**UNIVERSITY OF CALGARY**
FACULTY OF SCIENCE

**Department of Biological Sciences**
BI 186
403 220-3140
biosci@ucalgary.ca

# COURSE OUTLINE

1. **Course:** CMMB 505, Advanced Developmental Biology - Winter 2021

   Lecture 01: TR 11:00 - 12:15 - Online

| Instructor | Email | Phone | Office | Hours |
|---|---|---|---|---|
| Dr John Cobb | jacobb@ucalgary.ca | 403 220-5948 | BI 286D | Open door policy and by appointment |

**Online Delivery Details:**

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

All meetings for this course will be held online via Zoom. All meetings will be held synchronously and students will be expected to attend live and to participate in discussions. However, if this is a hardship for any students, especially those that are living in a very different time zone, then the classes will be recorded and made available to these students. Such students requiring this exception must notify Dr. Cobb before the start of the course. Otherwise, the classes will not be recorded.

To access the zoom links, log on to D2L: click on the 'Communications' tab, then choose Zoom from the dropdown list. If you have additional questions, please refer to this page: http://elearn.ucalgary.ca/zoom-d2l-student/.

If students anticipate they will miss any components they must notify the instructor in advance, and in this case, when a special request is made, the class will be recorded and made available.

Expectations for online etiquette: As with in person classes, students are expected to behave in a professional and respectful manner during online teaching and learning sessions, and when using course tools such as discussion boards. The chat function in an online program such as Zoom is reserved to ask questions in a respectful manner or to respond to questions posed in class. The chat function must not be used for posting disrespectful comments towards other students or the course instructor, nor be used for having side-conversations, including private chats. Please note that if the instructor downloads the chat history for the session, ALL chats (including private chats) will be included in the history. Please be sure to not type anything in the chat that you would not be comfortable with the instructional team seeing.

**Course Site:**

D2L: CMMB 505 L01-(Winter 2021)-Advanced Developmental Biology

**Note:** Students must use their U of C account for all course correspondence.

2. **Requisites:**

   See section 3.5.C in the Faculty of Science section of the online Calendar.

   **Prerequisite(s):**
   Cellular, Molecular and Microbial Biology 403.

3. **Grading:**

   The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

   In determining the overall grade in the course the following weights will be used:

| Component | Weight | Date |
|---|---|---|
| **Paper Review #1, take home, 16 day allowance** | **15%** | **February 12 (Friday)** |
| **Paper Review #2, take home, 16 day allowance** | **25%** | **March 31 (Wednesday)** |
| **Class participation** | **20%** | **January 12-April 15** |
| **Class presentation** | **15%** | **Specific dates to be determined** |
| **Take home final** | **25%** | **Assigned April 15, Due April 29** |

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

| | **A+** | **A** | **A-** | **B+** | **B** | **B-** | **C+** | **C** | **C-** | **D+** | **D** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Minimum % Required** | 94 % | 85 % | 82 % | 79% | 75% | 72 % | 69 % | 65% | 62% | 59 % | 50 % |

This course has no in-class exams. The final is a take-home exam that must be completed independently by each student. Students are not permitted to discuss the exam or their answers with other students or anyone besides the instructor. The exam will be distributed on April 15 and must be returned via the D2L dropbox by April 29, 2020.

Participation in this course requires acceptance of this grading structure. Term work (paper reviews, class participation, and presentation) submitted by the student will be assigned a letter grade; a percentage score will be given for the take-home final. The student's mark for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

4. **Missed Components Of Term Work:**

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Course Text: There is no course text book. All material will be from the scientific literature. PDFs of the assigned paper will be distributed via the D2L website for each class, or a link to the pdf will be provided. Scott Gilbert's "Developmental Biology" 10th, 11th or 12th Ed. is highly recommended as a reference.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

The final exam and assigned paper reviews are prepared outside of class and will be submitted via D2L Dropboxes. These assessments must be performed independently by each student—no group work. The only exception is the student presentation, which is a group effort. The assignments and the take-home final are open book. Any legitimate materials (published papers, textbooks) can be consulted, but all sources of information must be cited and any ideas from those sources must be communicated in the words of the student. All writing must be done independently by the student.

E.

Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

In this course, the quality of the student's writing will be a factor in the evaluation of the student's performance.. See alsoSection E.2of the University Calendar.

10. **Human & Living Organism Studies Statements:**

Students will not participate as subjects or researchers in human studies.

See also Section E.5 of the University Calendar.

**STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.** Students taking laboratory and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with Section SC.4.1 of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar

b. **Final Exam:**The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

12. **Other Important Information For Students:**

a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

b. **SU Wellness Services:** For more information, see www.ucalgary.ca/wellnesscentre or call 403-210-9355.

c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed at (https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf)

d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

   Student Handbook on Academic Integrity
   Student Academic Misconduct Policy and Procedure
   Research Integrity Policy

   Additional information is available on the Student Success Centre Academic Integrity page

e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at procedure-for-accommodations-for-students-with-disabilities.pdf.

   Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head, Undergraduate of the Department of Biological Sciences, Heather Addy by email addy@ucalgary.ca or phone 403 220-6979. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See Section E.4 of the University Calendar.

f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see Legal Services website.

g. **Student Union Information:** VP Academic, Phone: 403-220-3911 Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: 403-220-3913 Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email: ombuds@ucalgary.ca.

h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies

available at law.

**Course Outcomes:**

- Students will be able to explain the experiments that led to critical discoveries in our understanding of the development of animals
- Students will be able to describe the important molecular techniques used in developmental biology
- Students will be able to outline the discoveries that established that molecular homologies underlie the common developmental pathways in all animals
- Students will be able to critique and extract information from the primary, current literature of developmental biology at an advanced level
- Students will interpret and critique experimental results from the primary developmental biology literature
- Students will prepare and deliver oral presentations in which they describe and critique developmental biology studies from the primary literature
- Students will formulate theoretical experimental approaches to address problems in developmental biology
- Students will be able to debate the pros and cons of recent controversial methods used in developmental biology and related areas of medicine

Electronically Approved - Dec 22 2020 14:26

---

**Department Approval**

Electronically Approved - Dec 23 2020 09:17

---

**Associate Dean's Approval**