

BIOL 312 Entomology Outline – Fall 2026 – CRN 10347

General Course Information

This course will provide a detailed introduction to the field of entomology – the scientific study of insects, with an emphasis on insect evolution, ecology, and systematics. Lectures will include: an overview of insect morphology, internal anatomy, and physiology, and insect and arthropod phylogenetic relationships. Lectures will also include topics in insect ecology and evolution, including mating systems, sociality, medical entomology, plant-insect interactions, and conservation. The laboratory portion of the course will include labs on insect identification, insect behaviour, and insect-symbiont interactions. As a lab project, students will prepare an image-based insect collection.

Lecture Location & Hours

Monday & Thursday, 10am – 11:20pm, David Strong C118

Lab Location & Hours

Monday (B01), Tuesday (B02), or Wednesday (B03), 2:30pm – 5:20pm, Cunningham 228

Course Instructors

Dr. Steve Perlman is an evolutionary biologist whose research focuses on parasites and beneficial microbes that infect insects and other invertebrates. He has been a professor at Uvic since 2005. In recent years, he has also taught BIOL 355 (Evolution), BIOL 435 (Molecular Evolution), and has been the Biology Undergraduate Honours Advisor and Biology Graduate Advisor.

Dr. Lyndon Duff is your Senior Lab Instructor (SLI), an entomologist whose work focuses on the behavioural ecology of social insects. He studied the sociality, foraging, movement, and mating behaviour of populations of the Eastern or Virginica carpenter bee, *Xylocopa virginica*, in southern Ontario from 2015 to 2024 while completing a MSc and PhD at Brock University. He joined Uvic in Fall 2025 and is also the SLI for BIOL 215 (Principles of Ecology), BIOL 329 (Biology of the Vertebrates of British Columbia), and BIOL 330 (Study Design and Data Analysis).

Contact Information, and Office Hour Information

Steve Perlman:

Email: stevep@uvic.ca

Office hours: Monday, 11:30am – 12:30pm, Cunn 160F (enter through 160D)

Lyndon Duff:

Email: dufflb@uvic.ca

Office hours: by appointment, Cunn 234a

Course Website and Materials

You can find the course website on Brightspace. Be sure to check this website regularly for important information and announcements, required readings, and other lecture and lab material. Lecture slides will be posted on Brightspace after class. There is no required textbook for this course.

Intended Learning Outcomes

After completion of this course, you will have received an overview of the field of entomology. You will have learned what are the major groups of insects and other arthropods, how they are related to each other, and what are the main features that have shaped their evolutionary history and success. You will have learned the principles underlying phylogenetic approaches used to determine insect and arthropod relationships. You will have learned how to identify the major groups of insects. You will have become familiar with insect DNA and biodiversity databases. You will have learned about key issues and concepts in insect biology, including medical entomology, pest control, pollination, biodiversity conservation, and sociality. You will have gained experience reading, understanding, and synthesizing primary scientific entomological research articles and figures from these articles. You will also have gained experience working with live insects, performing experiments that address ecological and behavioral questions involving insects, and learning how to discuss and interpret your results.

Assessments

Lecture Midterm (Thurs. Oct. 22)	22.5%
Lecture Final (Exam period, TBA)	30%
Lecture exercise: Databases, diversity, and DNA barcoding (due Nov. 15)	2.5%
Lab Insect ID Test (week of Oct. 26)	15%
Lab: Student Presentation on an Insect Order	3%
Lab: Bee Identification Assignment	2%
Lab: Insect Behaviour Assignment	2.5%
Lab: Insect Photo Project (due Fri. Nov. 27)	10%
Lab: Cytoplasmic Incompatibility Assignment (due Fri. Dec. 13)	12.5%

Penalty for late submissions: 5% per day.

To pass the course, students must:

- 1) Complete the final exam
- 2) Complete the following lab components: a) 1 lab test, b) insect photo project, c) cytoplasmic incompatibility assignment, d) insect behaviour assignment
- 3) Score a grade of 50 points, or greater, combined across assessments.

If either 1, 2 or 3 are not completed, the student will automatically fail the course and receive a grade of "N" on their transcript. N is a failing grade and factors into the GPA

as a value of 0. If a student completes 1, 2 and 3 but is not successful in 4, they will receive an “F” on their transcript.

Appendix: Policies & Additional Information

UVic Territory Acknowledgment: *We acknowledge and respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.*

Attendance and missed tests and exams:

Attendance is important. For more information about UVic’s policy on attendance:

https://www.uvic.ca/calendar/future/undergrad/index.php#/policy/ryNResf_E?bc=true&bcCurrent=03%20-%20Attendance&bcltemType=policies

Students who miss a test or exam are expected to contact their instructor as soon as possible. All correspondence regarding missed assessments must be in writing via email. Valid excuses for missed tests include illness, emotional trauma, and UVic-sponsored sporting activities. If a student misses the lecture midterm, the marks will be distributed to the final exam. If a student misses the lab test, they are expected to contact the senior lab instructor as soon as possible in order to make alternate arrangements.

If illness, accident, or family affliction causes a student to miss the final exam or to fail to complete any assignment by the end of the term, students are required to submit a Request for Academic Concession.

For more information about Academic Concessions:

<https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/index.php>

Students are reminded that final exams in the Faculty of Science run from December 10 through December 23. Final exams will not be rescheduled for students who make travel plans that conflict with the officially scheduled final exam for this course.

Please note that no supplemental tests or exams will be offered in this course.

Important Dates:

Last day for 100% reduction of tuition fees for standard courses – Sep. 22

Last day for adding first term courses – Sep. 25

Last day for 50% reduction of tuition fees for standard courses – Oct. 13

Last day for withdrawing from first term courses without penalty of failure – Oct. 31

Reading Break – Nov. 9–11

Last day of classes – Wed. Dec. 7

Exam period – Dec. 10–23

Important UVic links:

Academic important dates: <https://www.uvic.ca/calendar/dates/>

Academic calendar: <https://www.uvic.ca/calendar/undergrad/>

Academic concession guidelines:

<https://www.uvic.ca/calendar/undergrad/index.php#/policy/BymcP73U9>

Accessible learning: <https://www.uvic.ca/accessible-learning/index.php>

Academic integrity:

https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V

Academic Integrity:

As teachers, mentors, scientists, researchers, and members of the University of Victoria community, academic integrity is of the highest importance to us. Students are required to abide by all academic regulations set out in the University calendar, including standards of academic integrity. Violations of academic integrity (e.g. cheating and plagiarism) are considered serious and may result in significant penalties.

Please read the following—you are expected to abide by the terms outlined here:

<https://www.uvic.ca/students/academics/academic-integrity/index.php>

https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V#/policy/Sk_0xsM_V%C2%A0

To help avoid plagiarism and cheating, please read the UVic Libraries' plagiarism guide:

<https://libguides.uvic.ca/AvoidingPlagiarism>

Before handing in coursework for evaluation, students will be required to complete the UVic Undergraduate Integrity in Practice course in Brightspace:

<https://bright.uvic.ca/d2l/le/discovery/view/course/307294>

Code of Conduct:

All staff and students are responsible for adhering to a code of conduct, including academic integrity. The University of Victoria is committed to promoting critical academic discourse while providing a respectful and supportive learning environment. All members of the university community have the right to this experience and the responsibility to help create such an environment.

Please be advised that, by logging into UVic's learning systems or interacting with online resources, and course-related communication platforms, you are engaging in a university activity. All interactions within this environment are subject to the university's expectations and policies.

Any concerns about student conduct may be reviewed and responded to in accordance with the appropriate university policy.

Concerns about conduct in lectures and labs should be brought to your instructor.

For more information about UVic's policies on student conduct:

<https://www.uvic.ca/students/student-life/student-conduct-and-policies/index.php>

<https://www.uvic.ca/students/academics/academic-integrity/index.php>

https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V#/policy/Sk_0xsM_V%C2%A0

Course Grade and Academic Transcript:

Grades for all UVic courses are submitted as percentiles. A student's academic transcript will include the percentile grade and a letter grade plus the class average and the number of students registered in the course at the time of the final exam. Percentiles will be rounded to the nearest whole number; a grade of xx.5 will be rounded up. Percentile grades will be converted to letter grades on the student's academic transcript according to the table given below.

A+ (90-100), A (85-89), A- (80-84), B+ (77-79), B (73-76), B- (70-72), C+ (65-69), C (60-64), D (50-59), F (0-49)

Mental Health

A note to remind you to take care of yourself. Diminished mental health can interfere with optimal academic performance. Do your best to engage in self-care and maintain a healthy lifestyle this semester. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone. Support services at UVic can be found through the UVic Student Wellness Centre (<https://www.uvic.ca/student-wellness/index.php>), which provides cost-free and confidential mental health services to help you manage personal challenges that impact your emotional or academic well-being.

Copyright statement:

All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class. The material is protected under copyright law, even if not marked with a ©. Any further use or distribution of materials to others requires the written permission of the instructor, except under fair dealing or another exception in the Copyright Act. Violations may result in disciplinary action under the Resolution of Non-Academic Misconduct Allegations policy (AC1300). Students may not distribute lecture notes or any exams or quizzes from the course without permission of the instructor, and to do so, through note-sharing sites or other means, violates the Policy on Academic Integrity. For more information, please refer to:

<https://www.uvic.ca/universitysecretary/assets/docs/policies/IM7310.pdf>

Tentative Lecture Topics and Schedule:

Thurs. Sept. 10	1. Introduction and Importance of Insects
Mon. Sept. 14	2. Morphology
Thurs. Sept. 17	3. Introduction to Phylogenetics
Mon. Sept. 21	4. Phylogenetics and Ecdysozoa
Thurs. Sept. 24	5. Arthropods to Hexapods
Mon. Sept. 28	6. Pterygota and flight, Neoptera
Thurs. Oct. 1	7. Neoptera continued
Mon. Oct. 5	8. Holometabola, Metamorphosis & meet with a Guest Entomologist
Thurs. Oct. 8	9. Holometabola continued
Mon. Oct. 12	<i>Thanksgiving Holiday – No Class</i>
Thurs. Oct. 15	10. Internal Anatomy & Physiology
Mon. Oct. 19	11. Nervous System and Sensory Biology I
Thurs. Oct. 22	Lecture Midterm
Mon. Oct. 26	11. Nervous System and Sensory Biology II
Thurs. Oct. 29	12. Development, Life Histories I
Mon. Nov. 2	13. Development, Life Histories II
Thurs. Nov. 5	14. Sexual Selection, Mating Systems
Mon. Nov. 9	<i>Reading Break - No Class</i>
Thurs. Nov. 12	15. TBA: Lecture with a Guest Entomologist
Mon. Nov. 16	16. Plant-Insect Interactions – Herbivory
Thurs. Nov. 19	17. Parasitoids, Predators, Parasites
Mon. Nov. 23	18. Insect Symbionts
Thurs. Nov. 26	19. Medical Entomology
Mon. Nov. 30	20. Pests & transgenics
Thurs. Dec. 3	21. Plant-Insect Interactions – Pollination
Mon. Dec. 7	22. Insect Sociality

Biology 312 Laboratory Schedule, Fall 2026

Senior Lab Instructor: Dr. Lyndon Duff: dufflb@uvic.ca

Lab No.	Week of	Topic
	Sept. 7	No formal labs – First week
1	Sept. 14	Lab Introduction – Insects and Identification Basal Phylogenetic Orders week Odonata / Ephemeroptera / Orthoptera
2	Sept. 21	Lepidoptera week <i>Student Presentation – Incomplete Metamorphosis</i>
	Sept. 28	No formal labs – Week of Truth and Reconciliation
3	Oct. 5	Coleoptera week <i>Student Presentation – Lepidoptera</i>
	Oct. 12	No formal labs – Thanksgiving
4	Oct. 19	Hymenoptera week <i>Student Presentation – Coleoptera</i>
5	Oct. 26	Insect ID Test
6	Nov. 2	Diptera week <i>Student Presentation- Hymenoptera</i>
	Nov. 9	No formal labs – Reading Break
7	Nov. 16	Behaviour of Stink Bug Parasitoids & setting up Cytoplasmic Incompatibility Lab
8	Nov. 23	Hemiptera week <i>Student Presentation- Diptera</i>
9	Nov. 30	Cytoplasmic Incompatibility Lab <i>Student Presentation- Hemiptera</i>