

**Department of Biology Course Outline**

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| Course Number, Course Name  Term, Year |

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| Course Description |
| Official Calendar Course Description  Please use Ariel 10 point font in all boxes.  We do not know the number of species on Earth, even to the nearest order of magnitude. This course discusses the factors that influence the number of species in an area and the importance of biodiversity to humanity. Two lecture hours, three laboratory hours. One term. Three credits. Note: Completion of 60 credits required, towards a degree in biology or environmental science or environmental studies, or permission of the instructor. |

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| Prerequisites |
| Prerequisites from Calendar Course Description |

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| Course Instructors and Contact Information |
| Laurence Packer, [xeromelissa@mail.com](mailto:xeromelissa@mail.com), ext 66524  Spencer Monckton, [monckton@yorku.ca](mailto:monckton@yorku.ca), ext 66524  Name and contact information of course director, lab director and other important people associated with course administration. Office hours, any other related information. |

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| Schedule |
| Day and Time of Lectures,  Tutorials, Labs  (for tutorial and labs you can refer to course website, lab manual and/or York Courses Web Site as appropriate.  Refer to York courses web site  Lectures are on Tuesday and Thursday at 11:30am, last 50 minutes and take place in CB121 |

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| Evaluation |
| Evaluation Components of Final Grade and related information.  NOTE: An exam or term test worth more than 20% of the final grade may not be given during the final two weeks of classes.  First midterm, date TBA 15%  Second midterm, date TBA 15%  Final exam, date TBA 20%  Labs – 3 modules spread throughout the term, 30%  Assignment – 10%  Debate – 10% |

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| Important Dates |
| Dates of Tests/Exams, Due Dates of Major Assignments, First class, last class, drop date, etc.  Due dates for assignments and exams TBA, first class January 4th, drop date etc., as in university website  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 |

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| Resources |
| Text, Website, and related information such as Clicker information, lab manual  No textbook  A moodle site will be set up asap.  Lab modules, the assignment and debate information will be provided well before the lab sessions |

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| Learning Outcomes |
| Upon successful completion of this course, students should be able to:  **Course learning objectives:**  *Cognitive*:  Upon successful completion of BIOL 4255 4.0, students will be able to do all of the following and for each of the areas provide various named examples relevant to the phenomena under consideration:  • explain the principles of classification based upon phylogenetic methods  • use systematic and taxonomic terminology with correct scientific meaning and appropriate context  • be able to perform phylogenetic analyses using computer programs to analyse data they themselves have generated  • carry out a biodiversity inventory with all appropriate methodologies from sampling to analysis  • carry out a literature survey to find out about the biology of any particular group of organisms  • understand that defining the term “species” is difficult, and understand several of the more commonly used concepts  • understand how DNA barcoding works and how it is applied  • understand the different ways in which the number of species on the planet is guesstimated  • understand how the diversity of species is estimated from the fossil record and be able to explain the pattern of species diversity change over time since the Precambrian  • explain what happened during past mass extinctions  • explain the complexities around dealing with the Pleistocene extinction event  • understand the patterns in historical extinctions  • be able to explain extinction as a process  • understand the principles of conservation genetics  • understand island biogeography and the species area relationship (and some of its more modern analogues)  • be able to explain the main predicted causes of future extinction with particular emphasis upon climate change and the complexities that arise from it  • be able to explain to a wide variety of different audiences the way in which people use other organisms  *Psychomotor*:  Upon successful completion of BIOL 4255 4.0, students will be able to do all of the following:  • use computers and computer programs effectively  • manipulate model organisms  • use paper and scissors to construct an illustrated phylogeny  *Affective*:  Upon successful completion of BIOL 4255 4.0, students will be able to do all of the following:  • Explain their appreciation of the aesthetic beauty of organisms  • Describe their appreciation for their intellectual fascination with organisms  • Explain their appreciation of the utility of organisms in a wide range of circumstances  • Describe the fascinating diversity of organisms in appearance, behaviour, ecology and impacts upon humanity  • appreciate the importance of rational debate over a controversial topic and appreciate both sides of the argument(s) |

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| Course Content |
| Details of what will be taught in the course. For example, expanded course description (a description of the course in your own words, not the calendar copy), a list of lecture topics or lecture schedule with associated readings  *E.g.* Lecture Date and Topic, associated readings, materials, etc.  If you like to provide a detailed lecture outline you can also post it on Moodle and refer students to it.  This will be provided in class, by email and on moodle as soon as that is set up for the course. |

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| Experiential Education and E-Learning |
| Description of course components that would be classified as EE or e-learning.  Please see answer to “learning outcomes” above for more information on this |

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| Other Information |
| Any information you want in your outline that does not fall under the other categories, such as laboratory information, the expectations you have for your students, tips for success, role of tutorial, role of instructors, etc.  Students should arrive to lectures on time.  Students should arrive to laboratory sessions having already read the relevant materials provided associated with that lab. |

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| Course Policies |
| Policies you set for your course – for example:   * Policy for missed labs, assignments, midterms, tests * Penalties for late assignments * Email and discussion forum etiquette/policies * Policies for recording lectures   • Missed labs have to be made up through consultation with the TA.  • Missed exams will have a make-up exam scheduled as soon as possible after the exam date. Only one make-up exam will be scheduled for each exam, students missing both the original and the make-up exam will receive a zero for that portion of the mark.  • In the event of a student not being able to attend an exam or a laboratory session, advanced warning of this should be made to the instructor or TA (as appropriate) BEFORE the beginning of the exam or laboratory session OR the medical note should explain why it was that the student was not capable of sending an email or text before the missed event.  • Late assignments will not be marked unless a detailed medical report is provided explaining why it was not possible for the work to be completed on time.  • Students do not need to ask permission to record lectures, this is freely given.  • Students that miss a lecture should obtain the relevant information from other students, preferably through listening to a recorded version. |

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| 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.  Student's 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/  **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 and submit an Examination Accommodation Form at least 3 weeks before the exam period begins. The form 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-andor-harassing-behaviour-in-academic-situations-senate-policy/ |