MASTER COURSE OUTLINE

A. BIOL 1070 Human Nutrition

B. COURSE DESCRIPTION:

This course explores the role of nutrition in promoting, maintaining, and improving the health of the human body. Traditional aspects of nutrition will be studied, as well as emerging issues and nutritional controversies. This course will focus on the science of nutrition, including nutrients and nutritional needs over the lifespan. This course will also cover the application of the principles of nutrition as they relate to individual food choices, health behaviors, public health, wellness, obesity, eating disorders, the use of supplements and botanicals, and the prevention of chronic disease. Issues facing society including food safety and sustainability will also be covered.
MnTC (Goals 3/NS and 2/CT); (3 Cr – 3 lect, 0 lab)

C. *MnTC Discipline: Natural Sciences **Core Theme: Critical Thinking

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:

- Food choices and human health
- Nutrition tools: standards and guidelines
- The basics of digestion
- Carbohydrates: sugars, starches, glycogen and fiber
- Lipids: fats, oils, phospholipids and steroids
- Proteins and amino acids
- Vitamins
- Water and minerals
- Energy balance and healthy body weight
- Nutrients, physical activity, and the body's responses
- Diet and health

- Food safety and food technology
- Life cycle nutrition: mother and infant
- Child, teen, and older adult nutrition
- Hunger and the global environment
- Controversies in nutrition science
- Nutritional research study analysis

F. GOAL TYPES, OBJECTIVES, AND OUTCOMES:

GOAL TYPE	**OBJECTIVES** **Students will be able to**	**OUTCOMES** **The student will successfully**
MnTC Goal 2a	gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive and conscious of possible bias in the information selected.	1. apply nutritional theory to a report or case study questions in MnTC Goal 3d. 2. include analyses of the possible nutritional claims or biases in the information generated in MnTC Goal 3d.
MnTC Goal 2b	imagine and seek out a variety of possible goals, assumption, interpretations or perspectives which can give alternative meanings or solutions to a given situation or problem.	1. identify the assumptions in nutrition science and seek alternative explanations or meanings for the report or case study(s) specified in MnTC Goals 3d and 2a.
MnTC Goal 2c	analyze the logical connections among the facts, goals and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.	1. explain the implicit assumptions and the subsequent decision-making options relative to the report or case study questions specified in the outcomes for MnTC Goals 3d, 2a, and 2b.
MnTC Goal 2d	recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.	1. articulate the logical connections among the facts, goals and implicit assumptions related to the report or case study specified in the outcomes for MnTC Goals 3d, 2a, 2b, and 2c. 2. articulate how the issue chosen in the report or case study(s) in nutrition relate to experimental and controversial topics in nutrition, and generate and evaluate the implications/conclusions that could be drawn from their analysis.

MnTC 3a	demonstrate understanding of scientific theories.	1. complete an analysis of an experiment, related to human nutrition, 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 and other theories relevant to nutrition science. 3. define and explain the pertinent vocabulary terms related to outcomes 1 and 2 above.
MnTC 3c	communicate their experimental findings, analyses and interpretations both orally and in writing.	1. document the use of the experimental method, types and uses of data collection, statistical and graphical analyses, and identifying sources of error and uncertainty in the study in MnTC Goal 3a. 2. communicate findings for the study in MnTC Goal 3a in oral and written formats.
MnTC 3d	evaluate societal issues from a natural science perspective, ask questions about the evidence presented and make informed judgements about science-related topics and policies.	1. Complete a nutrition report OR case study(s) that examines a controversial topic/issue in nutrition and analyze the topic/issue from a scientific and societal perspective.
CS	recognize and explain the importance of carbohydrates, lipids, proteins, nucleic acids, vitamins and minerals in nutrition science.	1. demonstrate an understanding of nutrition science, including the link between fitness and disease prevention, the major groups and chemical composition of nutrients, as well as the current recommendations for balanced intake of nutrients.
CS	demonstrate an understanding of nutritional theories and consider how hypotheses in nutrition are developed and tested for verification.	1. define and explain the vocabulary terms and commonly used theories and concepts in nutritional science.
CS	evaluate and keep record of nutrition intake and physical activity.	1. record diet and/or physical activity using digital software and compare nutrition analysis to current USDA guidelines.
CS	evaluate food labels.	1. identify the kind of information found on a food label and apply the information to diet planning.

G. SPECIAL INFORMATION:

This course may require use of the Internet, the submission of electronically prepared documents and the use of course management software. 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: 04/04/11; 01/31/18
AASC Approval date: 01/25/22

***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)	
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.