

Department of Biology Course Outline

SC/BIOL 4230 4.00 Entomology
S2, 2019

Course Description

The distinguishing characteristics, biology and economic importance of the major orders and families of insects.

Prerequisites

Prerequisite: SC/BIOL 2030 4.00.

Course Instructors and Contact Information

L. Packer; 345 Lumbers, ext 66425, by appointment
S. Monckton; 345 Lumbers, ext 66425, by appointment

Schedule

Day and Time of Lectures, T&R 11:00am
Tutorials, Labs T&R 2pm

Evaluation

Quiz on validation paper 2%
Mid term 10%
Insect collection 50%
Special insect work 13%
Lab assignments 5%
Lab exam 10%
Final exam 10%

Important Dates

Midterm 9.vii
Final exam 25.vii
Lab exam 25.vii

NOTE: for additional important dates such as holidays, refer to the "Important Dates" section of the Registrar's Website at <http://www.yorku.ca/yorkweb/cs.htm>

Resources

No textbook, required lab materials are handed out as needed

Learning Outcomes

Upon successful completion of this course, students should be able to:

Cognitive: know the classification of insects and arthropods more broadly, understand the basic principles of systematics, know a range of behavioural, ecological and applied phenomena as they relate to different insect groups and understand the processes associated with them

Psychomotor: use insect collecting equipment, insect pins, pinning trays and microscope, be able to dissect an insect

Affective: obtain an appreciation of the beauty and academic interest of insects

Course Content

Details of what will be taught in the course

Introduction

Collecting methods

Principles of classification

Origin of insects and early insect phylogeny

Fossils, character mapping, fossils

Insect life cycles and phenology

Ephemeroptera, Odonata, origin of flight, mating strategies

Dictyopteroid orders, evolution of sociality in termites

Orthoptera and sound production in insects

Hymenoptera, haplodiploidy, social evolution, conservation genetics

Agricultural entomology

Lepidoptera, passive defence mechanisms

Coleoptera, fireflies, bark beetles

Diptera, forensic entomology

Experiential Education and E-Learning

The entire laboratory component of this course is experiential education with considerable outdoor, hand-on insect sampling experience.

Slide shows and online videos illustrate the beauty of insects

There is also considerable opportunity for the development of aesthetic appreciation of insects

Other Information

Students will arrive on time as the lectures and laboratories occur in the same space which can be locked from inside as soon as lectures begin

Students who are scared of insects and/or not prepared to spend a considerable amount of time outdoors looking for specimens for their collection (which is worth half the course marks) will not do well.

Students should expect to spend a considerable amount of time outdoors outside of formal class time to obtain the diversity of insect specimens required for success

The professor meets with the students one-on-one at least twice during the course to give direction for the collection and how to do well/better in the class

Course Policies

- Because we give students until the last minute to hand in their collections and chosen insect assignment (giving us just enough time to mark them before we have to meet the university deadline for assigning marks), late collections and chosen insect assignments cannot be marked.
- Because the course is lab-intensive, missed labs mean that valuable insect identification time is missed.
- There will be no make-up exams.
- Policies for recording lectures- Lectures may be recorded

University Policies

Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students' research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website at - <http://www.yorku.ca/academicintegrity/>

Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Additional information is available at the following websites:

Counselling & Disability Services - <http://cds.info.yorku.ca/>

Counselling & Disability Services at Glendon - <http://www.glendon.yorku.ca/counselling/personal.html>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

Ethics Review Process

York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants*. In particular, students proposing to undertake research involving human participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an *Application for Ethical Approval of Research Involving Human Participants* at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at

http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf (PDF)

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - <http://secretariat-policies.info.yorku.ca/policies/disruptive-and-or-harassing-behaviour-in-academic-situations-senate-policy/>