### COURSE SYLLABUS

**Course Title:** Human Biology  
**Department:** Mathematics and Science  
**Curriculum:** Biology  
**Date submitted:** Spring 2014 (AAC:14-12)

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>BIO*115</th>
<th><strong>Course Type:</strong> X</th>
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</thead>
<tbody>
<tr>
<td><strong>Course Descriptors:</strong></td>
<td>E: English</td>
<td>FA: Fine Arts</td>
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<tr>
<td>Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.</td>
<td>FL: Foreign Language</td>
<td>G: General</td>
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<td>HI: History</td>
<td>HU: Humanities</td>
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<td></td>
<td>LAS: Liberal Arts &amp; Sciences</td>
<td>M: Math</td>
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<td></td>
<td>S: Science</td>
<td>SS: Social Science</td>
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**Prerequisites:**  
C- or better in Integrated Reading and Writing II (ENG*075) OR Introduction to College Reading & Writing (ENG*093) OR Introduction to College English (ENG*096) OR Reading & Writing VI (ESL*162), or placement into Composition (ENG*101) [including embedded ENG*101]

**Corequisites:** None

**Elective Type:** G/LAS/S

**Credit Hours:** 4

**Contact Hours:**  
- Lecture: 3  
- Lab: 2  
- Studio: 0  
- Other: 0  
- **TOTAL:** 5

**Class Maximum:** 20/40

**Semesters Offered:** F/S

**Ability-Based Education (ABE) Statement:**  
At Tunxis Community College students are assessed on the knowledge and skills they have learned. The faculty identified the General Education Abilities critical to students' success in their professional and personal lives. In every class, students are assessed on course abilities, sometimes program abilities, and, in most classes, at least one General Education Ability. Students will receive an evaluation of the degree to which they have demonstrated or not demonstrated that General Education Ability.

**Catalog Course Description:**  
Emphasizes basic human physiology and provides students with an understanding of the human body in health and disease. Aids students in coping with particular health concerns. Attention is drawn to such environmental problems as the relationship between sunlight and skin cancer and the ecological effects of biotechnology. No dissection is required. This one semester course cannot be used to fulfill prerequisites for advanced biology courses.

**Topical Outline:**  
1. Introduction—A Human Perspective  
2. Chemistry of Life  
3. Cell Structure and Function  
4. Tissues, Organ Systems, and Homeostasis

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Original-4/10/07
5. Digestive System and Nutrition
6. Composition and Function of Blood
7. Cardiovascular System
8. Respiratory System
9. Urinary System and Excretion
10. Skeletal System
11. Muscular System
12. Nervous System
13. The Senses
14. Endocrine System
15. Reproductive System
16. Chromosomal Inheritance
17. Genes and Medical Genetics
18. Cancer

LABORATORY
1. Microscopy
2. Cell Structure and Function
3. Human Body Tissues
4. Basic Human Anatomy I: Respiratory and Digestive Systems
5. Basic Human Anatomy II: Urinary and Reproductive Systems
6. Basic Human Anatomy III: Musculoskeletal and Cardiovascular Systems
7. Brain, Nervous System and Senses
8. Mitosis
9. Human Genetics

**Outcomes:**
Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.

Upon successful completion of this course, the student will be able to do the following:

**COURSE:**
1. demonstrate an understanding of the cell as the basic unit of structure and function in the body
2. name the major systems of the human body and describe their general operation and role in maintaining homeostasis
3. demonstrate an understanding of the energy needs of the body and relate them to nutritional requirements
4. identify the physiological components of common diseases including cancer, diabetes, heart disease, and stroke
5. integrate the guidelines for healthy living and understand the reasons why they were established
6. link particular health concerns to specific system physiology

**PROGRAM:** *(Numbering reflects Program Outcomes as they appear in the college catalog)*
N/A

**GENERAL EDUCATION:** *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

8. **Scientific Knowledge** - Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.

**Demonstrates:** Consistently recalls and correctly applies discipline-specific terms, relevant theories, laws, and concepts to analyze and explain scientific information.

**Does Not Demonstrate:** Inconsistently recalls or incorrectly applies discipline-specific terms, relevant theories, laws, and concepts to analyze or explain scientific information.
9. **Scientific Reasoning** - Students will become familiar with science as a method of inquiry. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions.

**Demonstrates:** Identifies and successfully executes components of the scientific method (hypothesis, procedure, observations, data analysis, and conclusions) to investigate real-world phenomena.

**Does Not Demonstrate:** Misidentifies or poorly executes components of the scientific method (hypothesis, procedure, observations, data analysis, or conclusions) to investigate real-world phenomena.

**Evaluation:**
List how the above outcomes will be assessed.

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<tr>
<th>Assessment will be based on the following criteria:</th>
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<tbody>
<tr>
<td>assignments</td>
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<td>quizzes</td>
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<tr>
<td>examinations</td>
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**Instructional Resources:**
List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.

**Required:** Standard Laboratory equipment and specimens  
**Desired:** Adam Software, Smartboard

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<thead>
<tr>
<th>Textbook(s)</th>
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<tr>
<td>Starr and McMillan; <em>Human Biology</em>; Brooks Cole Thompson Learning; Latest edition</td>
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<td>Starr and McMillan; <em>Laboratory Manual for Human Biology</em>; Brooks Cole; Latest edition</td>
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