# Cannabis Biology and Chemistry Degree Program

**College of Science and Mathematics**  
**Colorado State University-Pueblo**

## Natural Products Emphasis

*Designates new courses  
**Core Courses (46 credits)**  
- BIOL 181/181L – College Biology I/Lab (4 credits)  
- BIOL 182/182L – College Biology II/Lab (4 credits)  
- BIOL 201/201L – Botany/Lab (4 credits)  
- BIOL 465 – Environmental Toxicology (3 credits)  
- CHEM 121/L – General Chemistry I/Lab (5 credits)  
- CHEM 122/L – General Chemistry II/Lab (5 credits)  
- CHEM 301/L – Organic Chemistry I/Lab (5 credits)  
- CHEM 302/L – Organic Chemistry II/Lab (5 credits)  
- CHEM 311 – Intro to Biochemistry (3 credits)  
- CBC 413/L* – Cannabis Physiology and Growth (4 credits)  
- CBC 463* – Medicinal Chemistry and Pharmacology (3 credits)  
- CBC 493* – Seminar (1 credit)

**Other Required Courses (11 credits)**  
- BIOL 171 – First Year Seminar (1 credit)  
- BIOL 350 – Mendelian and Pop Genetics (2 credits)  
- BIOL 351 – Molecular Biology and Genetics (2 credits)  
- BIOL 422 – Neurobiology (3 credits)  
- CBC 401* – Medicinal Plant Biochemistry (3 credits)

**Advisor Approved Electives (9-11 credits)** At least 6 upper division credits

**Support Courses (10-13 credits)**  
- MATH 126 – Calculus and Analytical Geometry I (5 credits) or MATH 221 – Applied Calculus: An Intuitive Approach (4 credits)  
- PHYS 201 – Principles of Physics I (3 credits) or PHYS 221 – General Physics I (4 credits)  
- PHYS 202 – Principles of Physics II (3 credits) or PHYS 222 – General Physics II (4 credits)

**General Education Courses (24 credits)**  
- ENG 101 – English Composition I (3 credits)  
- ENG 102 – English Composition II (3 credits)  
- History – 1 course (3 credits)  
- Humanities – 3 courses (9 credits)  
- Social Sciences – 2 courses (6 credits)

**General Electives (15-19 credits)** Students are encouraged to take other courses relevant to the subject such as PS223 Criminal Law or SOC 203 Criminal Justice System

**Total Credit Hours - 120 credits**

## Analytical Emphasis

*Designates new courses  
**Core Courses (46 credits)**  
- BIOL 181/181L – College Biology I/Lab (4 credits)  
- BIOL 182/182L – College Biology II/Lab (4 credits)  
- BIOL 201/201L – Botany/Lab (4 credits)  
- BIOL 465 – Environmental Toxicology (3 credits)  
- CHEM 121/L – General Chemistry I/Lab (5 credits)  
- CHEM 122/L – General Chemistry II/Lab (5 credits)  
- CHEM 301/L – Organic Chemistry I/Lab (5 credits)  
- CHEM 302/L – Organic Chemistry II/Lab (5 credits)  
- CHEM 311 – Intro to Biochemistry (3 credits)  
- CBC 413/L* – Cannabis Physiology and Growth (4 credits)  
- CBC 463* – Medicinal Chemistry and Pharmacology (3 credits)  
- CBC 493* – Seminar (1 credit)

**Other Required Courses (18 credits)**  
- CHEM 170/370 – Academic Orientation/Enrichment (1 credit)  
- CHEM 317/L – Quantitative Analysis/Lab (5 credits)  
- CHEM 322 – Physical Chemistry II (3 credits)  
- CHEM 419/L – Instrumental Analysis/Lab (5 credits)  
- CBC 422/L* – Natural Products Extraction and Analysis/Lab (4 credits)

**Advisor Approved Electives (5-7 credits)**

**Support Courses (16-18 credits)**  
- MATH 126 – Calculus and Analytical Geometry I (5 credits) or MATH 224 – Calculus and Analytical Geometry II (5 credits)  
- PHYS 201 – Principles of Physics I (3 credits) or PHYS 221 – General Physics I (4 credits)  
- PHYS 202 – Principles of Physics II (3 credits) or PHYS 222 – General Physics II (4 credits)

**General Education Courses (24 credits)**  
- ENG 101 – English Composition I (3 credits)  
- ENG 102 – English Composition II (3 credits)  
- History – 1 course (3 credits)  
- Humanities – 3 courses (9 credits)  
- Social Sciences – 2 courses (6 credits)

**General Electives (7-11 credits)** Students are encouraged to take other courses relevant to the subject such as PS223 Criminal Law or SOC 203 Criminal Justice System

**Total Credit Hours - 120 Credits**