

Pre-Baccalaureate Nursing – Science with Biology Concentration Program

Associate in Science

Minimum of 61 credit hours

If you know you want to pursue a bachelor's degree in the field of science, you might consider enrolling in the pre-baccalaureate nursing – science with biology concentration program at Oklahoma City Community College. This curriculum will prepare you to transfer to a four-year college or university and pursue your education in nursing. A degree in nursing prepares you to work in clinical settings as well as education, private industry and public health settings.

COURSE SEQUENCE

Course ID	Course Name	Credits	Type	Min GD
Term 1				
SCL 1001	Success in College and Life Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement. Prerequisites: ENGL 0106 or adequate reading/writing assessment scores	1	Life Skills	
MATH 1483	Functions and Modeling The student will demonstrate: an understanding of the general concepts of relation and function and specifically of polynomial, rational, exponential and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and, the ability to solve practical problems using algebraic and digital techniques. Prerequisites: MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures	OR	Gen Ed	
MATH 2013	Introduction to Statistics The student will solve problems applying the concepts of random sampling, elementary probability, testing hypotheses, descriptive measures, chi-square, regression and correlation, and analysis of variance. Prerequisites: MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures	3	Gen Ed	
BIO 1124	General Biology I (Majors) An introductory course required for all biological science majors and pre-health profession students. The fundamental principles of biology are described using a cellular approach. Students gain knowledge regarding the chemical basis of life, structural characteristics of cells to include a discussion of energetics, metabolism and genetics. Evolution and ecology are also discussed in order to provide an understanding of both the diversity of living organisms and the living world. Students recognize, discuss and correctly apply fundamental biological principles influencing their personal relationship with other life forms. A discussion of the scientific method, logical (deductive) reasoning, hypothesis testing and some common fallacies and misconceptions that cloud scientific explanations of the natural world are included. Laboratory work, an integral and required part of the course, will enhance the student's understanding of fundamental biological concepts as well as scientific procedures, laboratory technical skills, dissection and statistical analysis. Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0313 or adequate math placement.	4	Major	
Term 2				
CHEM 1115	General Chemistry I	5	Major	

This course is designed for science and engineering majors. The course covers nomenclature, atomic and molecular structure, stoichiometry, acid/base and other aqueous reactions, states of matter, phase changes, gas laws, and an introduction to thermochemistry. Laboratory experience is an integral part of the course.**Prerequisites:**

ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 1483 or MATH 1533, or both MATH 0313 and High School Chemistry or CHEM 1123.

ENGL 1113 English Composition I 3 Gen Ed

The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.**Prerequisites:**

ENGL 0203, adequate placement score, or by meeting determined placement measures

Term 3

BIO 1023 Introductory Nutrition 3 Gen Ed

Upon completion of this course, the student will be able to discuss the composition of nutrients and accessory factors required for human nutrition, relate their roles in human health and disease, and describe the application of basic nutritional principles to the planning of normal and special dietary regimens.**Prerequisites:**

ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0203 or adequate math placement.

ENGL 1213 English Composition II 3 Gen Ed

In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques they learned in ENGL 1113 or ENGL 1103 to develop well-reasoned, well-structured arguments in a clear, fluid, and engaging prose style.**Prerequisites:**

ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.

Term 4

BIO PB
SUPP
ELEC Pre-Bacc (Biology) Support Electives 3 Support

9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1134, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, CHEM 1215, COM 2213, CS 1103, MATH 1613, MATH 1743, PHYS 1114, PHYS 1214, PSY 2403, or any 5 credit hour GRMN, FREN, or SPAN course.

HIST 1483 U.S. History to 1877 OR Gen Ed

After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.**Prerequisites:**

ENGL 0203, adequate placement score, or by meeting determined placement measures

HIST 1493 U.S. History 1877 to Present 3 Gen Ed

After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.**Prerequisites:**

ENGL 0203, adequate placement score, or by meeting determined placement measures

Term 5

BIO 2234 Human Physiology 4 Major

Students discuss major systems of the human body, contrast functional and regulatory activities of each and identify factors influencing homeostasis. Through the use of models, the student will recognize the relative influences and interrelationships between circulation, digestion, metabolism, respiration, kidney function, muscle action, endocrine and nervous control, and reproduction of other systems and the organism as a whole.

Laboratory work which requires dissection is an integral and required part of the course.**Prerequisites:** BIO 1124 and one college-level chemistry course.

POLSC
1113 American Federal Government 3 Gen Ed

A study of the principles, structure, processes and functions of the United States federal government.**Prerequisites:**

ENGL 0203, adequate placement score, or by meeting determined placement measures

Term 6

BIO 2125 Microbiology 5 Gen Ed

Students are introduced to the biological requirements and activities of microorganisms which influence their roles as integral components of the ecosystem. Students demonstrate knowledge of basic principles of pathology, epidemiology and immunology in addition to performing basic laboratory techniques for isolating, characterizing and identifying common microorganisms. **Prerequisites:** MATH 0203 or adequate math placement, Any four credit hour college-level biology course and a college-level chemistry course.

HUM	Humanities Elective Humanities elective	3	Gen Ed
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Term 7

BIO PB SUPP ELEC	Pre-Bacc (Biology) Support Electives	3	Support
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9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1134, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, CHEM 1215, COM 2213, CS 1103, MATH 1613, MATH 1743, PHYS 1114, PHYS 1214, PSY 2403, or any 5 credit hour GRMN, FREN, or SPAN course.

PSY 1113	General Psychology	3	Gen Ed
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A survey of the major areas of study in psychology such as motivation, learning, physiology, personality, social psychology, abnormal behavior, perception, memory, cognition/thought, and treatment. **Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

Term 8

BIO PB SUPP ELEC	Pre-Bacc (Biology) Support Electives	3	Support
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9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1134, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, CHEM 1215, COM 2213, CS 1103, MATH 1613, MATH 1743, PHYS 1114, PHYS 1214, PSY 2403, or any 5 credit hour GRMN, FREN, or SPAN course.

SOC 1113	Introduction to Sociology	OR	Gen Ed
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The student will identify the sociological dimensions of human behavior by analyzing the concepts of society, culture, socialization, institutions, social stratification and social change. **Prerequisites:** ENGL 0203, adequate placement score, or by meeting determined placement measures

PSY 2403	Developmental Psychology	3	Gen Ed
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This course will cover biopsychosocial aspects of human development throughout the lifespan. **Prerequisites:** PSY 1113

Term 9

CS 1103	Introduction to Computers and Applications	3	Gen Ed
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This hands-on course affords students a basic understanding of computers and their application. Upon completion of this course, the student will be able to demonstrate the ability to use a computer operating system, an office suite, productivity tools, as well as the Internet at an introductory level. Advanced Standing is available.

Prerequisites:

MATH 0103 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

HUM	Humanities Elective Humanities elective	3	Gen Ed
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COURSE GROUPING

Major Courses: (13 credit hours) Biology: BIO 1124; BIO 2234; Chemistry: CHEM 1115

General Education Courses: (38 credit hours) English: ENGL 1113; ENGL 1213; History: HIST 1483 or HIST 1493; Political Science: POLSC 1113; Biology: BIO 1023; BIO 2125; Humanities: Six credit hours*; Social Science: PSY 1113; PSY 2403 or SOC 1113*; Mathematics: MATH 1483 or MATH 2013; Computer Science: CS 1103

*Support Courses: (9 credit hours); 9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1134, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 1215, CHEM 2114, CHEM 2111, COM 2213, CS 1103, MATH 1613, MATH 1743, PHYS 1114, PHYS 1214, PSY 2403, or any 5 credit hour GRMN, FREN, or SPAN course.

Life Skills Courses: (1 credit hour) Life Skills: SCL 1001

A minimum grade of "C" required for all prerequisites and general education courses at OUHSC; at UCO all BIO and CHEM courses require a minimum grade of "C".

*Course choice depends on the specific program for which the student is applying. See prerequisite course list of the receiving institution.

PROGRAM NOTES

Notes: This program is designed for students planning to continue their education at a four-year college or university. See the front general section for information and requirements about University Parallel/Transfer Programs.

COURSE DESCRIPTIONS

BIOLOGICAL SCIENCE

BIO 1023 - Introductory Nutrition

Upon completion of this course, the student will be able to discuss the composition of nutrients and accessory factors required for human nutrition, relate their roles in human health and disease, and describe the application of basic nutritional principles to the planning of normal and special dietary regimens.

Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0203 or adequate math placement.

Credits: 3

BIO 1124 - General Biology I (Majors)

An introductory course required for all biological science majors and pre-health profession students. The fundamental principles of biology are described using a cellular approach. Students gain knowledge regarding the chemical basis of life, structural characteristics of cells to include a discussion of energetics, metabolism and genetics. Evolution and ecology are also discussed in order to provide an understanding of both the diversity of living organisms and the living world. Students recognize, discuss and correctly apply fundamental biological principles influencing their personal relationship with other life forms. A discussion of the scientific method, logical (deductive) reasoning, hypothesis testing and some common fallacies and misconceptions that cloud scientific explanations of the natural world are included. Laboratory work, an integral and required part of the course, will enhance the student's understanding of fundamental biological concepts as well as scientific procedures, laboratory technical skills, dissection and statistical analysis.

Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0313 or adequate math placement.

Credits: 4

BIO 2125 - Microbiology

Students are introduced to the biological requirements and activities of microorganisms which influence their roles as integral components of the ecosystem. Students demonstrate knowledge of basic principles of pathology, epidemiology and immunology in addition to performing basic laboratory techniques for isolating, characterizing and identifying common microorganisms.

Prerequisites: MATH 0203 or adequate math placement, Any four credit hour college-level biology course and a college-level chemistry course.

Credits: 5

BIO 2234 - Human Physiology

Students discuss major systems of the human body, contrast functional and regulatory activities of each and identify factors influencing homeostasis. Through the use of models, the student will recognize the relative influences and interrelationships between circulation, digestion, metabolism, respiration, kidney function, muscle action, endocrine and nervous control, and reproduction of other systems and the organism as a whole. Laboratory work which requires dissection is an integral and required part of the course.

Prerequisites: BIO 1124 and one college-level chemistry course.

Credits: 4

CHEMISTRY

CHEM 1115 - General Chemistry I

This course is designed for science and engineering majors. The course covers nomenclature, atomic and molecular structure, stoichiometry, acid/base and other aqueous reactions, states of matter, phase changes, gas laws, and an introduction to thermochemistry. Laboratory experience is an integral part of the course.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 1483 or MATH 1533, or both MATH 0313 and High School Chemistry or CHEM 1123.

Credits: 5

COMPUTER SCIENCE

CS 1103 - Introduction to Computers and Applications

This hands-on course affords students a basic understanding of computers and their application. Upon completion of this course, the student will be able to demonstrate the ability to use a computer operating system, an office suite, productivity tools, as well as the Internet at an introductory level. Advanced Standing is available.

Prerequisites: MATH 0103 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

ELECTIVES

BIO PB SUPP ELEC - Pre-Bacc (Biology) Support Electives

9 credit hours of support electives from the following: AHP 1013, ACCT 2113, BIO 1134, BIO 2114, BIO 2203, BIO 2215, BIO 2255, BIO 2404, CHEM 2114, CHEM 2111, CHEM 1215, COM 2213, CS 1103, MATH 1613, MATH 1743, PHYS 1114, PHYS 1214, PSY 2403, or any 5 credit hour GRMN, FREN, or SPAN course.

Credits: 9

HUM - Humanities Elective

Humanities elective

Credits: 3

ENGLISH

ENGL 1113 - English Composition I

The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

ENGL 1213 - English Composition II

In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques they learned in ENGL 1113 or ENGL 1103 to develop well-reasoned, well-structured arguments in a clear, fluid, and engaging prose style.

Prerequisites: ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.

Credits: 3

HISTORY

HIST 1483 - U.S. History to 1877

After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

HIST 1493 - U.S. History 1877 to Present

After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

MATHEMATICS

MATH 1483 - Functions and Modeling

The student will demonstrate: an understanding of the general concepts of relation and function and specifically of polynomial, rational, exponential and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and, the ability to solve practical problems using algebraic and digital techniques.

Prerequisites: MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

MATH 2013 - Introduction to Statistics

The student will solve problems applying the concepts of random sampling, elementary probability, testing hypotheses, descriptive measures, chi-square, regression and correlation, and analysis of variance.

Prerequisites: MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

POLITICAL SCIENCE

POLSC 1113 - American Federal Government

A study of the principles, structure, processes and functions of the United States federal government.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

PSYCHOLOGY

PSY 1113 - General Psychology

A survey of the major areas of study in psychology such as motivation, learning, physiology, personality, social psychology, abnormal behavior, perception, memory, cognition/thought, and treatment.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

PSY 2403 - Developmental Psychology

This course will cover biopsychosocial aspects of human development throughout the lifespan.

Prerequisites: PSY 1113

Credits: 3

SOCIOLOGY

SOC 1113 - Introduction to Sociology

The student will identify the sociological dimensions of human behavior by analyzing the concepts of society, culture, socialization, institutions, social stratification and social change.

Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures

Credits: 3

SUCCESS IN COLLEGE AND LIFE

SCL 1001 - Success in College and Life

Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement.

Prerequisites: ENGL 0106 or adequate reading/writing assessment scores

Credits: 1