



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 - Environmental Biology Lab

Course Prefix and Number - BIOL 2106

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 # 1:0:2

Equated Pay hours for course – 1.2

Course Catalog Description - Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems.

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

Prerequisites/Corequisites - TSI satisfied in reading and writing. Enrollment in BIOL 2306 or credit for BIOL 2306.

Approvals – *the contents of this document have been reviewed and are found to be accurate.*

Prepared by Jennifer Jeffery

Date 9/15/11

Reviewed by department head Kim Raun

Date 9/15/11

Accuracy verified by Division Chair Kevin Dees

Date 10/10/2011

**Approved by Dean of Vocational Instruction or
Vice President of Instruction** Leigh Ann Collins

Date 12/01/11



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):

1. Orientation; Laboratory Safety
2. Scientific Method; Long-Term Experiment: Effect of Kerosene on Marigold Growth
3. Estimating Population Size: Mark & Recapture Exercise
4. Food Chains: Investigation of NW vs. SE Owl Pellets
5. Long-Term Experiment: Landfills
6. Field Trip: Attwater Prairie Chicken National Wildlife Refuge
7. Field Trip: City of Wharton Wastewater Treatment Plant
8. Species Diversity Exercise using the Simpson Index: Introduction, Data Collection & Analysis
9. Recycling Activity
10. Campus tour - examining vegetation on campus

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
<ol style="list-style-type: none"> 1. Demonstrate how population size may be estimated. 2. Compare two communities by calculating the diversity index. 3. Demonstrate application of the scientific method. 4. Describe different approaches to conservation. 	<ol style="list-style-type: none"> 1. Mark and Recapture worksheet 2. Species Diversity worksheet 3. Lab Report: Effects of Kerosene on Marigold Growth 4. Lab quiz

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

Withgott and Brennan. *Environment: The Science Behind the Stories*. Pearson. Current edition

IV. Suggested Course Maximum - 24

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

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

20%	Tests
20-40%	Quizzes
40-60%	<u>Other (lab reports, worksheets, discussions)</u>
100%	Total

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 Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**
Attach the following:

- Program SCANS Matrix
- Course SCANS Competencies Checklist

Page 1: Competencies

Course Prefix & Number: BIOL 2106	
Competency	Method of Assessment
READING: Reading at the college level means the ability to analyze and interpret a variety of printed materials – books, articles, and documents.	
WRITING: Competency in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience.	
SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience.	
LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication.	
CRITICAL THINKING: Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies.	lab exercises
COMPUTER LITERACY: Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information.	



Page 2: Perspectives

Course Prefix & Number: BIOL 2106	
Perspective	Method of Assessment
1. Individual and society/world; cultural and ethnic diversity	
2. Individual, political, economic, and social aspects of life; being a responsible member of society	lab exercises
3. Health and wellness	
4. Technology and science: use and understanding	lab exercises
5. Personal values for ethical behavior	lab exercises
6. Ability to make aesthetic judgments	lab exercises
7. Logical reasoning in problem solving	lab quizzes
8. Integrate knowledge from and understand interrelationships of the scholarly disciplines	lab quizzes



Page 3: Exemplary Educational Objectives

Course Prefix & Number: BIOL 2106	
Component Area: Natural Sciences	
Exemplary Educational Objective	Method of Assessment
1. Understand and apply method and appropriate technology to the study of natural science.	lab exercises
2. Recognize scientific and quantitative methods and the difference between these approaches and other methods of inquiry; and communicate findings, analyses, and interpretations both orally and in writing.	lab report and quizzes
3. Identify and recognize the differences among competing scientific theories.	
4. Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.	lab report
5. Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.	lab quizzes