

Macdonald Campus of McGill University
Plant Propagation (PLNT 310)
COURSE OUTLINE Winter 2020

Credit weight: 3

Lecture: T/TR R3-037 8:35 – 9:55

Lab: TR B1-016 2:35 – 5:25

Course instructor:

Lecture Supervisor: **Mr. Mohammed Antar** (mohammed.antar@mail.mcgill.ca)

Lab Supervisor: **Dr. Christie Lovat** (christie-anna.lovat@mcgill.ca)

Office: Mr. Antar: R2-025b Dr. Lovat: R2-025b

Teaching Assistant: TBA (TBA@mail.mcgill.ca)

Prerequisites:

None. Plant taxonomy skills an asset.

Course Description:

Plant propagation is the foundation of both agriculture and horticulture. Students in this course will learn the basic foundations of this science, consider ongoing debates in the discipline, and get an introduction to its tools and analytical techniques.

Learning Outcomes:

After successfully completing the course, the student will be able to:

- Think critically about issues in plant propagation, evaluate their applications, and take relevant management decisions.

Instructional method:

Instruction in this course will be lecture-based. Instructional material will be made available on MyCourses. Important announcements will also be made on myCourses. There also are laboratory exercises and assignments.

Topics covered:

The following timeline is tentative and subject to change.

Date	Lecture/lab Number	Title	Assignment Due
Jan 7 th	1	Introduction to the course	
Jan 9 th	2	Plant Nurseries	
Jan 9 th	LAB 1	Introduction to propagation	
Jan 14 th	3	Propagation Environment	
Jan 16 th	4	Plant Growth Media	
Jan 16 th	LAB 2	Divisions	
Jan 21 st	5	Biology of Plant Propagation	
Jan 23 rd	6	Seed Propagation	
Jan 23 rd	LAB 3	Seeds!	Project Proposal Due
Jan 28 th	7	Seed selection, production and handling	
Jan 30 th	8	Principles and techniques of Propagation by Seed	
Jan 30 th	LAB 4	Bulbs	
Feb 4 th	9	Vegetative Propagation Principles	
Feb 6 th	10	Propagation by Leaf Cuttings	
Feb 6 th	LAB 5	Leaf cuttings	
Feb 11 th	11	Propagation by Stem and Root Cuttings	
Feb 13 th	12	Propagation by Grafting I	
Feb 13 th	LAB 6	Stem cuttings	
Feb 18 th	13	Propagation by Grafting II	
Feb 20 th	14	Propagation by Grafting III	
Feb 20 th	LAB 7	Grafting herbaceous species	
Feb 25 th	15	Midterm review	
Feb 27 th		Midterm	
Feb 27 th	LAB 8	Grafting woody species	
March 3 rd 5 th		March Break	
March 10 th	16	Video Making or Library	
March 12 th	17	Propagation by Layering	
March 12 th	LAB 9	Budding	
March 17 th	18	Propagation by Layering	
March 19 th	19	Propagation through Specialized Organs	
March 19 th	LAB 10	NA	
March 24 th	20	Fruit Types	
March 26 th	21	Micropropagation I	
March 26 th	LAB 11	NA	
March 31 st	22	Micropropagation II	
April 2 nd	23	Propagation of Seedless Vascular Plants	
April 2 nd	LAB 12	Budding	
April 7 th	24	Marketability	
April 9 th	25	Review session and open discussions	
April 9 th	LAB 13	Micropropagation	
April 14 th	NA	Friday Schedule	Project Report Due
April 20 th	NA	No lecture	Prop. Manual Due

Evaluation:

Project Proposal: 5%

Midterm: 50%

Propagation Project Report: 20%

Propagation Project Presentation 5%

Propagators Manual: 25%

Final exam (during scheduled finals): 35%

- ☒ Late assignments will have marks deducted (5 % per day) for each day late.

Midterm examination (50%):

The midterm will take place Feb 27th, during class. The midterm will cover material from lectures 1 - 15. A make-up exam will not be given. If you miss the midterm due to medical reasons (only), you require a doctor's certificate. In that case, marks will be redistributed. An exam that is missed without a medical certificate will be worth zero.

Propagation Project (25 % overall – 5 % proposal and 20 % final report):

As a propagator, it is your goal to experimentally test a propagation method on a plant species, in the hopes of improving existing propagation methods for that species. For this project, you must test at least two different treatments against a control. The control should be the existing recommended propagation method for that particular plant.

In the first lab session of this course, you will be introduced to the plants which are available for you to work with in the greenhouse. This assignment has three main components: a proposal, a presentation, and the final report.

- ✓ The proposal is due Jan 23rd and should consist of your experimental design and a brief literature review, including references. Only after you have received approval for your project should you begin your experiment.
- ✓ The final report is due the last lab session. It should consist of a complete lab report of your propagation project, including an introduction, methods, results, discussion, conclusions, and literature review section.
- ✓ More details on all components of this assignment can be found on MyCourses.

Propagation Manual (25%):

Lab sections in this course are dedicated to teaching you practical plant propagation techniques. To help preserve these lessons over the long term, students are expected to construct their own personal propagation manual based on the techniques taught in the lab sections. For each lab (excluding the introductory and micropropagation labs), students should prepare a short descriptive document (with photos) which would allow someone with no experience to be able to perform the plant propagation technique described in the lab section. A more detailed description of this assignment will be made available online on MyCourses. The propagation manual is due April 20th.

McGill Statements:

"In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded."

"McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and

Disciplinary Procedures” (see www.mcgill.ca/students/srr/honest/ for more information).

“In the event of extraordinary circumstances beyond the University’s control, the content and/or evaluation scheme in this course is subject to change.”

“Sickness/illness during the term: Please visit Student Services (CC1-124) at Macdonald Campus if you are suffering from any mental or physical health-related issues during the term. If you need to seek accommodation for in-course assignments, for medical or other emergencies, please bring medical documentation to the Student Affairs Office (106 Laird Hall).”

Deferred Final Exam:

Students may apply via Minerva to defer a final exam that has been missed (<http://www.mcgill.ca/students/exams/dates/supdefer>).

The deferred fall-term exams are written during the March study break. Deferred winter-term exams are written in August. A missed deferred exam is considered to be course failure.

Exams are normally deferred for medical reasons. The Faculty offers a first-deferral for non-medical as well as medical reasons. Some students elect to defer for non-medical reasons (e.g. undesirable exam schedule, travel conflict etc.) but should be aware of the difficulties involved in getting a good grade in an exam written months after the course is finished.