



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title – Human Physiology and Anatomy II

Course Prefix and Number – BIOL 2402

Department - Biology

Division – Math & Science

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours # : Lab/Other Hours # 4:3:2

Equated Pay hours for course – 4.2

Course Catalog Description – (Continuation of BIOL 2401) Study of the structure and function of human anatomy, including the digestive, urinary, reproductive, respiratory, and circulatory systems.

List Lab/ Other Hours
Lab Hours 2
Clinical Hours
Practicum Hours
Other (list)

Prerequisites/Co-requisites - TSI reading and writing requirements met; BIOL 2401 with a grade of "C" or better.

Prepared by Wendy Waters

Date 8-1-13

Reviewed by Department Head Kim Raun

Date 8-1-13

Accuracy Verified by Division Chair Kevin Dees

Date 8-1-13

Approved by Dean or Vice President of Instruction *gghunt*

Date 8-1-13



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non lecture instruction):

Lecture

- I. Maintaining the metabolism and homeostasis of the body
 - A. Cardiovascular system
 1. Blood
 - a. Types and functions of cells
 - b. Blood plasma
 - c. Blood types
 - d. Clot formation and dissolution
 2. Heart
 - a. Anatomy
 - b. Nerve supply and impulse conduction system
 - c. Physiology of the cardiac cycle (ECG)
 3. Blood vessels
 - a. Arteries, veins and capillaries
 - b. Blood pressure
 - c. Microcirculation
 - d. Circulation
 4. Lymphatic system
 - a. Function
 - b. Tissues and organs
 - c. Lymphatic circulation
 5. Immune System
 - a. Cells
 - b. Antibodies
 - B. Respiratory system
 1. Organs of the respiratory tract
 2. Kinds of respirations
 3. Mechanisms of respirations
 4. Volumes of air exchanged
 5. Transportation of gases
 6. Control of respiration
 - C. Digestive system
 1. Primary organs of the digestive system
 2. Accessory organs of the digestive system
 3. Digestion
 - a. Physical processes
 - b. Chemical processes
 4. Absorption
 5. Nutrition
 - a. Sources of nutrients
 - b. Function of nutrients
 6. Metabolism and metabolic rates
 - D. Urinary system
 1. Organs
 2. Physiology
 - a. Filtration
 - b. Reabsorption
 - c. Secretion
 - d. Hormonal control

- e. Fluid volume and distribution
- 3. Characteristics of urine
- 4. Fluid and electrolyte balances and pH Balance
 - a. Principles of fluid balance
 - b. Electrolyte concentration and distribution
 - c. pH control
- II. Reproduction of the Human Being
 - A. Male reproductive system
 - 1. Organs and glands
 - 2. Hormonal regulation
 - 3. Spermatogenesis
 - B. Female reproductive system
 - 1. Organs
 - 2. Female menstrual cycle
 - 3. Hormonal regulation
 - 4. Oogenesis

Lab Outline

- I. Anatomy of the heart, cardiac muscle histology
- II. Histology of blood vessels; major arteries and veins
- III. EKG, heart sounds, pulse and blood pressure
- IV. Hematology; cell types, blood typing, hemoglobin determination
- V. Anatomy and histology of the respiratory system
- VI. Spirometry
- VII. Digestive system
- VIII. Urinary system
- IX. Reproductive System

II. Course Learning Outcomes

Course Learning Outcomes	Methods of Assessment
<p>Upon completion of course, students will:</p> <ol style="list-style-type: none"> 1. Identify important anatomical structures of the cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems 2. Compare the cardiovascular, lymphatic, immune, respiratory digestive, urinary, and reproductive systems with respect to: 1) overall function, 2) function of important anatomical structures within each system, and 3) interaction between systems 3. Describe the hormonal and/or neural regulation of the cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems necessary for homeostasis 	<ol style="list-style-type: none"> 1. laboratory practicals; Case study, peer review, discussion or homework activity (in class or online), graph/table/chart, short essay, presentation 2. lecture exam questions and post-test exam questions; Case study, discussion or homework activity (in class or online), graph/table/chart, exam/quiz, short essay, presentation, project 3. lecture exam questions and post-test exam questions; Exam/quiz, case study, graph/table/chart, presentation, short essay

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Text: Marieb and Hoehn. *Human Anatomy & Physiology*. Pearson. Current edition
 Laboratory Manual: Marieb and Mitchell. *Human Anatomy & Physiology: Custom Edition for WCJC*. Pearson. Current edition

IV. Suggested Course Maximum – 36 lecture; 24 lab

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Laboratory classroom required

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Lecture Average:	<u>55%</u>	Grade Assignments (%):
Exam average (3-4 exams)	30-55%	A 100-90
Other (homework, quizzes, projects, etc.)	0-25%	B 89-80
Laboratory Average (average of 3 lab practicals)	<u>25%</u>	C 79-70
Final Exam (includes at least 50% comprehensive material)	<u>20%</u>	D 69-60
Total	100%	F Below 60

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Review Forms

- Critical Thinking
- Communication
- Empirical & Quantitative Skills
- Teamwork
- Social Responsibility
- Personal Responsibility

- **WECM Courses**

Attach the following:

- Program SCANS Matrix
- Course SCANS Competencies Checklist



Core Curriculum Review Form

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: _____

Core Objective: **Critical Thinking Skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

Student Learning Outcome supporting core objective:

For each core objective, there must be at least two different methods of assessment.

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
The SLO is:	Insert SLO (from Administrative Master Syllabi) below	Provide a brief name and description of the sample learning activity:	Provide a brief name and description of the sample quiz, exam, rubric, assignment, etc. for assessing the objective:
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			
<input type="checkbox"/> Existing <input type="checkbox"/> Revised <input type="checkbox"/> New <input type="checkbox"/> State Mandated			

Department Head: _____

Date: _____



Core Curriculum Review Form

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: _____

Core Objective: **Communication Skills**—to include effective development, interpretation and expression of ideas through written, oral and visual communication

Student Learning Outcome supporting core objective:

For each core objective, there must be at least two different methods of assessment.

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
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Department Head: _____

Date: _____



Core Curriculum Review Form

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: _____

Core Objective: **Empirical and Quantitative Skills**—to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Student Learning Outcome supporting core objective:

For each core objective, there must be at least two different methods of assessment.

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
The SLO is:	Insert SLO (from Administrative Master Syllabi) below	Provide a brief name and description of the sample learning activity:	Provide a brief name and description of the sample quiz, exam, rubric, assignment, etc. for assessing the objective:
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Department Head: _____

Date: _____



Core Curriculum Review Form

Foundational Component Area: **Life & Physical Sciences**

Course Prefix & Suffix: _____

Core Objective: **Teamwork**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Student Learning Outcome supporting core objective:

For each core objective, there must be at least two different methods of assessment.

SLO Status	Student Learning Outcome (SLO)	Learning Activity	Assessment
The SLO is:	Insert SLO (from Administrative Master Syllabi) below	Provide a brief name and description of the sample learning activity:	Provide a brief name and description of the sample quiz, exam, rubric, assignment, etc. for assessing the objective:
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Date: _____