governingcouncil.utoronto.ca/policies/behaveac.htm) outlines the behaviors that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

> **In papers and assignments**: Using someone else's ideas or words without appropriate acknowledgement. Submitting your own work in more than one course without the permission of the instructor. Making up sources or facts. Obtaining or providing unauthorized assistance on any assignment.
>
> **On tests and exams**: Using or possessing unauthorized aids. Looking at someone else's answers during an exam or test. Misrepresenting your identity.
>
> **In academic work:** Falsifying institutional documents or grades. Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behavior or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (refer to: http://www.utoronto.ca/academicintegrity/resourcesfor students.html).

Grade Breakdown:

The grade breakdown for the course will be as listed below. The quizzes and exams will test the material covered in lectures. The exams will include multiple-choice questions, fill in the blank(s) and short answer type questions that test your understanding and application of the course material. If you miss an exam or a quiz for an official reason (e.g. documented family emergency or illness), you must contact me within 48 Hours and provide me with appropriate documentation.

- **Quizzes: 6 X 2%** **Topics will be announced in class** **Dates: See below**
- **Midterm Exam: 38%** **Topics covered before the date of exam** **Date: TBA**
- **Final Exam: 50%** **Cumulative – All topics covered in the course** **Date: TBA**

Tentative Quiz Schedule:

The quizzes will be done online on Blackboard and will include multiple-choice questions and fill in the blanks. Each quiz will be worth 2% of your final grade for the total combined grade of 12% over the whole term. It is students' responsibility that the quiz is completed and submitted within the time period specified. If you do not complete the quiz on time, a grade of zero will be assigned. If any changes need to be made due to unforeseen circumstances, it will be posted on Blackboard.

Week of:

Sept 19	Quiz 1
Oct 3	Quiz 2
Oct 17	Quiz 3
Oct 31	Quiz 4
Nov 14	Quiz 5
Nov 28	Quiz 6

Tentative Lecture Schedule:

More than one topic may be covered in one lecture while some topics will be covered over more than one lecture. The topics may be covered in a different order than the one listed below.

Topic 1: Overview of the course; Principles of Development

Topic 2: Studying developmental biology – tools and techniques

Topic 3: Differential gene expression, developmental patterning

Topic 4: Cell signaling and communication

Topic 5: Gametogenesis and Fertilization

Topic 6: Early development in C. Elegans, Drosophila, Mammals

Topic 7: Development of nervous system

Topic 8: Organogenesis

Topic 9: Metamorphosis and regeneration

Topic 10: Development in Health and Disease