

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**  
**NATURAL SCIENCES**  
**Summer II 2011**

**SYLLABUS AND COURSE OBJECTIVES FOR BIO 137**  
**Human Anatomy & Physiology I**

**Course Prefix:** BIO 137  
**Sections:** J020-22 MTWR 9:00-10:50  
Start 6/23/2011 End 8/4/2011

**Course Title:** Human Anatomy and Physiology I

**Credit Hours:** 4

**Prerequisites:** Successfully passed developmental courses

**Division:** Natural Sciences

**Department:** Biological Sciences

**Instructor:** Robin L. Cooper  
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Office hours: By appointment  
Prior or after lecture would work well.

**Assistant Dean:** Vicki Partin  
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**Biology Coordinator:** Yasemin Congleton  
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Bluegrass Community and Technical College  
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**COURSE DESCRIPTION:** The interrelationship of structure and function of each body system will be presented in two semesters (BIO 137 and BIO 139). The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular and nervous systems. Lecture 3 hours, Laboratory 2 hours.

**GENERAL EDUCATION LEARNING OUTCOMES/COURSE OBJECTIVES:**

**COMMUNICATE EFFECTIVELY**

Learning Outcome: Read and listen with comprehension

Course Objective: Use anatomical and physiological terminology to comprehend and communicate information on body structure and function.

Instructional Objective: Students will utilize information presented during lecture/discussion to complete CD Rom assignments, quizzes and exams assessing their knowledge of basic anatomy and physiology of systems studied.

**THINK CRITICALLY**

Learning Outcome: Demonstrate problem solving through interpreting, analyzing, summarizing, and/or integrating a variety of materials.

Course Objective: Explain the interrelationships between organ systems and physiological processes.

Course Objective: Recognize the complimentary relationship of structure and function and describe the basic metabolic processes of the organ systems.

Instructional Objective: Students will complete quizzes, exams and CD Rom assignments which test their knowledge of relationships between the structure of body organs and their physiological functioning.

**LEARNING INDEPENDENTLY**

Learning Outcome: Apply learning in academic, personal, and public situations.

Course Objective: Explain basic principles of inorganic and organic chemistry as they apply to physiological processes.

Instructional Objective: Students will complete quizzes and exam questions which assess their knowledge of chemical principles in physiological processes, e.g. gas exchange, blood chemistry, acid-base balance, mechanisms of hormone action, etc.

Course Objective: Explain the major homeostatic mechanisms utilized in each body system in response to internal and external environmental changes.

Instructional Objective: Students will complete CD Rom assignments and short essay test questions to assess their understanding of homeostatic mechanisms, e.g. response to acute blood loss.

**EXAMINE RELATIONSHIPS IN DIVERSE AND COMPLEX ENVIRONMENTS**

Learning Outcome: Demonstrate an awareness of the relationship of the individual to the biological and physical environment.

Course Objective: Explain the physiological and anatomical mechanisms of common dysfunction.

Instructional Objective: Students will complete exam questions in the

form of clinical case studies to assess their knowledge of common pathologies presented during lecture/discussion.

## **INSTRUCTIONAL MATERIALS:**

### **Required Text:**

1. **Human Anatomy and Physiology** (8<sup>th</sup> edition)  
(packaged with Interactive Physiology CDs which are required for lab)  
Author: Elaine N. Marieb and Katja Hoehn  
ISBN # 0-8053-9569-5
2. **Lecture Outline/notes**-available on course Blackboard site

### **Optional Book:**

#### **Study Guide for Marieb**

### **Required Material:**

1. #2 lead pencils for exams
2. Five Scantrons – Form No. 882E (100 multiple choice)
3. Highlighter for exams, any bright color

### **Optional Material:**

Small cassette tape recorder to record lectures

## **INSTRUCTIONAL MODES:**

Lecture will be presented in a semi-formal manner to allow for questions and brief discussions. PowerPoint will be used for presentation of lecture notes and pictures from the textbook and other sources to illustrate anatomical parts and physiological processes.

## **REASONABLE ACCOMMODATIONS:**

If you have a special need that may require an accommodation or assistance, please inform me of that fact at the beginning of the course or as soon as the special need is identified. Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course **must** contact a staff member in our Disability Support Services office, 103 Oswald Building, (859) 246-6535.

## **STUDENT CONDUCT:**

All rules and regulations set forth in the current edition of the Code of Student Conduct will be followed in this course. It is the student's responsibility to obtain a copy of this publication from:

[www.kctcs.edu/student/studentcodeofconduct.pdf](http://www.kctcs.edu/student/studentcodeofconduct.pdf)  
<http://www.kctcs.edu/student/studentcodeof>  
<http://www.kctcs.edu/student/studentcodeof>

**CLASS ATTENDANCE:**

<http://www.kctcs.edu/student/studentcodeof>

Class attendance is mandatory. It will be very difficult (almost impossible) to pass this course if you fail to come to class. Attendance will be taken daily.

**WITHDRAWAL:**

See BCTC www site:

[http://www.bluegrass.kctcs.edu/Registrar/~media/Bluegrass/Registration/documents/Summer%20Schedule/Summer\\_2011\\_Calendar.ashx](http://www.bluegrass.kctcs.edu/Registrar/~media/Bluegrass/Registration/documents/Summer%20Schedule/Summer_2011_Calendar.ashx)

The last day for a student to officially withdraw from BIO 137, at their discretion, and receive a “W” grade is **Thursday, July 14, 2011**. <http://www.kctcs.edu/student/studentcodeof> Withdrawals after this time are permitted only for **nonacademic** reasons. The last day for students to withdraw for **NONACADEMIC** reasons at the instructor's discretion, with the instructor's signature and receive a “W” is **Wednesday, August 3, 2011**.

**MAKE-UP EXAMS/QUIZZES:**

<http://www.kctcs.edu/student/studentcodeof>

Students who miss an exam for an excused absence (death in immediate family, physician's certification of personal illness, college sponsored or approved trips, major religious holidays, etc.; see Student Code of Conduct: [www.kctcs.edu/student/code](http://www.kctcs.edu/student/code)) must notify the instructor no later than the day of the scheduled exam. **Contact information is provided on the first page of the syllabus.**

It is the responsibility of the student that misses an exam to provide appropriate written documentation that includes the student's name and date of absence. It is also the student's responsibility to make arrangements to complete the make-up exam before the scheduled class period following the exam. Students who do not schedule a make-up exam in the outlined time frame will receive a zero for that exam. Students who have an unexcused absence (transportation problems, oversleeping, etc.) will receive a zero for that exam.

<http://www.kctcs.edu/student/studentcodeof>

If a student is absent from class the day a quiz is given, they may not make-up the quiz. One additional quiz will be given so that those with an excused absence will not be penalized. If more than one quiz is missed, a score of zero will be given for each additional quiz missed. Those who take all 6 quizzes will have the lowest score dropped. Quizzes are given at the beginning of class. If a student is late, they will only have the fraction of time remaining to complete the quiz and will not be given additional time.

**FINAL EXAM:**

<http://www.kctcs.edu/student/studentcodeof>

Thursday, August 4, 2011, 9:00-11:00 a.m.

**ADDITIONAL PROCEDURES:**

<http://www.kctcs.edu/student/studentcodeof>

**Cheating** will absolutely NOT be tolerated! If you are caught cheating you will be given an “E” for the assignment, exam, and perhaps for the course.

If a student has questions on cheating or policies concerning cheating, he/she should refer to *The Code of Student Conduct* ([www.kctcs.edu/student/code](http://www.kctcs.edu/student/code))

**Course content** may be modified as required at my discretion (e.g. change of pace, addition/omission of chapters, changes in number of exams or quizzes).

## **COURSE EVALUATION**

**Your grade will be based on the following:**

1. Four regular exams – These are worth 100 points each

Exams total 400 points

Exams will be based upon material presented in class and your reading of the text.  
Exam questions may be multiple choice, matching, fill in the blank, or short answer

2. Five quizzes – These are each worth 20 points

Quizzes total 100 points

One extra quiz will be given so that those with an excused absence will not be penalized.  
For those completing all six quizzes, the five highest scores will be used.

3. Comprehensive Final Exam – 150 points

4. Total possible points for lecture – 650 points

The lecture portion of the course is worth 75% of your final grade and the laboratory portion accounts for the remaining 25%.

**A student must pass both the lecture and lab sections of the course to receive credit for BIO 137.**

The Final Grade will be assigned according to the following scale:

| Grade | %        |
|-------|----------|
| A     | 90 – 100 |
| B     | 80 – 89  |
| C     | 70 – 79  |
| D     | 60 – 69  |
| E     | < 60     |

Exams will not be returned. However, they will be available in my office for review. Students are strongly encouraged to meet with me after each exam to review material that was missed on the exam.

**BIO 137: J020, J021, J022          Summer II 2010          Tentative Course Outline**

| <u>Date</u> | <u>Topic</u>  | <u>Chapter/Assigned Reading</u> |
|-------------|---|---------------------------------|
| Jun 23      | Introduction/Human Body Orientation   | 1                               |
| 27          | Human Organism/Chemistry  | 1/2                             |
| 28          | Chemistry/Biochemistry  | 2                               |
| 29          | Cellular Physiology- <b>Quiz 1</b>  | 3                               |
| July 30     | Cellular Physiology   | 3                               |
| 4           | <b>Independence Day – Academic Holiday!</b>   |                                 |
| 5           | Cellular Physiology – <b>Quiz 2</b>   | 3                               |
| 6           | Cellular Physiology – Mitosis, Protein synthesis  | 3                               |
| 7           | <b>EXAM 1 – 100 points</b>  | <b>1-3 (in part)</b>            |
| 11          | Histology   | 4                               |
| 12          | Integumentary System - <b>Quiz 3</b>  | 5                               |
| 13          | Skeletal System & Joints (self-study)   | 6 & 8                           |
| 14          | Nervous System – <b>Quiz 4</b>  | 11                              |
|             | <b>Last day to withdraw at student's discretion with a “W” grade.</b>                           |                                 |
| 18          | <b>EXAM 2 – 100 points</b>  | <b>3 (in part), 4, and 5</b>    |
| 19          | Nervous System  | 11                              |
| 20          | Cellular Metabolism – <b>Quiz 5</b>   | 24                              |
| 21          | Cellular Metabolism/Muscular System   | 24/9                            |
| 25          | <b>EXAM 3 – 100 points</b>  | <b>6, 8 and 11 (in part)</b>    |
| 26          | Muscular System   | 9                               |
| 27          | Autonomic Nervous System  | 14                              |
| 28          | Central & Peripheral Nervous Systems – <b>Quiz 6</b>  | 12/13                           |
| Aug 1       | <b>EXAM 4 – 100 points</b>  | <b>11 (in part), 24 and 9</b>   |
| 2           | Central and Peripheral Nervous Systems  | 12/13                           |
| 3           | Last day to withdraw for <b>nonacademic</b> reasons at instructor's discretion with a “W” grade |                                 |
| 4           | <b>FINAL EXAM; comprehensive and new material (Chapters 12-14), 150 points</b>                  |                                 |

<http://www.kctcs.edu/student/studentcodeof>

The course content may be modified as required at my discretion – change of pace, addition/omission of chapters and date/number of exams.