I. ASCRC General Education Form

<table>
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<tr>
<th>Group</th>
<th>Natural Sciences</th>
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<tr>
<td>Dept/Program</td>
<td>Applied Arts &amp; Sciences</td>
</tr>
<tr>
<td>Course #</td>
<td>SCN 115N</td>
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II. Endorsement/Approvals

Complete the form and obtain signatures before submitting to Faculty Senate Office.

<table>
<thead>
<tr>
<th>Please type / print name</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Instructor</td>
<td>Jacqueline Elam</td>
<td>09/22/08</td>
</tr>
<tr>
<td>Phone / Email</td>
<td>7835/jacki.elam@mso.umt.edu</td>
<td></td>
</tr>
<tr>
<td>Program Chair</td>
<td>Cathy Corr</td>
<td></td>
</tr>
<tr>
<td>Dean</td>
<td>Barry Good</td>
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III. Description and purpose of the course:

General Education courses must be introductory and foundational. They must emphasize breadth, context, and connectedness; and relate course content to students’ future lives: See Preamble:

http://www.umt.edu/facultysenate/gened/GEPreamble_final.htm

This course offers students the opportunity to develop fundamental knowledge of anatomy and physiology of the human body. Students will be able to apply this knowledge to their specific program. The course is suitable for those with no science background who seek familiarity with the subject matter as an aid to other classes, occupational skills, or personal interest.

IV. Criteria:

Briefly explain how this course meets the criteria for the group. See:

http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm

1. Courses explore a discipline in the natural sciences and demonstrate how the scientific method is used within the discipline to draw scientific conclusions.

   Relevant examples of research are discussed throughout the course to illustrate the formation and testing of hypotheses applicable to what is now the accepted knowledge of the human body.

2. Courses address the concept of analytic uncertainty and the rigorous process required to take an idea to a hypothesis and then to a validated scientific theory.

   Coursework is strongly based in biochemistry and cellular biology, and applied to the structure and function (anatomy and physiology) of the human body. However, within the scientific reasoning discussed, coursework consistently cites examples of research that is faulty or erroneously interpreted; this manner of instruction is utilized to demonstrate how lack of scientific rigor has led to incorrect conclusions.

3. Lab courses engage students in inquiry-based learning activities where they formulate a hypothesis, design an experiment to test the hypothesis, and collect, interpret, and present the data to support their conclusions.

   No lab component for this course.
### V. Student Learning Goals:
Briefly explain how this course will meet the applicable learning goals. See: [http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm](http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm)

1. Understand the general principles associated with the discipline(s) studied.

   Coursework includes in-depth study of basic principles of chemistry as applicable to human anatomy and physiology, the concept of homeostasis, and the relationship of microscopic anatomy relevant to structure and function of the human body.

2. Understand the methodology and activities scientists use to gather, validate and interpret data related to natural processes.

   No lab component for this course.

3. Detect patterns, draw conclusions, develop conjectures and hypotheses, and test them by appropriate means and experiments.

   No lab component for this course.

4. Understand how scientific laws and theories are verified by quantitative measurement, scientific observation, and logical/critical reasoning.

   Scientific laws and theories are primarily taught by example in lecture. There is no lab component for this course; however, students regularly access online clinical websites to apply their knowledge.

5. Understand the means by which analytic uncertainty is quantified and expressed in the natural sciences.

   Students are thoroughly indoctrinated to the normative as well as the variation of anatomical features and physiological processes. Completion of critical thinking exercises reinforce these principles which influence uncertainty in clinical mensuration.

### VII. Syllabus:
Paste syllabus below or attach and send digital copy with form.

The syllabus should clearly describe how the above criteria are satisfied. For assistance on syllabus preparation see: [http://teaching.berkeley.edu/bgd/syllabus.html](http://teaching.berkeley.edu/bgd/syllabus.html)

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*Please note: As an instructor of a general education course, you will be expected to provide sample assessment items and corresponding responses to the Assessment Advisory Committee.*
Office Hours: Tuesday & Thursday 11:10 a.m. to 12:00 p.m. or by appointment

RELATIONSHIP TO PROGRAM(S): This course offers the students the opportunity to develop fundamental knowledge of anatomy and physiology of the human body. Students will be able to apply this knowledge to their specific program. The course is suitable for those with no science background who seek familiarity with the subject matter as an aid to other classes, occupations skills, or personal interest.

COURSE DESCRIPTION: Structures of the human body and their basic functions.

STUDENT PERFORMANCE OUTCOMES:
Upon completion of this course, the student will be able to:
1. Relate basic principles of chemistry to human anatomy and physiology.
2. Utilize proper terminology to describe body parts and directions.
3. Relate the concept of homeostasis to the human organism.
4. Identify gross anatomical structures on diagrams.
5. Describe the functions of anatomical structures.
6. Discuss the relationship of microscopic anatomy to structure and function.
7. Explain physiologic processes that maintain homeostasis.
8. Describe and discuss the interrelatedness of body systems.
9. Describe anatomic and physiologic changes that occur with aging.

METHOD OF INSTRUCTION: Assigned textbook reading, lecture and utilization of animated websites. Online lectures, Powerpoint presentations and links to animated websites for each unit are also posted in the “Course Materials” section of Blackboard (Bb). The instructor will also be available by e-mail at the address above and will respond to student questions as soon as possible but within 24-48 hours (see instructions under “Communication” below).


STUDENT ASSESSMENT METHODS AND GRADING PROCEDURES:
Point breakdown: Final grade scoring:
Total Test (8) points possible: 800 A = 720 – 800 points
Final grade is based on total points B = 640 – 719 points
C = 560 – 639 points
TOTAL COURSE POINTS POSSIBLE: 800 D = 480 – 559 points
F = 0 – 479 points

ACADEMIC CONDUCT: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar
with the Student Conduct Code. The Code is available for review online at http://www.umt.edu/SA/vpsa/index.cfm/page/2585. See page 6 of The Student Conduct Code as it specifically relates to Academic Conduct.

COMMUNICATION:

1. When communicating with the instructor via email, please be sure to sign your full name and indicate the course title or number.
2. If you have a question related to a specific lecture, website or a general question, please entitle your e-mail message "Question about_______." E-mails with this subject line will receive priority attention to ensure that you can move ahead with your work.
3. Please allow 24-48 hours (on average) for a response from me. Sometimes I will be able to respond more quickly. Other times, for example, during heavy grading times or if I am attending a conference, it may take me longer to respond.

ANNOUNCEMENTS: Announcements are available on the Welcome Page of the Anatomy Bb course website. Announcements are regularly posted regarding problems with the websites, technological issues, suggestions, questions, etc. I highly recommend you read the announcements frequently. After seven days, Blackboard removes current announcements from the opening page. However, you can read all announcements throughout the semester by clicking on "View Last 7 days," "View Last 30 days," or "View All."

LECTURES & INTERACTIVE WEBSITES: Learning units for this course will include a lecture, POWERPoint presentation, or a link to an interactive website, or any combination thereof. The lectures, POWERPoint and links are also housed in the “Course Materials” section of Bb. The audible lectures are recorded in Windows Media Player (be sure the most current version is loaded on the computer you open the lecture files on) in an MP3 format, and may be downloaded to an MP3 player, iPod, or listened to on your desktop or laptop computer.

EXAMS:

1. Exams will be administered online via Bb, which can be accessed from any computer with Internet access.
2. I strongly recommend a computer with a minimum of cable internet connection be used for exams to prevent as many technological problems as possible. Bb is known to “lock-up” on slower connections. Also, do not switch to another webpage or screen while taking an exam as this will potentially cause Bb to “lock the exam” as well. If possible, you may want to take the exams in a computer lab on campus.
3. Each 100-point exam which will consist of any combination of 50 multiple choice-matching-true/false questions. Exam questions are based on the textbook readings, lectures and animated website information.
4. Students may access the exam on Bb at 6:00 a.m. MDT on the exam dates indicated below and the exam will remain available on Bb until 7:00
p.m. MDT. Ninety (90) minutes will be allotted for completion of the exam. If the exam is not completed within the 90-minute timeframe one (1) point will be deducted from your score for each minute you exceed the allotted 90 minutes.

5. The exam can only be accessed by the student once (i.e., no starting, exiting and restarting the exam).

6. If Bb becomes unavailable for any reason during the course of the exam, CONTACT THE INSTRUCTOR IMMEDIATELY BY GRIZMAIL SO THE SITUATION CAN BE RECTIFIED. The instructor will be available by email during the entire exam period. No one other than the instructor can reset an exam, so it will not be helpful to contact Bb support or a lab monitor. Bb outages are recorded by the System Administrator for verification.

7. Upon completion of the exam by the student, the number of points earned for the exam will be available to the student and will be automatically entered in the Gradebook feature located in the “Course Tools” section of Bb.

8. If you feel a question you answered has been incorrectly marked wrong, you may email the instructor within two (2) hours after your completion of the exam with the following information for review and possible awarding of points for the question: A) Access your test by clicking on your score in Grades section of Bb. B) Number of the question marked wrong on Bb. C) Your description of the correct answer and the page, column, and paragraph in the textbook, the lecture or website that supports your answer. E-mails sent regarding this matter after the 2-hour timeframe will not be accepted.

COURSE OUTLINE:

UNIT

1. Chapter 1: Introduction to Structure and Function of the Body
   Chapter 2: The Chemistry of Life
   Chapter 3: Cells and Tissues
   Chapter 4: Organ Systems of the Body

2. Chapter 5: Integumentary System and Body Membranes
   Chapter 6: The Skeletal System
   Chapter 7: The Muscular System

3. Chapter 8: The Nervous System

4. Chapter 9: The Senses

5. Chapter 10: The Endocrine System

6. Chapter 11: Blood
   Chapter 12: The Circulatory System
   Chapter 13: The Lymphatic System and Immunity

7. Chapter 14: The Respiratory System
   Chapter 15: The Digestive System
   Chapter 16: Nutrition and Metabolism

8. Chapter 17: The Urinary System
   Chapter 18: Fluid and Electrolyte Balance
Chapter 19: Acid Base Balance
8. Chapter 20: The Reproductive System
    Chapter 21: Growth and Development

EXAMINATION PLAN*: See Course Outline above for Unit Exam breakdown.

<table>
<thead>
<tr>
<th>Week</th>
<th>Unit Exam</th>
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<tbody>
<tr>
<td>2</td>
<td>Unit 1</td>
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<tr>
<td>4</td>
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