

**Faculty of Science Course Syllabus
Department of Biology/ Environmental Science**

**Economic Botany: Plants & Civilization (ENVS 3226/BIOL 3226)
Fall 2017**

Instructor: Rajesh Rajaselvam Email: Rajesh.Rajaselvam@Dal.Ca Office: LSC 3082
Office Hours: Tuesday/Friday 14:30 – 15:30 pm, Thursday by appointments

Lectures: Tuesday & Thursday 19:05 – 20:55 hrs (LSC/C244)

Tutorials: 6 tutorials (80 min/tutorial)
Friday 11:35 – 12:55 pm (LSC/C244 & LSC/8007 Milligan Room)

Course Description

This course explains the importance of plants and their role in human biological and cultural development. It gives an opportunity for students to learn the impact of plants on society for their use as a major food source, as medicine, and in the industrial and recreational world. Additionally, it explains the role of plants in ecosystem conservation and sustainability. Students will involve in hands-on field activities and seminars to investigate plants on the aspect of their uses and interactions.

Course Prerequisites

A grade of B- or higher in BIOL 1010.03 or (BIOL 1020.03 or BIOA 1002.03 or BIOL 1030.03) and BIOL 1011.03 or (BIOL 1021.03, BIOA 1003.03, or BIOL 1031.03); or SCIE 1505.18 or instructor's permission.

Course Textbook

Levetin, E. and McMahon, K. (2016). *Plants & Society*, 7th Edition. NY: McGraw-Hill. (2012 Edition also can be used)

Learning Objectives

- Explain plant biology and how humans use different plant structures.
- Understand the botanical aspects and origins of important food, medicinal and economically important plants.
- Evaluate the importance of plants and their different roles.
- Analyze the plant structures and interactions with hands on field experiments.
- Demonstrate a deeper knowledge of a chosen medicinal plant through formal group oral presentation and report writing.

Course Assessment

Assignment, Exam, or Presentation	Marks %	Date
Quiz 1	08	Oct 03
Mid-Term Exam	24	Oct 17
Oral Presentation (group presentation)	10	Nov 21, 23 & 24
Quiz 2	08	Nov 30
Lab/Seminar Reports	20	TBA/See Brightspace
Final Exam	30	Scheduled by Registrar
Total	100	

Oral Presentation

Students are expected to do a 12 minute power point presentation (Group) on their chosen Medicinal Plant

<i>*Evaluation rubric</i>	MARKS				
<i>Evaluate the presentation by checking the grade the student achieved in the following categories:</i>					
The presentation was well organized.	5	4	3	2	1
The chosen 'Medicinal Plant' was covered in a clear and understandable fashion.	5	4	3	2	1
The presentation was very well timed.	5	4	3	2	1
Presentation resources were incorporated and used effectively.	5	4	3	2	1
The student/group responded effectively to questions posed by the audience.	5	4	3	2	1
Main points were effectively summarized at the end of the presentation.	5	4	3	2	1
Overall grade: Total (out of 30) is reduced to out of 10					

Grading Scale

Conversion of numerical grades to Final Letter Grades follows the [Dalhousie Common Grade Scale](#)

A+ (90-100)	B+ (77-79)	C+ (65-69)	D	(50-54)
A (85-89)	B (73-76)	C (60-64)	F	(<50)
A- (80-84)	B- (70-72)	C- (55-59)		

Course Policies

Class participation is considered vital.

Tutorial/Seminar sessions are compulsory. Complete attendance of all lectures is highly recommended, since it helps to improve your grade significantly.

Meeting deadlines is mandatory. No late submission without valid reason is accepted for marking.

Brightspace (course web-tool) will be used for regular updates and announcements. TAs are the first point of contact (unless for major issues), and copying the instructor on messages is highly recommended.

Course Content

Schedule (Tentative)

A. Lectures

Week 1

Sep 05 - Introduction & Plants in our lives (Chap1)

Sep 07 - Diversity of plant life I (Chap 9)

Week 2

Sep 12 - Diversity of plant life II (Chap 9)

Sep 14 - Plant cell & Life cycles (Chap 2, 5 & 6)

Week 3

Sep 19 - Human nutrition (Chap 10)

Sep 21 - Origin of agriculture I (Chap 11)

Week 4

Sep 26 - Origin of agriculture II (Chap 11)

Sep 28 - Grasses (Chap 12)

Week 5

Oct 03- Quiz 1 (Open-book)... 8 marks

Oct 05 - Legumes & Starchy staples (Chap 13 & 14)

Week 6

Oct 10 - Feeding a hungry world I (Chap 15)

Oct 12 - Feeding a hungry world II (Chap 15) & Midterm Review

Week 7

***Oct 17 - Midterm Exam (13:00 - 14:30 hrs)... 24 marks**

Oct 19 - Current research in plants I (*Guest lecture: Dr. Arunika Gunawardena*)

Week 8

Oct 24 - Stimulating beverages I (Chap 16)

Oct 26 - Stimulating beverages II (Chap 16)

Week 9

Oct 31 - Current research in plants II (*Guest lecture: Dr. Adrian Dauphinee*)

Nov 02 - Medicinal Plants I (Chap 19)

Week 10

Nov 6 - 10 – Fall Study Break

Week 11

Nov 14 - Medicinal Plants II (Chap 19/Recent Journal Articles)

Nov 16 - Herbs and spices/ **TA Discussion session** (Chap 17)

Week 12

Nov 21, 23 & 24 – Students’ presentation...10 marks

Week 13

Nov 28 - Plant and the environment (Chap 26 & Journal Articles) **& Final Revision**

Nov 30 - Psychoactive plants (Chap 20) **& Quiz 02...8 marks**

Final Exam (Scheduled by Registrar)...30 marks

B. Seminar/Tutorial sessions

Attendance Mandatory, (4 x 5) = 20 marks

Sep 15: Tutorial 1: Field/Wild Plant identification **(Field report required: Lab 01)**

Sep 22: Tutorial 2: Importance of Plants/Plant life cycles (Short video)

Oct 13: Tutorial 3: Food and Beverages: Haskap berry of LaHave Forest **(Report required: Lab 02)**

Oct 20: Midterm Exam

Oct 27: Tutorial 4: Oral presentation introduction/preparation

Nov 03: Tutorial 5: Current research in plants/Lab visit **(Report required: Lab 03)**

Nov 21, 23 & 24: Students’ oral presentations

Dec 01: Tutorial 6: Plants and the Environment **(Report required: Lab 04)**

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit the office (Rm 3037, McCain Building), e-mail (elders@dal.ca) or leave message (902-494-6803).

Information: https://www.dal.ca/campus_life/communities/native.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Aboriginal Student Centre: https://www.dal.ca/campus_life/communities/native.html

Black Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health Services: https://www.dal.ca/campus_life/health-and-wellness/health-services/services.html

Counselling: https://www.dal.ca/campus_life/health-and-wellness/counselling.html

Student Advocacy: <https://www.dsu.ca/services/community-student-services/student-advocacy-service>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety**Research Lab Safety:**

https://www.dal.ca/content/dam/dalhousie/pdf/dept/safety/lab_policy_manual_2007.pdf

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Questions?

Visit forums on Brightspace and/or send emails via Brightspace.

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