ENVS 300 Vascular Plants of Southern Ontario
Spring 2019

CONTACT INFORMATION:

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bev Raimbault</td>
<td><a href="mailto:baraimba@uwaterloo.ca">baraimba@uwaterloo.ca</a></td>
<td>EV1-135 x31858</td>
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<td>Anne Grant</td>
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<td>EV1-135A x32646</td>
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<tr>
<td>TA Chris DeGeer</td>
<td><a href="mailto:cdegeer@uwaterloo.ca">cdegeer@uwaterloo.ca</a></td>
<td></td>
</tr>
<tr>
<td>Office hours</td>
<td>Fridays</td>
<td>9-11am</td>
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LECTURE MEETINGS: Fridays 11:30-12:20pm in EV1-350

LABS: Fridays 12:30-4:20pm in EV1-134

COURSE DESCRIPTION:
This is an applied course where students will learn to identify vascular plants using botanical keys. Through lab work and field trips, students will understand vascular plant structure and associated terminology as the basis for plant identification. Students will also learn how to collect specimens to create an herbarium collection and how to conduct vegetation community assessments.

LEARNING OUTCOMES:

- Identify vascular plants using keys and other botanical resources
- Become familiar with common plants of Southern Ontario
- Understand plant families, taxonomy
- Explore issues affecting plant communities such as species at risk, invasive species, human impacts
- Develop proficiency in mounting plant specimens
- Develop proficiency in field documentation and techniques
- Distinguish between different plant communities
- Synthesize field data.

UW-LEARN:

LEARN will be used for the following: course info, your grades, announcements, and course emails/discussion forums. Course emails will be sent through LEARN, which will forward to your uwaterloo account. Please check that your email address on WatIAM is either your uwaterloo account or a current personal account (https://watiam.uwaterloo.ca/idm/user/login.jsp) so that you receive course emails. If you are registered in the course and have checked your UW-ID AND WatIAM and still cannot access LEARN, please email Scott Anderson (sjanders@uwaterloo.ca).
FIELD TRIP FEES:

$32+HST field trip fee payable online at shop.uwaterloo.ca. Place a screen capture of your receipt in the labelled dropbox on Learn. Payment is required prior to boarding the bus in week 2.

REQUIRED ITEMS:

- Newcombs Wildflower Guide by Lawrence Newcomb ($20 at UW bookstore)
- Field Notebook (pocket sketch book, rite in the rain or other)

RECOMMENDED RESOURCES:

- Michigan Flora by Edward Voss & Anton Reznicek
- Botany in a Day by Thomas Elpel
- Trees in Canada by John Laird Farrar
- Shubs of Ontario by James Soper and Margaret Heimburger
- Woodlot Biodiversity by Steven Newmaster et al.

SCHEDULE OF ACTIVITIES:

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Lecture (Fri 11:30-12:20pm)</th>
<th>Lab and/or Field Trip (Fri 12:30-4:20pm)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>EV1 350</td>
<td>EV1 134</td>
</tr>
<tr>
<td>1</td>
<td>May 10</td>
<td>Introduction, course expectations</td>
<td>Lab: Plant terminology, taxonomy, field notebooks</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Field Trip: UW Urban forest</td>
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<tr>
<td>2</td>
<td>May 17</td>
<td>Plant families: Ranunculaceae, Papervaceae, Brassicaceae, Violaceae, Araceae</td>
<td>Field Trip: Schneider’s woods, Wilmot township</td>
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<td>Group project signup due by 4:30pm</td>
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<tr>
<td>3</td>
<td>May 24</td>
<td>Tree Families: Betulaceae, Fagaceae, Juglandaceae, Pinaceae, Salicaceae, Sapindaceae</td>
<td>Lab: Herbarium and plant press techniques</td>
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<td>Project Proposal due by 11:59pm</td>
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<td>Field: Tree identification, on campus</td>
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<tr>
<td>4</td>
<td>May 31</td>
<td>Shrub families: Caprifoliaceae, Adoxaceae, Grossulariaceae, Comaceae, Rosaceae, Ericaceae</td>
<td>Lab: Shrub identification</td>
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<td>Field: On campus</td>
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<tr>
<td>5</td>
<td>June 7</td>
<td>Fern families</td>
<td>Field Trip: Stamm Woodlot, Waterloo</td>
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<tr>
<td>6</td>
<td>June 14</td>
<td>Test 1</td>
<td>Field Trip: ENV reserve, UW North campus</td>
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<tr>
<td>7</td>
<td>June 21</td>
<td>Plant Families: Boraginaceae, Iridaceae, Caryophyllaceae, Apocynaceae, Asteraceae</td>
<td>Plant family: Poaceae</td>
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<td></td>
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<td>Lab: grass ID, Identification with Michigan Flora</td>
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<td>Field: Demonstration and practice of vegetation field techniques</td>
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<tr>
<td>8</td>
<td>June 28</td>
<td>Plant families: Apiaceae, Fabaceae, Lamiaceae, Liliaceae,</td>
<td>Field: Spongy bog, Baden</td>
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<td>Group vegetation assessment site</td>
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| 9   | July 5 | Wetland Plant Families: Juncaceae, Cyperaceae, and other wetland plants | **Field Trip:** Huron Natural Area, Kitchener  
**Spongy group assignment due by 11:59pm** |
| 10  | July 12 | Field trip begins at 11:30am! No lecture | **Field Trip:** UW Rockwood property, Rockwood |
| 11  | July 19 | Importance of Plant ID in the workplace/nature apps | **Lab:** Review  
**Field Trip:** Campus plants review  
**Term Project due by 11:59pm** |
| 12  | July 26 | **Test 2** | **Field Notebook due by 4:30pm**  
**Plant Collection due by 4:30pm** |

**ASSESSMENT:**

<table>
<thead>
<tr>
<th>Evaluation Format</th>
<th>Percentage of Final Mark</th>
<th>Test or Due Date</th>
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<tbody>
<tr>
<td>Test 1 (50 min)</td>
<td>15%</td>
<td>June 14</td>
</tr>
<tr>
<td>Test 2 (2 hours)</td>
<td>20%</td>
<td>July 26</td>
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<tr>
<td>Field Notebook</td>
<td>15%</td>
<td>July 26</td>
</tr>
<tr>
<td>Spongy Vegetation assessment</td>
<td>5%</td>
<td>July 5</td>
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<tr>
<td>Group Project</td>
<td>25%</td>
<td>July 19</td>
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<tr>
<td>Plant Collection</td>
<td>20%</td>
<td>July 26</td>
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- **Test 1:** This will cover lab 1 and weeks 1-5 lectures with short answer questions, as well as identifying plant specimens.
- **Test 2:** This will cover lab 7 and weeks 7-9 with short answer questions and significant component on identifying plant specimens from all families.
- **Field Notebook:** This will be used to record sightings and information on each of the field trips for a minimum of 7 entries. The notebook will be assessed based on neatness, detailed information and variety of recording techniques including sketches, diagrams, maps, written notes, references to photos, etc.
- **Spongy Bog vegetation assessment:** field data collection and analysis of UW property.
- **Term Group Project and Written Report:** Consultant’s report on defined project, field data collection and assessment, including peer evaluation.
- **Plant Collection:** Students will be expected to collect, mount and identify plants from 20 different families. The plant collection will be assessed based on the correct identification and quality of the specimens.

**Submission of Field Notebook, Group Report and Plant Collection:** The Notebook and Plant Collection will need to be submitted in person on or before the date that they are due by 4:30pm. The term project and Spongy assessment must be submitted electronically via dropboxes on UW-LEARN. Ensure that you size graphics appropriately to avoid overloading the LEARN submission. You are responsible for ensuring that your dropbox submission was accepted by the system (you should receive a confirmation email) and that you view your submission to double-check the document for format errors. **If you run into problems send a copy of your assignment/report to the instructor prior to the deadline.**

**Lateness and Penalties:** Failure to hand in the above-mentioned items on the due date will result in a penalty of 5% per day. If it is more than 4 calendar days late it will receive a zero. You can be exempted from these penalties by a medical certificate or documentation by your undergraduate advisor or UW counseling services.
COMMITMENT EXPECTATIONS:

- Students will be expected to study different plant families specified in course outline by reading content assigned ahead of each lecture. You will be assessed on level of preparedness.
- Attendance is expected in both the lab and the lecture. Evaluation of the field notebook will account for participation on field trip days. Labs make up a significant portion of the course and therefore are mandatory and you are expected to arrive on time. You may miss 1 lab without penalty (however, you are still responsible for material covered). For each additional lab absence, you will receive a penalty of 5 marks on your final grade. Two late arrivals equals 1 missed lab (late is considered 10min).

REFERENCING/CITATION IN GROUP PROJECT:

- The format adopted for this course is the APA (American Psychological Association) style. This is the style recommended by the School of Planning for all student reports. The complete style outline can be found in the Publication Manual of the American Psychological Association, located in the reference section in Dana Porter Library, call number BF76.7.P83 1994, and is normally for sale in the Book Store. See APA Style essentials - http://www.apastyle.org/

LAB AND FIELD WORK SAFETY & REQUIREMENTS:

- This course includes field trips in potentially extreme weather conditions (heat, humidity, cold, wind). Students are expected to be prepared for this and walking in woods, fields, wetlands on hilly and uneven terrain. Appropriate footwear and clothing should be worn.
- Pay attention to the safety presentation given during the first lab. Exercise caution around the field sites and follow safety instructions given by instructors.
- Carry bug repellent and sunscreen on field trips.
- Complete the forms "Faculty of Environment Field Trip Form" and "Emergency Information".

*If you have any concerns about the physical activity required for this course, please contact us immediately.*

COMMUNICATION WITH INSTRUCTOR AND TA:

All communication with students must be through either the student’s University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.

ACADEMIC INTEGRITY AND OFFENCES:

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University’s guiding principles on academic integrity can be found here: http://uwaterloo.ca/academicintegrity. ENV students are strongly encouraged to review the material provided by the university’s Academic Integrity office specifically for students: http://uwaterloo.ca/academicintegrity/Students/index.html

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial: https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial
When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-71. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance:

https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70

Co-op interviews and class attendance:

Co-op students are encouraged to try and choose interview time slots that result in the least amount of disruption to class schedules. When this is challenging, or not possible, a student may miss a portion of a class meeting for an interview. Instructors are asked for leniency in these situations; but, a co-op interview does not relieve the student of any requirements associated with that class meeting.

When a co-op interview conflicts with an in-class evaluation mechanism (e.g., test, quiz, presentation, critique), class attendance takes precedence and the onus is on the student to reschedule the interview. CECA provides an interview conflict procedure to manage these situations.

Students will be required to provide copies of their interview schedules (they may be printed from WaterlooWorks) should there be a need to verify class absence due to co-op interviews.

Intellectual Property:

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student’s educational experience. However, sharing this intellectual property without the intellectual property owner’s permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

AccessAbility

AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the
curriculum. If you require academic accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.

Assignment submission
Please refer to course notes for detailed instructions on submission of assignments and see above for deadlines.

Attendance and preparation
You are strongly encouraged to attend class meetings because they will be interactive in nature and develop the course material. Thus, please come to class prepared to discuss and engage. You will not be marked for attendance, however will be penalized for not attending the labs (1 missed lab allowed without penalty, then 5 marks deducted from final mark thereafter, 2 lates equal 1 missed lab).

Definition of grades
Please see the following link for descriptions of the standards required for different grades: https://uwaterloo.ca/environment/current-undergraduate-students/student-handbook#exams.

Digital distraction
Recent research has demonstrated that students cannot focus effectively on classroom activities and discussions if others around them are using laptops or electronic devices—and their grades, as well as those of their classmates, suffer (e.g., Fried 2008; Taneja et al. 2015). Accordingly, please turn your cell phone off before class. Further, this course involves extensive oral and listening participation, in addition to note-taking, so laptops will not be used regularly during class. Therefore, I request that those of you who must use a laptop sit in the back half of the class. If you have a special learning need that requires a laptop and sitting closer to the front of the room, please document it with AccessAbility Services and we will find an agreeable solution.

Mental health
The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. Please note that help is available. Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services http://www.uwaterloo.ca/counselling-services is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.

Religious observances
Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

Unclaimed assignments
Unclaimed assignments will be retained until one month after term grades become official in Quest. After that time, they will be destroyed in compliance with UW’s confidential shredding procedures. Unclaimed plant presses may be used for subsequent teaching purposes.

Grievance
A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 - Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please contact your Undergraduate Advisor for details.

Appeals
A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or
Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

Writing

The Writing Centre works across all faculties to help students clarify their ideas, develop their voices, and write in the style appropriate to their disciplines. Writing Centre staff offer one-on-one support in planning assignments and presentations, using and documenting research, organizing and structuring papers, and revising for clarity and coherence. You can make multiple appointments throughout the term, or drop in at the Library for quick questions or feedback. To book a 50-minute appointment and to see drop-in hours, visit www.uwaterloo.ca/writing-centre. Group appointments for team-based projects, presentations, and papers are also available.

Please note that writing specialists guide you to see your work as readers would. They can teach you revising skills and strategies, but will not proof-read or edit for you. Please bring hard copies of your assignment instructions and any notes or drafts to your appointment.