



When?	The first half of this course is ONLINE and the second half (after Mar 17th) we meet in person every Tuesday and Thursday evening from 5:00 - 7:50 PM. The first time we will meet in person together will be March 18th at 5:00 PM
Where?	When we meet in person, we meet in ADK Hall 108.
Professor Info.	Best way to communicate with me is via email: cahillm@sunyacc.edu
Office Hours	My office is in ADK Hall 223 (upstairs) My office hours are Monday and Tuesday from 12:00 - 1:30 and Thursday from 11:30 - 1:30. Email me or talk to me in person if those times don't work for you.

Course Description:

This course provides an in-depth exploration of the processes involved in cultivating cannabis. Students will learn about the evolution and ecology of cannabis, seedling care, cloning, cultivation techniques, optimal environmental conditions, hydroponic production, irrigation management, vegetative and flowering cycles, pruning and shaping, and pest management practices. By the end of the course, students will have gained practical knowledge and skills in cultivating high-quality cannabis & hemp products.

First Half (online and asynchronous)

The goal of the first half of the course is to establish a foundation of knowledge and a common vocabulary so that we can get our hands dirty and dive into deeper discussions when we are gathered in person. We will accomplish this goal by reading sections from our textbook as well as articles posted on Brightspace, watch videos etc.

Second Half (in person)

The beginning of the second half of the class coincides with the planting time for cannabis in the Northeastern US. We will plant cannabis seeds that will be later planted on the farm at SUNY ADK (these plants will be later harvested and processed as part of the Cannabis Harvesting and Processing course in the Fall 2025). In addition to these plants, we will be conducting experiments to determine conditions of optimal seedling cultivation. Factors such as soil temperature, fertilizer application rates, and the use of amendments such as mycorrhizal fungi will be investigated to better understand their influence on seedling germination and growth. Finally, each student will grow their own cannabis “bonsai tree”. The purpose of this practice is to understand how the cannabis plant responds to different pruning techniques.

Grading:

The first half of the semester you will complete various weekly assignments to build your foundational knowledge of cannabis cultivation. At the end of the first half, there will be a midterm exam. The second half of the semester will occur in person and will focus on developing the skills required to successfully cultivate high quality cannabis. Assessment of these skills which range from germinating seeds successfully, cloning, mixing fertilizer, using instruments to measure pH and CEC, etc. will occur in person in the lab. Furthermore, you will be graded on your student group experiment project and your personal bonsai mother plant which you will grow from seed and design its structure.

Grading Overview

1	Asynchronous course work and midterm
2	Hands-on/practical skill development (germinate seeds, mix fertilizer, etc)
3	Student Experiments (group assessment)
4	Bonsai mother(personal assessment)
5	Participation/Contribution Collaborative Learning

Attendance:

No attendance is required during the asynchronous portion of the course. During the second half of the semester, attendance is mandatory and part of your grade for participation. If you are going to miss a class, please notify me ahead of time and make arrangements to obtain any required work. Also make sure you collaborate with your experiment group to ensure that your plants are taken care of (including your bonsai)

Required Textbook

Rosenthal, E. (2021) Cannabis Grower's Handbook: The complete guide to marijuana and hemp cultivation

Required Materials

Trimming pruners

Clothing for working in the greenhouse

Notebook (digital or physical) to record observations

Overview of the Course

Week	Date	Main Topics
1	Jan 20	Introduction to Cannabis Cultivation
2	Jan 27	Cannabis Cultivation in NY: Commercial and Homegrown, Indoor and Sungrown Pathways to Licensure
3	Feb 3	Cannabis Anatomy and Physiology: How Cannabis Works
4	Feb 10	Genetics and Breeding: How do we design a more resilient cannabis plant for the North East?
5	Feb 17	Plant Nutrients and their Availability: Understanding the Rhizosphere
6	Feb 24	Integrated Pest Management: Working with nature to control populations in the Cannabis Agroecosystem
7	Mar 3	Introduction to Experimental Design and our Cannabis Experiments: The method of finding answers to important questions
	Mar 10	Spring Break No classes
8	Mar 17	Seeds and Seed Dormancy: Germinate seeds for The Farm@ SUNY ADK, Students Experiments, and Bonsai Mothers
9	Mar 24	Asexual Propagation: Cloning and Tissue Culture
10	Mar 31	Farm/Site Analysis (collect soil sample) and Cover Crop Planting Interpret soil sample analysis
11	Apr 7	Using Instruments to Collect Data (pH, CEC, hygrometer, soil thermometer, leaf chlorophyll, PAR, Brix Refractometer, etc)
12	Apr 14	Cannabis and the Ecosystem: A Sustainability Assessment
13	Apr 21	Foliar Sprays, Compost Tea, and Biochar: Microbial Protectors
14	Apr 28	Student Experiment and Bonsai Presentations
	May 8	Final Exam @ 6:00 PM