North Central State College

MASTER SYLLABUS
2020-2021

A. Academic Division: Health Sciences

B. Discipline: Science

C. Course Number and Title: BIOL1050 Principles of Biology

D. Course Coordinator: Justin Tickhill
Assistant Dean: Melinda Roepke, MSN, RN

Instructor Information:
1. Name: Click here to enter text.
2. Office Location: Click here to enter text.
3. Office Hours: Click here to enter text.
4. Phone Number: Click here to enter text.
5. E-Mail Address Click here to enter text.

E. Credit Hours: 3
Lecture: 2 hours
Laboratory: 2 hours

F. Prerequisites: None

G. Syllabus Effective Date: Fall, 2020

H. Textbook(s) Title:

Campbell Biology: Concepts and Connections
- Authors: Reece, Taylor, Simon, Dickey, Hogan
- Copyright Year: 2018
- Edition: 10th
- ISBN: 97780135269169

1. Workbook(s) and/or Lab Manual:

Thinking About Biology: An Introductory Laboratory Manual
- Authors: Bres, Weisshaar
- Copyright Year: 2018
- Edition: 6th
- ISBN #: 9780134765624

J. Course Description: This course is designed as an introduction to biology for non-majors. The course will provide the fundamentals of biology for students as an introduction to further college biology courses. The course will introduce students to the diversity, structure, and interdependence of living organisms with one another and the environment. Students will meet two lecture hours and two lab hours per week.

K. College-Wide Learning Outcomes

College-Wide Learning Outcomes	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
Describe the nature of scientific knowledge and inquiry.	Lab Exercise-Week 1; First interim exam-Week 6; Final exam
Compare and contrast form and function of Prokaryotic and Eukaryotic cells.	Lab Exercise-Week 2 and 3; First interim exam-Week 6; Final exam
Compare and contrast the processes of cellular respiration, fermentation and photosynthesis	Lab Exercise-Week 4-5; First interim exam-Week 6; Final exam
Define mitosis and meiosis and describe each process.	Lab Exercise-Week 6; Second interim exam-Week 12; Final exam
Apply the principles of heredity and related concepts.	Lab Exercise-Week 7-8; Second interim exam-Week 12; Final exam
Relate the theory of evolution by natural selection with the comparative study of body systems of living organisms	Lab Exercises-Week 9-13; Second interim exam-Week 12; Final exam
Describe the major features of the Biosphere and describe the impact of loss of biodiversity.	Lab Exercise-Week 14-15; Final exam

M. Topical Timeline (Subject to Change):

Week	Topical Timeline
1	• The Process of Science (Scientific Method)
2 and 3	• The Molecules of Cells • Components of Eukaryotic and Prokaryotic cells • Membrane Structure and Function
4 and 5	• Cellular Respiration • Fermentation • Photosynthesis
6	• Mitosis • Meiosis
7 and 8	• Mendelian Genetics • Molecular Genetics
9	• Evolution
10, 11, and 12	• Microbial life: Prokaryotes and Protists • Fungal and Plant Diversity • Invertebrate Diversity • Vertebrate Diversity
13	• Animal Structure and Function
14 and 15	• The Biosphere • Conservation Biology

Lab (Will correspond roughly to Lecture Material Presentation Time Schedule)

1. Introduction to the Scientific Method.
2. Windows to a Microscopic World.
3. Functions and Properties of Cells.
4. Movement of molecules across cell membranes.
5. Mitosis and Asexual Reproduction.
6. Connecting Meiosis and Genetics.
7. Human Genetics.
8. Introduction to Molecular Genetics.
9. Bacteriology.
10. Photosynthesis.
11. Examining Invertebrate Diversity.
12. Introduction to Anatomy: Dissecting the fetal Pig.
13. Organs of the Abdominal Cavity.
14. Ecosystems.

N. Course Assignments:

1. Lecture Quizzes (Week 3, 9, 14)Lab Exercises (Weekly)
2. Reflection Paper (Week 12)
3. Interim exams (Week 6 and 12)
4. Final Exam (Week 16)

O. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70-72	C-	1.67	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

P. Grading and Testing Guidelines:

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Q. Examination Policy:

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R. Class Attendance and Homework Make-Up Policy:

Click here to enter text.

S. Classroom Expectations:

Click here to enter text.

T. College Procedures/Policies:

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at

http://catalog.ncstatecollege.edu/mime/download.pdf?catoid=5&ftype=2&foid=3