

**NEOSHO COUNTY COMMUNITY COLLEGE
MASTER COURSE SYLLABUS**

COURSE IDENTIFICATION

Course Code/Number: BIOL 252

Course Title: Biology I Laboratory

Division: Applied Science (AS) Liberal Arts (LA) Workforce Development (WD)
 Health Care (HC) Lifetime Learning (LL) Nursing Developmental

Credit Hour(s): Two (2)

Effective Date: Fall 2017

Assessment Goal Per Outcome: 70%

COURSE DESCRIPTION

Laboratory exercises, which reinforce the fundamental principles and processes of life taught in the lecture portion of biology I, will be examined.

MINIMUM REQUIREMENTS/PREREQUISITES AND/OR COREQUISITES

Co-requisite: BIOL 251 Biology I Lecture

TEXTS

The official list of textbooks and materials for this course is found on *myNeosho*.

<http://www.neosho.edu/ProspectiveStudents/Registration/CourseSyllabi.aspx>

GENERAL EDUCATION OUTCOMES

1. Practice Responsible Citizenship through:
 - identifying rights and responsibilities of citizenship,
 - identifying how human values and perceptions affect and are affected by social diversity,

- identifying and interpreting artistic expression.
2. Live a healthy lifestyle (physical, intellectual, social) through:
 - listing factors associated with a healthy lifestyle and lifetime fitness,
 - identifying the importance of lifetime learning,
 - demonstrating self-discipline, respect for others, and the ability to work collaboratively as a team.
 3. Communicate effectively through:
 - developing effective written communication skills,
 - developing effective oral communication and listening skills.
 4. Think analytically through:
 - utilizing quantitative information in problem solving,
 - utilizing the principles of systematic inquiry,
 - utilizing various information resources including technology for research and data collection.

COURSE OUTCOMES/COMPETENCIES (as Required) & MINIMUM COURSE CONTENT

KCOG, Course Approval Date: Summer 2016, Course Review Date: Summer 2021

Upon completion of the above listed course, students will have a command of the following:

1. Demonstrate an understanding of the nature of science
 - a. Scientific processes
 - b. Scientific methods
2. Demonstrate an understanding of the levels of organization and emergent properties of life
 - a. Basic biological chemistry
 - b. Structure and function of biological molecules
 - c. Cellular structure and functions
3. Demonstrate an understanding of bioenergetics
 - a. Enzyme activity
 - b. Cellular respiration
 - c. Photosynthesis
4. Demonstrate an understanding of cellular reproduction
 - a. Binary fission
 - b. Mitosis
 - c. Meiosis
5. Identify the basic principles of Mendelian and molecular genetics, and relate these to the basic principles of Natural Selection and evolution.
 - a. Classical genetics
 - b. Molecular genetics
 - i. DNA replication
 - ii. Gene expression and regulation
6. Design and perform experiments in a laboratory setting.
 - a. Microscopy
 - b. Quantitative measurement skills incorporating the metric system
 - c. Analytical and statistical skills including presenting and/or interpreting graphs and tables
 - d. Experience with living organisms in the laboratory

STUDENT REQUIREMENTS AND METHOD OF EVALUATION

This is a two credit hour course consisting of three hours of laboratory per week. Evaluator measures may include daily work, examinations, quizzes, laboratory techniques, laboratory write-ups, investigations and a notebook. Laboratory examinations and procedures cannot be made up. The student must be present.

GRADING

There are NO make-up Examinations in this course. The ONLY reason for missing a scheduled examination is an illness, which can be verified in writing by your PHYSICIAN or a NCCC activity. If you absolutely must miss an examination, contact the Instructor BEFORE the scheduled examination. PLEASE NOTE that the Instructor has provided TWO ways for your convenience in making contact. If you have failed to take an examination at its scheduled time and have not made prior arrangements with the Instructor, you will receive a score of ZERO (0) for that examination.

Percent of Top Score Letter Grade

- 90 - 100% A
- 80 – 89.9% B
- 70 – 79.9% C
- 60 – 69.9% D
- < 60% F

ASSESSMENT OF STUDENT GAIN

Student mastery of competencies will be assessed during performance of laboratory skills in practical laboratory examinations, through completion of laboratory exercises, and a comprehensive laboratory final.

Attendance Policy

1. NCCC values interactive learning which promotes student engagement in the learning process. To be actively engaged, the student must be present in the learning environment.
2. Unless students are participating in a school activity or are excused by the instructor, they are expected to attend class. If a student's absences exceed one-eighth of the total course duration, (which equates to one hundred (100) minutes per credit hour in a face-to-face class) the instructor has the right, but is not required, to withdraw a student from the course. Once the student has been dropped for excessive absences, the registrar's office will send a letter to the student, stating that he or she has been dropped. A student may petition the chief academic officer for reinstatement by submitting a letter stating valid reasons for the absences within one week of the registrar's notification. If the student is reinstated into the class, the instructor and the registrar will be notified. Please refer to the Student Handbook/Academic Policies for more information

3. Absences that occur due to students participating in official college activities are excused except in those cases where outside bodies, such as the State Board of Nursing, have requirements for minimum class minutes for each student. Students who are excused will be given reasonable opportunity to make up any missed work or receive substitute assignments from the instructor and should not be penalized for the absence. Proper procedure should be followed in notifying faculty in advance of the student's planned participation in the event. Ultimately it is the student's responsibility to notify the instructor in advance of the planned absence.

ACADEMIC INTEGRITY

NCCC expects every student to demonstrate ethical behavior with regard to academic pursuits. Academic integrity in coursework is a specific requirement. Definitions, examples, and possible consequences for violations of Academic Integrity, as well as the appeals process, can be found in the College Catalog, Student Handbook, and/or Code of Student Conduct and Discipline.

ELECTRONIC DEVICE POLICY

Student cell phones and other personal electronic devices not being used for class activities must not be accessed during class times unless the instructor chooses to waive this policy.

NOTE

Information and statements in this document are subject to change at the discretion of NCCC. Students will be notified of changes and where to find the most current approved documents.

ACCOMMODATIONS

If you are a student with a disability who may need accommodation(s), in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, please notify the Dean of Student Services in the Student Services Office, Sanders Hall, 620-432-0304, on the Chanute Campus, or the Dean for the Ottawa and Online Campuses, 785-248-2798, on the Ottawa Campus as soon as possible. You will need to bring your documentation for review in order to determine reasonable accommodations, and then we can assist you in arranging any necessary accommodations.

NON-DISCRIMINATION POLICY

The following link provides information related to the non-discrimination policy of NCCC, including persons with disabilities. Students are urged to review this policy.

<http://www.neosho.edu/Departments/NonDiscrimination.aspx>

SEXUAL MISCONDUCT POLICY (TITLE IX)

At NCCC, it is the responsibility of an instructor to help create a safe learning environment in the classroom, including both physical and virtual classrooms. All instructors are considered mandatory reporters at NCCC, therefore any information regarding sexual misconduct that is shared by a student in one-on-one meetings with the instructor must be reported to appropriate personnel at the College. Instructors will keep the information private to the greatest extent possible, but it is not confidential. Generally, climate surveys, classroom writing assignments or discussions, human subjects research, or events such as Take Back the Night events do not provide notice that must be reported to the Coordinator by employees, unless the reporting party clearly indicates that they wish a report to be made.

The following link provides information related to the sexual misconduct policy of NCCC, including resources, reporting options, and student rights. Students are urged to review this policy.

<http://www.neosho.edu/TitleIX.aspx>

COURSE NOTES