



Flowering Plant Taxonomy
NRMT 2050 / BIOL 2051
Faculty of Natural Resources Management
Winter 2024

Instructor Information

Instructor: Dr. Ashley Thomson, PhD, RPF (she/her)
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Office Hours: Fridays: 1:30 to 3:30 pm
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Instructor: Mrs. Keri Pidgen-Welyki (she/her)
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Office Hours: Mondays and Wednesdays 10:00 to noon
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Teaching Assistant: Myles Cummins
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Lectures: Mondays and Wednesdays from 12:30 to 1:30 pm in Regional Centre RC 3044.

Laboratories: Fridays from 8:30 to 11:30 am in Braun Building 1061.

Course Description/Overview: This course introduces students to the evolutionary relationships among the flowering plants and the processes that gave rise to their existing taxonomic hierarchy. The systematic identification of Ontario's major flowering plant families is learned in labs. The methods, rules and history of flowering plant taxonomy are presented in lectures. An individual herbarium project is also completed.

Learner Outcomes: After successfully completing this course, you should be able to:

- 1) Demonstrate knowledge of the principles and methods of plant systematics, including description, identification, nomenclature, classification, and phylogenetic inference
- 2) Recognize and describe the key characteristics of important flowering plant families, including their morphological characteristics, ecology, distribution, and principal uses

- 3) Understand the principles and rules of plant nomenclature, including how to use plant scientific names correctly, the procedure for naming a new plant taxon, and the reasons that names may be changed
- 4) Apply taxonomic methodology to effectively identify flowering plant species using dichotomous keys
- 5) Explain the principles of phylogenetic reconstruction and how understanding of evolutionary relationships is applied to the study of plant systematics

Course Website (D2L): <https://mycourselink.lakeheadu.ca/d2l/home>

Recommended Course Text: Plant Systematics 3rd edition by Michael G. Simpson. Published by Academic Press (ISBN 9780128126288).

Assignments and Evaluations

Item	Percent of final grade
Midterm Exam	15
Herbarium Project	10
Laboratory Exercises	30
Midterm Lab Test	5
Final Lab Test	15
Final Exam	25

Laboratory Participation and Exercises: Students have a three-hour lab section dedicated to weekly learning objectives and assignments. *Laboratory participation is mandatory, and all lab assignments are due by the end of each lab period.* No late lab submissions will be accepted, except under circumstances agreed upon by the instructor. Students who miss lab due to an unapproved absence will receive a grade of zero for the missed assignment. For an approved absence, arrangements must be made with the Instructors and TA to make up work and/or obtain data and notes from your peers.

Herbarium Project: The herbarium assignment must be submitted on D2L before 11:59 PM on March 29th. Late assignments will be subject to a penalty of 10% per day (including weekends) of the total marks for the assignment. Assignments submitted seven calendar days beyond the due date will be assigned a grade of zero. Additional information on this assignment will be made available on D2L in the first few weeks of class.

Midterm Exam: The mid-term exam will be held during the regular lecture period on Wednesday, February 14th. All material covered in the lecture to this date will be considered when setting the exam.

Midterm Lab Test: There will be lab midterm test held during the regular lab period on Friday, February 16th, 2024.

Final Lab Test: There will be a cumulative lab test at the end of the semester. The test will occur in the last lab period of the semester (Friday, April 5th) and will test the students' understanding of plant taxonomy, morphology, and common families.

Final Exam: The final exam will be held online during the April examination period. It will be administered as a D2L quiz and take place during the scheduled exam date and time. It will mainly cover lecture material from the entire term; however more emphasis will be placed on material covered after the midterm test.

Lecture Schedule (subject to change)

08-Jan	Course introduction; Floral morphology
15-Jan	ANA grade and magnoliids; Evolution of flowering plants
22-Jan	Asparagales and Liliales; Taxonomic evidence
29-Jan	Poales; Plant nomenclature
05-Feb	Proteales and Ranunculales; History of angiosperm classification
12-Feb	Fabids I; Midterm exam
19-Feb	<i>Winter Study Week (no classes)</i>
26-Feb	Fabids II; Plant molecular systematics
04-Mar	Malvids; Pollination ecology
11-Mar	Caryophyllales, Cornales, and Ericales; Herbarium tour
18-Mar	Lamiids; Plant reproductive biology
25-Mar	Campanulids; Plant speciation I
01-Apr	Plant speciation II; Plant biogeography

Lab Schedule (subject to change)

Week of	Topic
08-Jan	Lab 1: Introduction to plant morphology
15-Jan	Lab 2: Basal angiosperms and magnoliids
22-Jan	Lab 3: Non-commelinid monocots
29-Jan	Lab 4: Commelinid monocots
05-Feb	Lab 5: Basal eudicots
12-Feb	Lab midterm; Lab 6: Fabales

19-Feb	Winter Study Week (no classes)
26-Feb	Lab 7: Rosales
04-Mar	Lab 8: Malvids
11-Mar	Lab 9: Superasterids
18-Mar	Lab 10: Lamiids
25-Mar	Lab 11: Campanulids
01-Apr	Final Lab Test

COURSE POLICIES

Use of D2L: Course information and announcements, lecture slides, laboratory information and exercises, and marks will be posted on the D2L system.

Communication and Email: You are encouraged to ask questions in class laboratory sessions, and during office hours. If you have a course conflict with our scheduled office hours, please contact us to set up a time when we can meet. To avoid inadvertent loss through spam- filtering, all e-mails should be from a LakeheadU account, include the course code in the subject heading, and your full name in the text. *I check and respond to emails during my working hours of Monday to Friday, 8:30 am to 4:30 pm. I will not regularly see or respond to emails outside of these hours.*

Missed tests and exams: Students who miss tests or exams for reasons other than a medical condition or other serious event will NOT be provided with the opportunity to write a make-up exam and will receive a grade of zero for that exam.

UNIVERSITY POLICIES

All University Policies can be found [here](#). Pay attention to those found under the Category of “Regulations” and “Student-Related”.

It is your responsibility as a student at Lakehead University to familiarize yourself with, and adhere to the Code of Academic Integrity that addresses issues of academic dishonesty, among others: <https://www.lakeheadu.ca/faculty-and->

[staff/departments/services/provost-vice-president-academic/academic-integrity-plans-policies](#)

Plagiarism and Academic Misconduct: The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences will be strictly enforced. The [Code of Student Behaviour and Disciplinary Procedures](#), includes sections on plagiarism and other forms of misconduct. See the Code under Policies - Student Related in the University Policies at [policies.lakeheadu.ca](#). Plagiarism is defined in [University Regulation IX](#) with additional examples in Article I, Section 1 of The Code. Sanctions associated with Academic Misconduct are defined in Article II of The Code and Enforcement Procedures are outlined in Article III of The Code. Students wishing to learn more about Academic Misconduct are encouraged to read the [University and relevant Faculty Regulations](#) and The Code (noted above) and access other resources on the [Teaching Commons](#) website.

Student Illness and Missed Exams: Lakehead University is temporarily suspending the need for a student who is ill to provide a Certificate of Illness or Incapacitation completed by a Medical Professional as per University Regulation IV “Examinations – Missed Examinations Due to Illness or Other Extenuating Circumstances”. If you are ill and need to defer an exam, test, quiz, etc., please follow these steps:

1. Inform your instructor(s) directly by email from your lakeheadu.ca email prior to the exam;
2. Within the email, you will be required to provide a self-declaration affirming your illness to be true. In order for your exam to be deferred and rescheduled, you will be required to include the following Self Declaration:

Student Self-Declaration Email:

I am submitting this self-declaration as a request made in good faith for academic consideration due to illness that has temporarily impaired my physical health and ability to write my exam/test as scheduled.

By making this declaration I am affirming these statements to be true. Once I have returned to good health, I will contact my professor directly via email to arrange a new exam date.

I understand that providing any false or misleading information or using this self-declaration to delay or avoid fulfilling academic requirements, constitutes a breach of academic integrity as outlined in the Lakehead University's Academic Integrity and Policies.

3. Once you have returned to good health, immediately contact your instructor(s) to arrange a new exam date.

SUPPORT FOR STUDENTS

Mental Health: As a university student, you may sometimes experience mental health concerns or stressful events that interfere with your academic performance and negatively impact your daily activities. *All of us can benefit from support during times of struggle. If you or anyone you know experiences academic stress, difficult life events or feelings of anxiety or depression, Student Health and Wellness is here to help. Their services are free for Lakehead Students and appointments are available. You can learn more about confidential mental health services available on and off campus at lakeheadu.ca/shw. Remember that getting help is a smart and courageous thing to do - for yourself, for those you care about, and for those who care about you. Asking for support sooner rather than later is almost always helpful.*

Accessibility: Student Accessibility Services at Lakehead provides academic accommodations and services to students who have a physical, sensory, or learning disability, mental health condition, acquired brain injury, or chronic health condition, be it visible or hidden. For more information, please visit:
<https://www.lakeheadu.ca/students/student-life/student-services/accessibility>

Student Resources: There are many resources available to support our students. These include but are not limited to: [Health and Wellness](#), [Student Success Centre](#), [Student Accessibility Centre](#), [Library](#), [Academic Support Zone](#). Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services (sas@lakeheadu.ca).

*******Students are responsible for knowing the content of the syllabus*******