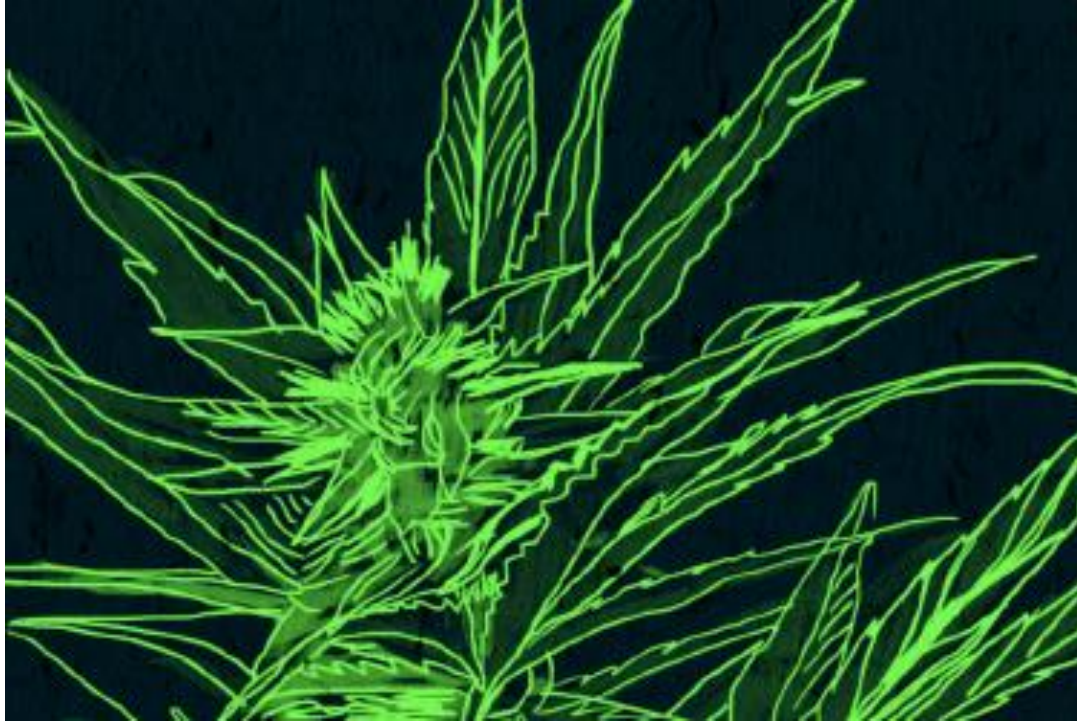


**Cannabis
Education Series**



PREMIUM

420  **Organics**

CANNABIS





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Cannabis Training Course Program Proposal

1 Introduction

I got a crazy idea to pursue a PhD after the legalization of adult recreational *Cannabis* use and possession in Colorado. My background is in population investigating relationships among closely related species as well as within species relationships. I thought it would be interesting to figure out why strains with the same name vary when obtained from different dispensaries. I pitched my idea and built a case for my doctoral research to my master's thesis mentor. He allowed me to conduct research on this plant that in 2015 was still taboo and largely illegal around the world. However, I knew little about *Cannabis*, marijuana, hemp, strains, the history of the plant etc.- so I had to learn everything from the ground up (literally). I read just about every journal article on *Cannabis* genetics and phytochemicals and bought all the books I could get my hands on. As there were not really any credible *Cannabis* education programs at the time, it was my responsibility to consume as much information as possible and weed out misinformation and lore from facts. One thing that is abundantly clear is that there is a whole lot of stuff out there on the internet and social media that is just plain wrong, and yet people believe without digging in to find out the source of the information and if it is true. Now that I have all this information, I want to share it with the world!

1.1 Our Instructors

Anna Schwabe PhD



Dr. Schwabe (aka Dr. Annabis) is the Director of Research & Development at 420 Organics whose expertise is specifically *Cannabis* Science and Education. She is a researcher and educator with extensive experience in *Cannabis* genetics and biology and her knowledge spans a variety of additional scientific fields. She is an established presenter and invited speaker and has published several peer reviewed research articles on *Cannabis*. She is an Associate Professor at the University of Colorado where she co-teaches a course, which she developed along with Dr. Daniela Vergara, called “Modern Cannabis Science” Additionally, she is also an educator through the Curious



About Cannabis Educator Program. She is passionate about *Cannabis* science, education, and facilitating consistency in the Cannabis Industry.

<https://www.annaschwabe.com/>

BS Cellular & Molecular Biology (2009), University of Northern Colorado

MS Biological Sciences, Plant Population Genetics (2012), University of Northern Colorado

PhD Biological Education and *Cannabis* Genetics (2019), University of Northern Colorado

“A multifaceted approach to investigate genetic aspects in Cannabis sativa”

Dean’s Citation of Excellence, and Dean’s Award for Outstanding Dissertation

Grant Orvis, PhD



Geneticist, developmental biologist, and Cannabis Industry Expert
Founder of BoCo Farms

Grant has been involved in the cannabis industry for over a decade. He has consulted for both the hemp and marijuana industries, specializing in genetics, breeding and everything from seed to sale. He has served as the Director of Cultivation & Chief Technical Advisor for both indoor & outdoor cannabis production, and has been responsible for writing, developing, creating and/or implementing SOPs, breeding programs and internal audits. He has led & set up cultivations, served as an expert witness, ensured client compliance, solved problems and connected businesses as an integration tool for success. Additionally, he has experience with nutrient programs, integrated pest management programs, research & development programs, and has performed services for farmers, breeders, processors, manufacturers and retailers. He has testified before legislative committees on numerous bills, worked with stakeholders and legislators on bill language and participated in several rule making and stakeholder workgroups regarding hemp and marijuana. His institutional research and funding opportunities combined with his work through the Industrial Hemp Research Foundation offers an excellent understanding of the research practices and funding strategies at Institutions of Higher Education.



Postdoc: Sloan-Kettering Cancer Center (NYC), Molecular Genetics

PhD: University of Texas (Houston), Molecular Genetics & Reproductive Biology

BS: Arizona State University, Zoology & Developmental Biology and Embryology

Andrew Defries, PhD



Botanical Chemist

Founder/owner SevenRitual

<https://seventenritual.com/>

Doctoral botanist with an interdisciplinary skill set in plant genomic sciences, chemistry, and cheminformatics. Experience setting up scientific laboratories for cannabis quality control and large cultivation operations. Poised to manage a team of scientists and technicians. Lifelong learner with equal parts tenacity, creativity, and gusto.

PhD: University of California (Riverside), Chemical Genetics, Botany, Organic Chemistry, Proteomics, Genetics

BSc: University of Toronto, Zoology, Endocrinology, Genetics

<http://tinyurl.com/AndrewGoogleScholar>

1.2 About 420 Organics

420 Organics is a New Jersey Agritech company that is female owned, and locally operated, currently cultivating federally compliant *Cannabis sativa* L. (hemp). We deploy the most sustainable cultivating technology available today, and are the first true USDA certified organic, 100% pesticide free, food grade hemp facility in New Jersey. We utilize a semi-closed loop ecosystem that combines both aquaculture and hydroponics, supporting the plant growth without the need for chemical nutrients which conserves water and does not use nutrient salts. This method has higher yields in less time due to the nutrient rich water in the system.



2 Cannabis Education Series

2.1 Overview

With Dr. Anna Schwabe at the helm, 420 Organics has developed a series of education courses designed to be taken online. This will be an ongoing series of short courses with digestible chunks of focused topics designed so that people can choose which *Cannabis* subjects they would like to learn about.

2.2 Format

When you sign up for a lecturer, you will access a prerecorded video of the lesson with the expert instructor. The courses will be taught as a PowerPoint lecture and a printable pdf version of the lectures will be provided. There will also be a quiz attached to the lecture and a certificate of completion will be awarded with a score of 80% or higher.

2.3 Technology Requirements

As this course is hosted online it is necessary that you have access to a computer with internet capabilities.

2.4 Pricing

Subjects that are currently offered or will be soon are as follows:

The <i>Cannabis</i> Plant Basics	\$	37.50
<i>Cannabis</i> Plant Physiology & Anatomy	\$	82.50
<i>Cannabis</i> Life Cycle: Seed to Harvest	\$	75.00
The History of <i>Cannabis</i>	\$	75.00
<i>Cannabis</i> Evolution & Taxonomy	\$	25.00
<i>Cannabis</i> Species	\$	22.50
Science vs Public Perspectives on <i>Cannabis</i>	\$	70.00
The Science Gap	\$	67.50
<i>Cannabis</i> Phenotypes and Genotypes	\$	62.50



<i>Cannabis</i> Mutations	\$	75.00
Pests, Pathogens, & Problems	\$	32.50
Cultivar & Strain Variation & Quality	\$	50.00
Strains, Cultivars, & Varieties	\$	55.00
<i>Cannabis</i> Categories & Communication	\$	25.00
Strain Names	\$	30.00
“Research Grade Marijuana”	\$	25.00
Strain Information & Databases	\$	32.50
Processing & Manufacturing <i>Cannabis</i> Products	\$	82.50
Packaging, Labeling, & Advertising	\$	75.00
The Endocannabinoid System		TBD
Therapeutic Applications for Cannabinoids		TBD
Plant Medicine & Cannabinoid Pharmaceuticals		TBD
Routes Administration		TBD
Minor Cannabinoids		TBD
Public Health Concerns		TBD
Personal Health Matters		TBD
International Legislation & Policy		TBD
US Legislation & Policy		TBD
Regulatory Agencies		TBD
Breeding		TBD
Cultivation		TBD
<i>Cannabis</i> Phytochemicals & Chemotypes		TBD
<i>Cannabis</i> Testing Protocols & Methods		TBD