

## BIO 3403A Course Outline

### 1. Course Information

#### Course Information

**Biology 3403A, Flora and Vegetation of Ontario, Fall 2021.**

**Lectures:** Wednesday & Thursday 1:30-2:30 pm in PAB-34.

**Labs:** Wednesday 2:30-5:30 pm in BGS 3000 (002); Thursday 2:30-5:30 pm in BGS 3000 (003).

Note: Lectures and labs run together so that we may go on longer field trips on occasion. Do NOT plan to miss either.

#### List of Prerequisites

**Pre-Requisites:** Biology 2483A

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### 2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
Dr. Greg Thorn	<a href="mailto:rgthorn@uwo.ca">rgthorn@uwo.ca</a>	3047 BGS	X88647	By appointment
TA Ala Abdel Rahman	<a href="mailto:aabdel@uwo.ca">aabdel@uwo.ca</a>	3035 BGS	X86947	By appointment

Students must use their Western (@uwo.ca) email addresses when contacting their instructors, and include Bio 3403A in the subject line. Responses can normally be expected within 48 hours.

### 3. Course Syllabus, Schedule, Delivery Mode

**Synopsis:** A study of the flora and vegetation of Southwestern Ontario, teaching the elements of plant classification, identification, distribution, and conservation. Students will become familiar with the dominant native and “alien” flora, and the basis of their distribution as affected by geology, climate and anthropogenic changes. Some local field work included.

#### Description:

This course will provide an introduction to the flora and vegetation of Ontario. On field trips to the UWO campus, Byron Bog, and Westminster Ponds, you will see a variety of the plants found in our area, and this exposure will be supplemented with fresh and preserved plants observed in labs. The objective is for you to become familiar with the woody plants (trees and shrubs) that dominate our landscape, some of the most important plant families of our area, conspicuous and important “alien” flora, and the characters used to identify plant species, including the often overlooked lichens and

bryophytes. Lectures will emphasize concepts (including the difference between flora and vegetation) and labs will emphasize observation of real plants. Because of the brief time-span of the course this will only be an introduction to the topic, but it will be an introduction that you should be able to use in your future – whether as a home-owner, gardener, conservationist, or in studies in field biology involving plants and fungi.

Students of biology and ecology frequently ask, "Why do we have to study plants?" A very simple answer is that plants feed most of the rest of the world's organisms, including us, and they also form the biological structure of all terrestrial ecosystems. An even more compelling reason to study plants is that they are interesting and beautiful! Plants are the central figures in symbioses and trophic relations with fungi, animals, and microorganisms, and they have amazing adaptations to survive and reproduce under varied and remarkable circumstances.

### Learning Outcomes:

At the end of this course, successful students will be able to:

1. Proficiently identify, by sight in the field, the dominant species of trees and shrubs in the deciduous forests of southwestern Ontario, and the main groups of macroscopic, terrestrial photosynthetic organisms: lichens, mosses, liverworts, ferns & horsetails, conifers, forbs and graminoids.
2. Proficiently identify, in the lab with the aid of a dissecting microscope and technical guides, any of the commonly occurring species of vascular plants found in southwestern Ontario.
3. Document a taxonomic range of vascular plants from southwestern Ontario through collection and preparation of dried, pressed specimens and through digital photographs that capture the essential identification features.
4. Describe or compare plant communities of various scales (bryophytes, herbaceous, or trees) through choice and execution of an appropriate sampling technique and analysis of the resulting data.
5. Describe the historical development of Ontario's flora and vegetation since the time of the last glaciation to the present day, and the geomorphological, climatic, and anthropogenic factors that have influenced its development and losses.
6. Describe the various levels of private, non-governmental and governmental agencies involved in the conservation of Ontario's flora and vegetation.

### Course Calendar [Note: We may not stay on schedule!]

#### LECTURES: [Yellow = Online, on OWL]

Week	Dates	Subject material
1	Sep 8/9	[Classes begin Sep 8] Intro, Flora vs. vegetation, Flower parts
2	Sep 15/16	Taxonomy, systematics
3	Sep 22/23	Vegetation sampling [online]; Guest Lecture, Dr. Curtis Lubbe
4	Sep 29/30	Geology, geomorphology, glaciation[online]
5	Oct 6/7	Soils; biomes
6	Oct 13/14	Forest regions of Canada & Ontario
7	Oct 20	More terrestrial habitats, aquatic vegetation
7	Oct 21	<b>Midterm exam (15%)</b>
8	Oct 27/28	Disturbance & succession
<b>X</b>	<b>Nov 1-7</b>	<b>No Classes: Fall Reading Week</b>
9	Nov 10/11	Palynology, paleobotany, paleolimnology and what they tell us
10	Nov 17/18	Forestry and agriculture; plant conservation issues
11	Nov 24/25	Introduced and invasive species, global change
12	Dec 1/2	Parks, reserves, and conservation legislation [Classes end Dec 3]
<b>Exam period (TBA): Final exam (3 hours; 30%)</b>		

**LABS:** [Yellow = Dr. Curtis Lubbe]

Week	Dates	Lab number and subject material (each week's assignment due the following week)
1	Sep 8/9	Lab 1: Herbarium, Campus hike (trees), GoogleEarth exercise
2	Sep 15/16	Lab 2: GIS training & Arboretum inventory ( <b>15%, due Oct 13/14</b> )
3	Sep 22/23	Lab 3: Invasives Field Trip, quantitative sampling of vegetation.
4	Sep 29/30	Lab 4: Byron Bog field trip (pteridophytes, Ericaceae, Pinaceae) [BUS]
5	Oct 6/7	Lab 5: Brassicaceae*, Rosaceae
6	Oct 13/14	Lab 6: Boraginaceae, Fabaceae, Lamiaceae, Scrophulariaceae s.l
7	Oct 20/21	Lab 7: Campus/Medway field trip (Asteraceae, collecting)
8	Oct 27/28	Lab 8: Graminoids: Poaceae, Cyperaceae, Juncaceae
X	Nov 1-7	<b>No Classes: Fall Reading Week</b>
9	Nov 10/11	Lab 9: Spencer Flats walk
10	Nov 17/18	Lab 10: Fall colours campus walk
11	Nov 24/25	Last-minute identifications
12	Dec 1/2	<b>"Collection" due (20%; iNaturalist); No Labs</b>

\*Families start off with regular, bisexual flowers and gradually get more and more modified.

**Attendance at laboratories is required.**

**TEST FORMAT:** Mid-term and Final Exams will have a mixture of multiple choice questions, fill-in-the-blank and short to 1-2 paragraph written questions.

**Contingency plan for an in-person class pivoting to 100% online learning**

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

**Please note that individual requests for online accommodation in the absence of a university-wide return to online learning will not be considered.**

## 4. Course Materials

**Lab Manual:** Thorn, R.G. 2021. Bio3403A Lab Manual (**required; supplied weekly on OWL**)

**Some Useful Texts (if you like plants you will buy one or more of these; none are required):**

1. Trees & Shrubs: Farar's Trees in Canada; Petrides & Peterson's A Field Guide to Trees and Shrubs; or any of the tree identification books listed on Amazon.ca [Or, if you can find Kershaw, L. 2001. Trees of Ontario. Lone Pine Press, Edmonton in used book shop]
2. "Wildflowers": Newcomb's Wildflower Guide; McKenny & Peterson's Field Guide to Wildflowers; Dickinson & Royer Plants of Southern Ontario.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. All course material will be posted to OWL: <http://owl.uwo.ca>. If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

## Technical Requirements

You will need a cellphone capable of taking moderate resolution photographs (min 500 kb) of small subjects (10 cm across). If your cellphone does not meet this requirement for macrophotography, an inexpensive adaptor can be purchased to enable it to do so. You will also require access to a computer with secure internet, and be required to create an account in iNaturalist.ca to upload your digital collection requirement.

## 5. Methods of Evaluation

Midterm Exam	15%	(Thursday Oct 21 at 1:30-2:20 pm, in class)
Lab Assignments	20%	(10 labs, 2% each; weekly)
Plant Collection	20%	(Due W/Th Dec 1/2 at 5:30 pm)
Arboretum Inventory	15%	(Due W/Th Oct 13/14 at 1:30 pm)
Final Exam	30%	3h (TBA)

- Rubrics will be used to evaluate assessments and will be posted with the instructions
- After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days

**Note: This is a lab course, so under UWO Senate rules you must complete 60% of the lab assignments and pass all lab components (55%) to pass the course.** In the event that, due to an accommodated absence such as prolonged illness, you miss too many labs to achieve this, you will be assigned an INC in the course and will have the opportunity to complete these assignments the next time the course is offered in Fall 2023.

**Statement on Use of Electronic Devices: No electronic devices** will be allowed during tests and examinations; ScanEX and remote proctoring will not be used in this course.

**Grades:** Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

### Information about late or missed evaluations:

- Late assignments without self-reported absences (SRA) will be subject to a late penalty of 10% per day
- Late assessments with self-reported absences should be submitted within 24 hours of the end of the period excused
- An assessment cannot be submitted after it has been returned to the class; the weight will be transferred to the final grade
- A make-up for the Midterm will be on Oct 28 from 6:00-7:00 pm.

- ☒ If a make-up midterm test or Special Exam (make up final) is missed, the student will receive an INC and complete the task the next time the course is offered (Fall 2023).
- ☒ If you miss the Final Exam, contact your faculty's Academic Counselling Office as soon as possible. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam) in January 2022.
- ☒ You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

## 6. Student Absences

### Academic Consideration for Student Absences

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes (**NOT through their course instructors**):

- (i) Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
  - an absence must be no more than 48 hours
  - the assessments must be worth no more than 30% of the student's final grade
  - no more than two SRAs may be submitted during the Fall/Winter term
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered, unless otherwise instructed in the course outline [suggestions: write here.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For the policy on Academic Consideration for Student Absences – Undergraduate Students in First Entry Programs, see: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_illness.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf) and for the Student Medical Certificate (SMC), see: [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf)

### Religious Accommodation

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>

## 7. EDI statement

The pronouns used by:

- The instructor, Dr. Greg Thorn, are: he/him
- The TA, Ala Abdel Rahman, are: she/her

## 8. Land acknowledgment

We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Attawandaron peoples, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum. This land continues to be home to diverse Indigenous peoples (e.g. First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society.

## 9. Accommodation and Accessibility

### Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf)

## 10. Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>

In accordance with policy, [https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf)

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

**Scholastic offences** are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

### Professionalism & Privacy:

Western students are expected to follow the Student Code of Conduct. Additionally, the following expectations and professional conduct apply to this course:

- Students are expected to follow online etiquette expectations provided on OWL
- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed
- Students will be expected to take an academic integrity pledge before some assessments
- All recorded sessions will remain within the course site or unlisted if streamed

## 11. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at (519) 661-2147 if you have any questions regarding accommodations.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (<http://www.health.uwo.ca/mentalhealth>) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC: <https://westernusc.ca/your-services/>

This course is supported by the Science Student Donation Fund. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Counselling site. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the Chair of the Department or email the Science Students' Council at [ssc@uwo.ca](mailto:ssc@uwo.ca).