

Cannabis Chemistry & Therapeutics certificate programs

Coordinator: Karina Ckless Department of Chemistry and Biochemistry

The Cannabis Certificate program will provide a **foundation of knowledge for the cannabis industry** with an overview of the chemistry and botany of the cannabis, cannabinoid pharmacology and a brief view of the multidisciplinary aspects of the cannabis industry. Therefore, our program will focus on these two pillars:

1. **Workforce:** As the cannabis industry grows, so does the demand for skilled professionals. We will offer our graduates a **specialized pathway** to gain expertise, preparing them to meet the **workforce needs** and lead in this transformative field.
2. **Science and Evidence-based knowledge:** **Educate** enrolled **students** and the **community** at large on **many aspects of cannabis industry**, from the plant's basic science to its therapeutic uses, potential toxicities, and the complex regulatory landscape.

Unique program:

- **Science-based** and **hands on** courses, **research** and **internships** in the cannabis testing industry: CHE 320 Phytochemistry of Cannabis; CHE 440 Analytical Techniques for Cannabis, CHE Biochemistry and Pharmacology of Cannabis, CHE 498 internship; CHE 495 Research.
- Interdisciplinary **educational** component: CRI 371 **Substance Abuse** and the Criminal Justice System; GWS 350 **Feminist Science Studies**, CHE 330 **Cannabis seminar** (with invited speakers and Cannabis themed talks).

Fall 2025:

- CHE 450 - Biochemistry and Pharmacology of Cannabis (3 cr.)
- CRI 371 Substance Abuse and the Criminal Justice System (3 cr.) **WEB**
- CHE 495 - Cannabis research.

Summer 2025:

- CHE 498 - Cannabis-related Internships. (CHE 320 course recommended)
- CHE 495 - Cannabis research.

Spring 2026:

- CHE 440 – Analytical techniques in Cannabis (4 cr.). Schedule TBA
- CHE 330 – Cannabis seminar (1 cr.) Schedule TBA.
- GWS - 350 Feminist Science Studies (3 cr.) Schedule TBA.
- CHE 495 - Cannabis research.

Program Requirements for Cannabis Chemistry Certificate

Cannabis Chemistry Certificate

Curriculum 0044

For more information contact the [Chemistry & Biochemistry Department](#).

Certificate Requirements 18 Credits

- CHE 320 - Phytochemistry of Cannabis (3 cr.)
- CHE 330 - Cannabis seminar (1 cr.)
- CHE 440 - Analytical Techniques for Cannabis (4 cr.)
- CRI 371 - Substance Abuse and the Criminal Justice System (3 cr.) or
- GWS 350 - Feminist Science Studies (3 cr.)

Cannabis Chemistry/Testing Applied Learning (6 cr.)

- CHE 498 - Internship (1 to 15 cr.) or
- CHE 495 - Undergraduate Research (1 to 6 cr.)



Program Requirements for Cannabis Therapeutics Certificate

Cannabis Therapeutics Certificate

Curriculum 0045

For more information contact the [Chemistry & Biochemistry Department](#).

Certificate Requirements 17 Credits

- CHE 320 - Phytochemistry of Cannabis (3 cr.)
- CHE 330 - Cannabis seminar (1 cr.)
- CHE 450 - Biochemistry and Pharmacology of Cannabis (3 cr.)
- CRI 371 - Substance Abuse and the Criminal Justice System (3 cr.) or
- GWS 350 - Feminist Science Studies (3 cr.)

Medicinal Cannabis Applied Learning Experience (6 cr.)

- CHE 495 - Undergraduate Research (1 to 6 cr.) or
- CHE 498 - Internship (1 to 15 cr.)

