MASTER COURSE OUTLINE

A. BIOL 1020 Current Topics in Biology

B. COURSE DESCRIPTION:

This course is designed for students who do not plan to major in science. The primary, organizing themes of the course are centered upon learning the basic concepts and theories of life science integrated with issues of current interest and analyzing the current issues from the perspective of ethical and civic responsibility. Biological concepts and theories included in the course are the scientific method, biological molecules, cell biology, evolution, classification, genomics and genetics, ecology and environmental issues, and emerging infectious diseases.
MnTC (Goals 3/NS and 9/EC); (3 Cr – 3 lect, 0 lab)

C. *MnTC Discipline: Natural Sciences **Core Theme: Ethical and Civic Responsibility

D. RIVERLAND INSTITUTIONAL LEARNING OUTCOMES:

This course addresses the following Riverland Institutional Learning Outcome(s):
☐ ILO 1: critical thinking *(Core Theme Goal 2)*
☐ ILO 2: awareness of the larger global community *(Core Theme Goal 7 or 8)*
☒ ILO 3: ethical, engaged citizenship *(Core Theme Goal 9 or Goal 10)*
☐ ILO 4: communication and collaboration *(Discipline Goal 1 and by any learning outcome(s) involving communication or collaboration)*

E. MAJOR CONTENT AREAS:

This course is organized into units. Each unit incorporates basic biology concepts, related current issues, and the ethical analyses of those issues.

Topics covered:

- Scientific method
- Biological molecules and nutrition
- Cell theory and structure
- Cell reproduction and cancer
- Theory of evolution
- Classification and taxonomy
- Genomics and genetics
- Ecology and environmental issues
- Emerging infectious diseases and their impact on society

F. GOAL TYPE, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	**OBJECTIVES** **Students will be able to**	**OUTCOMES** **The student will successfully:**
MnTC Goal 3a	demonstrate understanding of scientific theories.	1. complete an analysis of an experiment that includes identifying the independent, dependent, and control variables as well as the steps of the scientific method. 2. define and explain the principles of experimentally- verifiable biological theories, including cell theory, the theory of evolution, and the structure and function of DNA. 3. define and explain the pertinent vocabulary terms related to outcomes 1 and 2 (above).
MnTC Goal 3c	communicate their experimental findings, analyses and interpretations both orally and in writing.	1. complete an analysis (such as in MnTC Goal 3a above) that will be developed in oral and written formats.
MnTC Goal 3d	evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.	1. identify the primary ethical issue in an assigned reading. 2. develop an evidence-supported opinion on the issue.
MnTC Goal 9a	examine, articulate and apply their own ethical views.	1. communicate a supported opinion on an issue to other students (may be in conjunction with MnTC Goal 3c above).
MnTC Goal 9c	analyze and reflect on the ethical dimensions of legal, social and scientific issues.	1. solicit evidence-based opinions from fellow students, and identify oppositional opinions (to their own), as well as articulate the support and application of ethical theory for those opinions. 2. identify the legal and social issue(s) accompanying the scientific issue(s).
MnTC Goal 9e	identify ways to exercise the rights and responsibilities of citizenship.	1. research and report on the possibilities of making an opinion heard when participating in citizen advocacy, support groups, political action movements, and/or voting on current issue(s).
CS	investigate and develop an opinion about a current topic of choice.	1. report (in a discussion, paper, poster or power point) on a current topic of choice.
CS	participate in activities or simulations relating to topics covered in class. Topics are subject to change and will reflect current issues in biology.	1. complete a variety of activities/simulations that reinforce topics covered in class (DNA structure/analysis, cancer, cell structure and function, evolutionary theory, population demographics, emerging infectious disease.

CS	read case studies and/or journal articles relating to current topics in biology.	1. answer questions and/or participate in discussions that pertain to the case studies and/or journal articles that focus current topics in biology.

G. SPECIAL INFORMATION:

This course may require use of the Internet, the submission of electronically prepared documents and the use of a course management software program. Students who have a disability and need accommodations should contact Accessibility Services at the beginning of the semester. This information will be made available in alternative format, such as Braille, large print, or current media, upon request.

H. COURSE CODING INFORMATION: Course Code C/Class Maximum 48; Letter Grade

Revision date: 09/28/10; 01/31/18; 09/06/22
AASC Approval date: 03/06/18; 09/20/22

***Riverland Community College Disciplines**	**MnTC Goal Number**
Communication (CM)	**1**
Natural Sciences (NS)	**3**
Mathematics/Logical Reasoning (MA)	**4**
History and the Social & Behavioral Sciences (SS)	**5**
Humanities and Fine Arts (HU)	**6**

****Riverland Community College Core Themes**	**MnTC Goal Number**
Critical Thinking (CT)	**2**
Human Diversity (HD)	**7**
Global Perspective (GP)	**8**
Ethical and Civic Responsibility (EC)	**9**
People and the Environment (PE)	**10**

*These five MnTC Goals have been identified as Riverland Community College Disciplines.
** These five MnTC Goals have been identified as Riverland Community College Core Themes.
NOTE: The Minnesota Transfer Curriculum "10 Goal Areas of Emphasis" are reflected in the five required discipline areas and five core themes noted in the Riverland Community College program of study guide and/or college catalog.