



DEPARTMENT OF
HIGHER EDUCATION &
WORKFORCE DEVELOPMENT

New Program Report

Date Submitted:

12/13/2022

Institution

Truman State University

Site Information

Implementation Date:

8/21/2023 12:00:00 AM

Added Site(s):

Selected Site(s):

Truman State University, 100 East Normal, Kirksville, MO, 63501-9980

CIP Information

CIP Code:

512005

CIP Description:

A program that focuses on the scientific study of biologically active compounds found in naturally occurring sources such as plants, animals, and microbes and their use and/or modification as medicinal substances. Includes instruction in medicinal chemistry, organic medicinals, pharmacological therapeutics, pharmacokinetics, molecular biology, structural chemistry, enzymes, nucleic acids, economic botany, ethnobotany, bioprospecting, bioassay, compound identification and isolation, mass spectrometry, and analytical instrumentation and techniques.

CIP Program Title:

Natural Products Chemistry and Pharmacognosy

Institution Program Title:

Cannabis and Natural Medicinals

Degree Level/Type

Degree Level:

Bachelor's Degree

Degree Type:

Bachelor of Science

Options Added:

Collaborative Program:

N

Mode of Delivery

Current Mode of Delivery

Classroom

Student Preparation



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Special Admissions Procedure or Student Qualifications required:

The normal admissions requirements and procedures for the University as a whole will be followed. There will be no independent procedure to be admitted to the major.

Specific Population Characteristics to be served:

This major appeals to a range of students interested in a growing field that touches on multiple disciplines including agriculture, biology, chemistry, business, philosophy and religion, sociology, and justice systems, among others. It will serve those interested in pursuing careers in natural medicinal science and business, as well as those who are interested in studying the social and cultural uses and implications of natural medicinal substances. As such, the program will appeal to those interested in the expanding number of jobs in the marketplace for natural medicinal products as well as those interested in pursuing continued study into the societal impacts of regulations governing these products.

Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

The courses for this program are interdisciplinary. As a result, faculty will be drawn from the constituent departments of the program and meet the professional requirements of their individual discipline. Those who teach seminars core to the major will have expertise in the specific topics of the seminars.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

With few exceptions, all courses will be assigned to full-time faculty. It is possible that a special topic may arise from time-to-time that would benefit from a guest part-time faculty member, or that a retired faculty member may wish to offer a course. This will not, however, be common.

Expectations for professional activities, special student contact, teaching/learning innovation:

Faculty will be expected to adhere to the expectations for tenure and promotion, or annual review, of their existing constituent departments. Faculty involved in the program will be expected to contribute to the advising of students in the program as they form their plans for study and to support research projects and internship supervision as needed.

Student Enrollment Projections Year One-Five

Year 1	Full Time: 10	Part Time: 2	
Year 2	Full Time: 12	Part Time: 3	
Year 3	Full Time: 14	Part Time: 5	Number of Graduates: 0
Year 4	Full Time: 16	Part Time: 7	
Year 5	Full Time: 18	Part Time: 9	Number of Graduates: 12

Percentage Statement:

n/a

Program Accreditation

Institutional Plans for Accreditation:

This program is not independently accredited.

Program Structure



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Total Credits:

120

Residency Requirements:

The minimum residence credit required for a Bachelor's degree is 45 credits, 28 of which must immediately precede completion of requirements for the degree.

General Education Total Credits:

42

Major Requirements Total Credits:

65

Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
CANM 301	3	Regulation of Natural Medicinals
BSAD 329	3	Principles of Finance
CANM 401	3	Natural Medicinals Practicum
BSAD 470	1	Special Topics in Business: Entrepreneurial Thinking
PER 335	3	Sacred Healing in Peru (Study Abroad)
ACCT 220	3	Introduction to Financial Accounting
PHRE 350	3	Biomedical Ethics
CANM 300	3	Cannabis Cultivation and Processing
CHEM 331	3	Organic Chemistry II
BSAD 234	3	Legal Environment in Business
CANM 200	3	History of Natural Medicine
BSAD 153	1	Introduction to Business Data Analytics
PSYC 166	3	General Psychology
BSAD 415	3	Entrepreneurship
JINS 347	3	Religion, Health, and Healing
BIOL 332	4	Plant Physiology
CHEM 312	5	Foundations of Chemical Analysis
AGSC 342	3	Agricultural Entrepreneurship
AGSC 110	4	Principles of Plant Agriculture
AGSC 314	4	Principles of Soil Science
BIOL 334	3	Molecular Pharmacology



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CANM 303	1	Evaluation and Analysis of Internship
BIOL 107	4	Cells, Molecules, and Genes
ACCT 221	3	Introduction to Management Accounting
SOAN 297	3	Introduction to Indigenous Americas
PHRE 344	3	Psychology and Religion
AGSC 332	4	Principles of Vegetable Production
CHEM 130	4	Chemical Principles I
IDSMS 351	2	Interdisciplinary Global Health Seminar
POL 361	3	Law and the Judicial Process
CHEM 131	4	Chemical Principles II
CHEM 335	3	Biochemistry I: Structure and Foundation
BIOL 300	4	Genetics
CANM 400	3	Natural Medicinals Seminar
SOAN 253	3	Comparative Cultures
CHEM 320	4	Foundations of Organic Chemistry
BIOL 318	4	Mycology
BSAD 349	3	Organizational Behavior
CHEM 332	1	Organic Chemistry II Lab
BIOL 321	3	Foundations of Genetics
JINS 3001	3	An Interdisciplinary Exploration of Human Consciousness
PHRE 386	3	Studies in Philosophy and Religion
PHRE 188	3	Ethics
INDV 321	3	Art (and Science) of Entrepreneurship
PHRE 305	3	Shamanism
AGSC 311	4	Plant Nutrition
JINS 384	3	Drugs, Society, Crime, and Treatment: Interconnected Paths and Theories
CANM 302	2	Internship in Natural Medicinals
PSYC 430	3	Psychopharmacology: Drugs and Behavior
AGSC 218	4	Introduction to Horticulture
BIOL 313	4	Plant Anatomy



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BIOL 317	3	Economic and Medical Botany
BSAD 325	3	Principles of Marketing
CHEM 329	3	Organic Chemistry I
CHEM 330	1	Organic Chemistry I Lab

Free Elective Credits:

12

Internship or other Capstone Experience:

3 credits capstone internship or research experience.

Assurances

I certify that the program is clearly within the institution's CBHE-approved mission. The proposed new program must be consistent with the institutional mission, as well as the principal planning priorities of the public institution, as set forth in the public institution's approved plan or plan update.

I certify that the program will be offered within the proposing institution's main campus or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the program can be launched with minimal expense and falls within the institution's current operating budget.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

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MINCH

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**Curriculum Summary
Cannabis and Natural Medicinals BS**

Dialogues Requirements: 42-61 Credits

Missouri Statute (1-4 credits)

MAJOR REQUIREMENTS:

The Cannabis and Natural Medicinals BS degree consists of three (3) parts: Required Support, Major Requirements, and a Learning Plan. Each student must complete all four parts. Within the first part students will select from among three (4) Options: Analytical Science, Society and Philosophy, Cultivation, and Business and Entrepreneurship.

Part I: Required Support: 18-20 Credits

For Students in the Analytical Science Option

Complete each of the following courses:

CHEM 130 Chemical Principles I Cr. 4
CHEM 131 Chemical Principles II Cr. 4
CHEM 329 Organic Chemistry I Cr. 3
CHEM 330 Organic Chemistry I Lab Cr. 1
CHEM 331 Organic Chemistry II Cr. 3
CHEM 312 Foundations of Chemical Analysis Cr. 5

For Students in the Society and Philosophy Option

Complete each of the following courses:

PSYC 166 General Psychology Cr. 3
PHRE 350 Biomedical Ethics Cr. 3
PHRE 344 Psychology and Religion Cr. 3
PHRE 386 Studies in Philosophy and Religion Cr. 3
SOAN 253 Comparative Cultures Cr. 3
SOAN 297 Introduction to Indigenous Americas Cr. 3

For Students in the Cultivation Option

Complete each of the following courses:

AGSC 218 Introduction to Horticulture Cr. 4
AGSC 311 Plant Nutrition Cr. 4
AGSC 314 Principles of Soil Science Cr. 4
BIOL 313 Plant Anatomy Cr. 4 OR
BIOL 332 Plant Physiology Cr. 4
BIOL 300 Genetics OR Cr. 4
BIOL 321 Foundations of Genetics Cr. 3

For Students in the Business and Entrepreneurship Option
Complete each of the following courses:

ACCT 220 Introduction to Financial Accounting Cr. 3
ACCT 221 Introduction to Management Accounting Cr. 3
BSAD 153 Introduction to Business Data Analytics Cr. 1
BSAD 325 Principles of Marketing Cr. 3
BSAD 329 Principles of Finance Cr. 3
BSAD 349 Organizational Behavior Cr. 3
AGSC 342 Agricultural Entrepreneurship Cr. 3 OR
INDV 321 Art (and Science) of Entrepreneurship Cr. 3 OR
BSAD 415 Entrepreneurship Cr. 3

Part II: Bachelor of Science Requirements: 8 Credits

Complete each of the following courses:

BIOL 107 Cells, Molecules, and Genes Cr. 4
AGSC 110 Principles of Plant Agriculture Cr. 4

Part III: Major Requirements: 21 Credits

Complete each of the following courses:

CANM 200 History of Natural Medicine Cr. 3
CANM 300 Cannabis Cultivation and Processing Cr. 3
CANM 301 Regulation of Natural Medicinals Cr. 3
CANM 400 Natural Medicinals Seminar Cr. 3
BSAD 234 Legal Environment of Business Cr. 3
PHRE 188 Ethics Cr. 3
CANM 401 Natural Medicinals Practicum Cr. 3 OR
CANM 302 Internship in Natural Medicinals Cr. 2 AND
CANM 303 Evaluation and Analysis of Internship Cr. 1

Part III: Learning Plan: 18 Credits

Select courses across at least 3 prefixes totaling at least 18 credits. No courses can double count with major requirements, BS requirements, or major required support. All major requirements, BS, requirements, and major required support can be double counted for all other majors and minor, or university graduation requirements.

AGSC 218 Introduction to Horticulture Cr. 4
AGSC 311 Plant Nutrition Cr. 3
AGSC 314 Principles of Soil Science Cr. 4
AGSC 332 Principles of Vegetable Production Cr. 4
AGSC 342 Agricultural Entrepreneurship Cr. 3

BSAD 325 Principles of Marketing Cr. 3

BSAD 329 Principles of Finance Cr. 3
BSAD 349 Organizational Behavior Cr. 3
BSAD 415 Entrepreneurship Cr. 3
BSAD 470 Special Topics in Business: Entrepreneurial Thinking Cr. 1

BIOL 313 Plant Anatomy Cr. 4
BIOL 317 Economic and Medical Botany Cr. 3
BIOL 334 Molecular Pharmacology Cr. 3
BIOL 300 Genetics OR Cr. 4
 BIOL 321 Foundations of Genetics Cr. 3
BIOL 318 Mycology Cr. 4
BIOL 332 Plant Physiology Cr. 4

CANM 401 Natural Medicinals Practicum Cr. 3 OR
CANM 302 Internship in Natural Medicinals Cr. 2 AND
CANM 303 Evaluation and Analysis of Internship Cr. 1

CHEM 329 Organic Chemistry I Cr. 3
CHEM 330 Organic Chemistry I Lab Cr. 1
CHEM 331 Organic Chemistry II Cr. 3
CHEM 332 Organic Chemistry II Lab Cr. 1 OR
 CHEM 320 Foundations of Organic Chemistry Cr. 4
CHEM 335 Biochemistry I: Structure and Foundation Cr. 3
CHEM 312 Foundations of Chemical Analysis Cr. 5

IDSM 351 Interdisciplinary Global Health Seminar Cr. 2

INDV 321 Art (and Science) of Entrepreneurship Cr. 3

JINS 347 Religion, Health, and Healing Cr. 3
JINS 384 Drugs, Society, Crime and Treatment: Interconnected Paths and Theories Cr. 3
JINS 3001 An Interdisciplinary Exploration of Human Consciousness Cr. 3

PHRE 305 Shamanism Cr. 3
PHRE 344 Psychology and Religion Cr. 3
PHRE 350 Biomedical Ethics Cr. 3

POL 262 American State and Local Government Cr. 3
POL 361 Law and the Judicial Process Cr. 3

PSYC 430 Psychopharmacology: Drugs and Behavior Cr. 3

PER 335 Sacred Healing in Peru (Study Abroad)

SOAN 253 Comparative Cultures Cr. 3
SOAN 297 Introduction to Indigenous Americas Cr. 3

Electives to Total: 120 Credits