

# CANNABIS BIOLOGY & CHEMISTRY: NATURAL PRODUCTS CONCENTRATION, BACHELOR OF SCIENCE

The major in Cannabis Biology and Chemistry leads to a Bachelor of Science (BS) degree. The major is a rigorous, interdisciplinary degree that has solid foundations in both biology and chemistry. In addition, a variety of supporting and general education courses are available to meet a wide range of interests, backgrounds and needs. The Cannabis Biology and Chemistry program prepares students to enter the workforce as scientists or technicians in a wide variety of different laboratories including agricultural and food, biology, chemistry, environmental science, and cannabis.

The Natural Products emphasis leads to a CBC BS degree for those with more interest in biology.

## Specific Program Requirements

### Specific Core Requirements

Course	Title	Credits
BIOL 181	College Biology I/Organismal Bio (GT-SC2)	3
BIOL 181L	College Biology I/Organismal Bio Lab (GT-SC1)	1
BIOL 182	College Biology II/Cellular Biology (GT-SC2)	3
BIOL 182L	College Biology II/Cellular Bio Lab (GT-SC1)	1
BIOL 201	Botany (GT-SC2)	2
BIOL 201L	Botany Laboratory (GT-SC1)	2
BIOL 465	Environmental Toxicology	3
CHEM 121	General Chemistry I (GT-SC2)	4
CHEM 121L	General Chemistry Lab I (GT-SC1)	1
CHEM 122	General Chemistry II (GT-SC2)	4
CHEM 122L	General Chemistry Lab II (GT-SC1)	1
CHEM 301	Organic Chemistry I	3
CHEM 301L	Organic Chemistry Lab I	2
CHEM 302	Organic Chemistry II	3
CHEM 302L	Organic Chemistry Lab II	2
CHEM 311	Biochemistry Survey	3
CBC 413	Cannabis Physiology & Growth	3
CBC 413L	Cannabis Physiology & Growth Lab	1
CBC 463	Medicinal Chemistry & Pharmacology	3
CBC 493	Seminar	1

### Specific Concentration Requirements

Course	Title	Credits
BIOL 171	First Year Seminar	1
BIOL 350	Mendelian and Population Genetics	2
BIOL 351	Molecular Biology and Genetics	2
BIOL 422	Neurobiology	3
MATH 126 or MATH 221	Calculus & Analytic Geometry I (GT-MA1) Applied Calc: An Intuitive Approach (GT-MA1)	4-5
CBC 401	Medicinal Plant Biochemistry	3

PHYS 201 or PHYS 221	Principles of Physics I (GT-SC2) General Physics I	3-4
PHYS 202 or PHYS 222	Principles Of Physics II (GT-SC2) General Physics II	3-4
<b>Advisor Approved Electives (At least 6 upper division credits)</b>		<b>9-11</b>
<b>General Electives</b>		<b>15-19</b>

## Specific Graduation Requirements

Students majoring in Cannabis Biology & Chemistry are required to have a cumulative GPA of 2.000 or better in their chemistry and biology courses.

## Planning Sheet

Disclaimer: The Planning Sheet is designed as a guide for student's planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.

Course	Title	Credits
<b>Year 1</b>		
<b>Fall</b>		
BIOL 171	First Year Seminar	1
BIOL 181 & 181L	College Biology I/Organismal Bio (GT-SC2) and College Biology I/Organismal Bio Lab (GT-SC1)	4
CHEM 121 & 121L	General Chemistry I (GT-SC2) and General Chemistry Lab I (GT-SC1)	5
ENG 101	Rhetoric & Writing I (GT-C01)	3
General Education		3
<b>Credits</b>		<b>16</b>
<b>Spring</b>		
BIOL 182 & 182L	College Biology II/Cellular Biology (GT-SC2) and College Biology II/Cellular Bio Lab (GT-SC1)	4
CHEM 122 & 122L	General Chemistry II (GT-SC2) and General Chemistry Lab II (GT-SC1)	5
ENG 102	Rhetoric & Writing II (GT-C02)	3
General Education		3
<b>Credits</b>		<b>15</b>
<b>Year 2</b>		
<b>Fall</b>		
BIOL 201 & 201L	Botany (GT-SC2) and Botany Laboratory (GT-SC1)	4
BIOL 350	Mendelian and Population Genetics	2
MATH 126 or MATH 221	Calculus & Analytic Geometry I (GT-MA1) or Applied Calc: An Intuitive Approach (GT-MA1)	5
General Education		3
<b>Credits</b>		<b>14</b>
<b>Spring</b>		
BIOL 351	Molecular Biology and Genetics	2
CHEM 301 & 301L	Organic Chemistry I and Organic Chemistry Lab I	5
PHYS 221 or PHYS 201	General Physics I or Principles of Physics I (GT-SC2)	4
General Education		6
<b>Credits</b>		<b>17</b>
<b>Year 3</b>		
<b>Fall</b>		
CHEM 302 & 302L	Organic Chemistry II and Organic Chemistry Lab II	5

CHEM 311	Biochemistry Survey	3
PHYS 222 or PHYS 202	General Physics II or Principles Of Physics II (GT-SC2)	4
Elective		3
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
BIOL 422	Neurobiology	3
CBC 401	Medicinal Plant Biochemistry	3
Elective	3 credits must be approved by advisor.	9
<b>Credits</b>		<b>15</b>
<b>Year 4</b>		
<b>Fall</b>		
BIOL 465	Environmental Toxicology	3
CBC 413 & 413L	Cannabis Physiology & Growth and Cannabis Physiology & Growth Lab	4
CBC 493	Seminar	1
Elective	3-4 credits must be approved by advisor.	6-7
<b>Credits</b>		<b>14-15</b>
<b>Spring</b>		
CBC 401	Medicinal Plant Biochemistry	3
CBC 463	Medicinal Chemistry & Pharmacology	3
Elective	3 credits must be approved by advisor.	9
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>121-122</b>