

BISC333 - Syllabus

Course overview

This is an introductory course in Developmental Biology. It focuses on a number of model organisms (plants, invertebrates and vertebrates) and addresses key questions such as: How do cells in the developing embryo differentiate into specialized cells such as neurons or muscle cells? How do these cells organize themselves to form an intact animal or plant? The course will cover the sequence of events during embryogenesis (pattern formation, cell fate specification, cell migration and morphogenetic events, cell differentiation, organogenesis) with the goal of illustrating general principles and molecular mechanisms of development.

Technical details

Instructor: Harald Hutter (hutter@sfu.ca)

Teaching Assistant: Nasim Abrishami Moghaddam (nabrisha@sfu.ca)

Office hours with your instructor, Dr. Hutter:

Flexible. Please email me for an appointment.

Office hours with your TA:

TBD

Textbook (recommended): [Principles of Development \(6th or 7th Edition\) - Lewis Wolpert; Oxford University Press, 2019/2026](#)

Assignments

Tutorials (10% of your grade)

Each week I will upload a worksheet with questions related to the previous week's lectures. Answer the questions and send your answers per email to your TA before 11 am on the day of the tutorial. Answers to tutorial questions will be discussed during the tutorial session. You should also use the tutorial session to bring up any questions you have regarding the course material. Tutorial grades are based on active participation in tutorials, timely submission of answers, and effort made to answer all the questions. Correctness of the answer is not a grading criterium.

Note: The first tutorial will be on May 25th.

Homework assignment 1 (10% of your grade)

Pattern formation. Due approximately end of June. I'm working on the details.

Homework assignment 2 (10% of your grade)

From zygote to differentiated cell. Due approximately end of July. I'm working on the details.

Midterm exam (25% of your grade)

There will be one midterm exam scheduled for June 17 during regular class time.

Final exam (45% of your grade)

The final exam will be comprehensive (i.e. will cover the entire course content) and will be a closed-book exam.

Date of the final exam:

TBD

Academic integrity

The use of technology to produce content for your assignments is strictly prohibited as **all submissions for grading must be your own work**. This includes a prohibition on generative artificial intelligence software such as ChatGPT and translation software as it will interfere with the learning objectives outlined for this course.
