

## APPENDIX D – Syllabi for Natural Science Courses

### BIOLOGY SYLLABI

BIOL 1063	Intro to Biology
BIOL 1071	Intro to Biology Lab
BIOL 2041	Principles of Biology I Lab
BIOL 2053	Principles of Biology I
BIOL 2083	Principles of Biology II
BIOL 2091	Principles of Biology II Lab
BIOL 2143	Botany
BIOL 2153	Zoology
BIOL 2161	Zoology Lab
BIOL 2171	Botany Lab
BIOL 3331	Molecular Biology Lab
BIOL 3333	Molecular Biology
BIOL 3354	Genetics
BIOL 3363	Cell Biology
BIOL 3384	Herpetology
BIOL 3394	Ichthyology
BIOL 3414	Mammalogy
BIOL 3434	Regional Flora
BIOL 3451	Mammalogy Lab
BIOL 3484	Ecology
BIOL 3493	Environmental Science
BIOL 3503	Marine Biology
BIOL 3511	Marine Biology Lab
BIOL 3524	Ornithology
BIOL 3553	Microbiology
BIOL 3561	Microbiology Lab
BIOL 3574	Comparative Anatomy
BIOL 358V	Natural History
BIOL 3594	Invertebrate Zoology
BIOL 3763	Evolution
BIOL 3801	Mammalian Anatomy Lab
BIOL 4594	Waterfowl Ecology
BIOL 4634	Vertebrate Physiology
BIOL 4664	Mammalian Histology
BIOL 4673	Pharmacology
BIOL 469V	Senior Research
BIOL 4724	Aquatic Biology
BIOL 4734	Animal Behavior
BIOL 4741	Biology Seminar

### **CHEMISTRY SYLLABI**

CHEM 1103	General Chemistry I
CHEM 1121	General Chemistry I Lab
CHEM 1113	General Chemistry II
CHEM 1131	General Chemistry II Lab
CHEM 3314	Quantitative Analysis
CHEM 3404	Organic Chemistry I
CHEM 3414	Organic Chemistry II
CHEM 3344	Instrumental Analysis
CHEM 4633	Biochemistry I
CHEM 4643	Biochemistry II
CHEM 4731	Biochemistry Lab
CHEM 3424	Elements of Physical Chemistry
CHEM 4714	Physical Chemistry -Kinetics and Quantum Mechanics
CHEM 4704	Physical Chemistry -Thermodynamics
CHEM 3623	Advanced Inorganic Chemistry
CHEM 3454	Organic Analysis
CHEM 4742	Advanced Lab Techniques

### **EARTH SCIENCE SYLLABI**

ESCI 1041	Astronomy Lab
ESCI 1033	Astronomy
ESCI 1051	Geology Lab
ESCI 1063	Geology
ESCI 1073	Earth and Atmosphere
ESCI 1081	Earth and Atmosphere Lab
ESCI 1131	Meteorology Lab
ESCI 1123	Meteorology
ESCI 358V	Natural History

### **PHYSICS SYLLABI**

PHYS 2203	College Physics I
PHYS 2231	College and University Physics I Lab
PHYS 2241	College and University Physics II Lab
PHYS 2213	College Physics II
PHYS 2313	University Physics I
PHYS 2323	University Physics II
PHYS 3444	Optics
PHYS 3013	University Physics III
PHYS 3423	Computational Physics
PHYS 3404	Modern Physics
PHYS 3504	Introduction to Electronics

**Biology 1063—Biological Sciences (ACTS BIOL 1004)**  
**School of Mathematical and Natural Sciences**  
**Summer 2015, MTWTh, 8:00-10:15 a.m.**  
**Science Center Auditorium**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466.  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Web page:** <http://uam-web2.uamont.edu/facultyweb/huntj>.  
**Office Hours:** Monday-Thursday 2:00-3:00, or by appointment.

**Corequisite:** ENGL1013.

**Required text:** Simon, E. J., J. L. Dickey and D. B. Reece. 2013. *Campbell essential biology*. Fifth edition. Pearson-Benjamin Cummings, San Francisco, 452+ pp. Available at the UAM Bookstore (\$186.75 new, \$140.25 used, ISBN 9780321763334). You may rent this textbook for the semester at the UAM Bookstore for \$93.38. Earlier editions of this text are also acceptable. The website associated with the textbook is at: [www.masteringbiology.com](http://www.masteringbiology.com) (registration required).

**Course Objectives:** To acquaint the student with the basic concepts of biology, with emphasis on the chemistry of life, introductory cell and molecular biology, photosynthesis, respiration, genetics, taxonomy, evolution, and ecology. This course will strive to convey knowledge of basic biological concepts and to stimulate an interest and understanding of the natural environment.

**Tests and grading:** Grades will be computed as a percentage of 400 points. Of these, 300 points will come from 3 hourly exams, and 100 will come from the final exam. Grading will be on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). There is no curving of the grade or “extra” credit. Points will be earned from scheduled examinations. Slight changes in the grading scheme may be made at the discretion of the instructor.

Exams will consist of multiple choice questions—bring a scantron on exam days. Exam dates are July 9, July 16, July 23, and July 30. **These dates will not change!** (In the event of emergency cancellation of class on an exam day, the exam will occur on the next class day.) Each test will cover material beginning with the previous exam, and continuing through the last class day before the exam. The final exam, which will not be comprehensive, will be on Wednesday, July 30. Please note that we **will** have lecture after exams are completed!

**Attendance:** Attendance at all lectures and exams is mandatory. Attendance will be recorded regularly. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance. Because each subject we will cover builds on those previous to it, missing even one lecture can make it difficult to catch up. This is especially true during a short summer session! Please plan on coming to class every day.

Missed exams may be made up only by students with an approved university excuse, by arrangement with the instructor. Approved university excuses do not include “hung over,” “overslept,” or “my car is busted.” Please be aware that any made-up exam may NOT be the same exam given during the normal class period; make-up exams may be essay-style. Students are responsible for all material presented in class, even with an approved university excuse for missing a class. It is the responsibility of the student to obtain missed material from classmates.

**Class web page.** The class web page may be found at: <http://uam-web2.uamont.edu/facultyweb/huntj/Biology1063.htm>. On this page there are lists of terms to know and lecture outlines for each of the chapters of the text that we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. A list of definitions for each chapter is also included. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment. Tutor service is available at Harris Hall—call 870-460-1054 for details.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **If I see you text-messaging during class, you will be asked to leave.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. You may not read outside material, study other classes, or work crossword puzzles during class. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is July 27.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

**Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty: a) Copying from another student's paper; b) Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor; c) Collaboration with another student during the examination; d) Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material; e) Substituting for another person during an examination or allowing such substitutions for oneself.

**Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Topics to be covered:** Lectures will begin at Chapter 1 in the text and proceed in the order of the text chapters. This will include definitions of science, the scientific method, and biology; basic chemistry and biochemistry; cell theory and structure; metabolism; cellular respiration and photosynthesis; cell division; genetics; evolution and natural selection; biodiversity; ecology; and conservation. We will move as fast as we can and still cover the topics in the required depth, so that a detailed schedule of lectures is impossible; this is another reason you should come to class every day.

**Biology 1071 Introduction to Biological Science Lab**  
Syllabus -Summer 2, 2015

**Corequisites:** Biol 1063(A.C.T. Equivalent # BIOL1004)

**Required Texts:**

1. *Laboratory Exercises for Biological Sciences* (revised July 2006)
2. *Campbell Essentials Biology*, 4th Edition(Assigned readings from textbook used in Biol 1063,)

**Instructor=s Name and Office Number:**

Name: Ms Jessie Chappell  
Office Number: Science Center B-26  
Office Telephone: 870-460-1566  
E-mail: [chappelj@uamont.edu](mailto:chappelj@uamont.edu)  
Office Hours: M-H 9:30-10:30

**Class attendance:**

You are expected to attend classes regularly and punctually. After 2 absences your ability to succeed in Intro Bio Science lab will be greatly diminished. 2 points are given for attending and completing each lab. You will sign an attendance sheet for each lab and exam. Failure to sign the attendance sheet will result in a 2 point deduction. **An excused absence does not excuse you from scheduled homework, quizzes or exams. You are expected to inquire about assignments and be prepared when you return to class. An excused absence includes medical excuses and UAM authorized student activities accompanied by proper documentation.**

**Cheating:**

Cheating will not be tolerated. The policy found on page 59 of the catalog, under Academic Code violations will be followed. Cheating and plagiarism are considered violations of the Academic Code. Violators will receive no credit for the quiz or exam (a no credit quiz or exam cannot be dropped as a lowest grade). Students with cell phones on the desk during quizzes or exams will receive a zero. Quizzes earning a zero for cell phone usage or cheating will not be dropped.

**Classroom policies:**

**Cell phones and pagers will be turned off during class and should not be on your desk during class. Use of a cell phone will result in the loss of your performance points for the day.** Students should not write on the desks. Scores on exams will be posted by a code number assigned on the first exam unless a student requests not to have his/her scores posted.

**Important Dates:**

July 1	First day of classes
July 2	Last day to register or add classes for all students
July 3	No class HOLIDAY
July 27	Last day to drop a class
July 30	Last day of classes and Final Exams

**Course objectives:**

Biology 1071 is a course designed to introduce students to basic studies of plants and animals, cells, biochemistry, metabolism and inheritance. It is designed to illustrate and complement concepts discussed in Biol 1063, Introduction to Biological science.

**Course outline**

<b>Date</b>	<b>Lab topic</b>	<b>Reading from Campbell's, <i>Essential Biology</i>, 4<sup>th</sup> edition</b>	
July 1	Exercise 1	Introduction and Microscopy	pp. 56-59
July 2	Exercise 2 <b><u>Quiz # 1</u></b>	Exchange Between Cells and Their Environment	pp. 60; 83-86
July 6	Exercise 3	Chemical Aspects of Life	pp. 32-50
July 7	Exercise 4	More Chemical Aspects of Life	pp. 32-50; 80-82
<b>July 8</b>	<b>LABORATORY EXAMINATION I*(EXERCISES 1-4)</b>		
<i>*A jump drive for Mitosis and Embryology slide photos is recommended.</i>			
July 9	Exercise 6	Respiration and Fermentation <b><u>Quiz #2</u></b>	pp. 91-103
July 13	Exercise 5	Experiments in Photosynthesis	pp. 107-116
July 14	Exercise 7	Cell Division: Mitosis and Cytokinesis	pp. 122-128
	Exercise 8	Embryology	pp. 122-128 & 251
<b>July 15</b>	<b>LABORATORY EXAMINATION II (<u>EXERCISES 5-8</u>)</b>		
July 16	Exercise 9	Genetics	pp. 145-167
July 20	Exercise 11	Plant Kingdom Seed Plants: 1. Plant Tissues	pp. 318-327
July 21	Exercise 12	Plant Kingdom Seed Plants: 2. Reproduction	pp. 318-327
July 22	Handout 404-420	Ecology <b><u>Quiz #3</u></b>	pp. 374-379 &
<b>July 23</b>	<b>LABORATORY EXAMINATION III (FINAL EXAM) (EXERCISES 9, 11, 12 AND ECOLOGY)</b>		

**Grading policy:**

Basis of final grade for grade	Points Possible	Grading Scale	Points needed
Exam I	100	89.5 - 100 A	299.8/335
Exam II	100	79.5 - 89.4 B	266.3/335
Exam III	100	69.5 - 79.4 C	232.8/335
Quizzes	10	59.5 - 69.4 D	199.3/335
Lab performance	25	00 - 59.4 F	Below 199.3
<b><u>Total points possible</u></b>	<b><u>335</u></b>		

**Makeup exams:**

All makeup exams will be **essay** type and will be given at the end of the semester. Exceptions will be made for medical excuses and UAM authorized student activities accompanied by proper documentation. **Only one makeup will be allowed. It is to your advantage to take exams as scheduled. Quizzes cannot be made up. The lowest quiz grade (3 quizzes) will be dropped and a missed quiz will be your drop.** Exam grades are never dropped

It is the policy of the University of AR at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

Incomplete:

To qualify for a grade of AI@ for an incomplete a student must have a C or better average and have completed 67% of the course work.



University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
Principles of Biology I Lab Course Syllabus  
Fall 2014, W 1:10-3:00pm, B5

**Instructor Name:** Karen Fawley, Ph.D

**Instructor Location of Office:** Museum of Natural History, Room 101

**Instructor Phone:** 870-460-1165

**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)

**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>

**Office hours:** MW 9-10am; T 9:40-11am; Th 2-3:30pm or by appointment.

**Course Title and Credit Hours:** Biology 2041, Principles of Biology I Lab, 1 credit hour

**Course Description:** Laboratory exercises and demonstrations on statistics, the chemical basis of life, cell structure and function, metabolism, photosynthesis, and animal form and function. Designed for biology and other life science majors.

**Prerequisites:** ACT composite of 22 or BIOL 1063 (A.C.T. equivalent BIOL 1034) (Introduction to Biological Science) with a C or above. **You may be dropped from this class if you do not have the prerequisites.**

**Student Learning Outcomes:** **This course is designed for biology and other life science majors or minors.** Upon completion of this course, students should have a general understanding of the scientific method and experimental design with laboratory exercises on statistics, the chemical basis of life, cell structure and function, metabolism, photosynthesis, and animal form and function.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** **Use of tobacco products is not permitted on UAM grounds.**

**Cell phones and all electronics should be turned off and put away during class. Any cell phone that is found on a student's desk during an exam or a quiz will result in an automatic zero. The use of cell phones as calculators during an exam or a quiz is prohibited.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4 of this syllabus will be applied to all assignments, quizzes and exams. Cheating includes plagiarism; plagiarism can result in a grade of “F” (zero points) for an assignment.

**Course Content Outline/Calendar:**

Date	Lab Topic
W Aug 27	Lab 1. Statistics/Hypothesis Testing Part 1
W Sept 3	Lab 2. Statistics/Hypothesis Testing Part 2
W Sept 10	Lab 3. Biomolecules
W Sept 17	Lab 4. DNA
W Sept 24	LAB EXAM I (Labs 1-4)
W Oct 1	Lab 5. Microscopy
W Oct 8	Lab 6. Diffusion and Osmosis
W Oct 15	Lab 7. Photosynthesis
W Oct 22	Quiz-Photosynthesis; Review
W Oct 29	LAB EXAM II (Labs 5-7)
W Nov 5	Lab 8. Plant Form and Function
W Nov 12	Lab 9. Animal Structure and Function: Epithelial/Connective Tissue
W Nov 19	Lab 10. Animal Structure and Function: Muscle/Nerve Tissue
W Nov 26	NO CLASS--THANKSGIVING HOLIDAY
W Dec 3	FINAL EXAM (LAB EXAM III) (Labs 8-10)

**Writing Assignment/Quiz /Exam Schedule:**

Date	Lab Topic	Total pts
W Sept 3	Lab Quiz- Lab 1. Statistics/Hypothesis Testing	20
W Sept 10	Writing Assignment Questions and Abstract for Lab 1&2-Statistics/Hypothesis Testing due	40
W Sept 17	Lab Quiz-Lab 3. Biomolecules	20
W Sept 24	LAB EXAM I (Labs 1-4)	100
W Oct 8	Lab Quiz-Lab 5. Microscopy	20
W Oct 15	Lab Quiz-Lab 6.-Diffusion/Osmosis	20
W Oct 22	Lab Quiz-Lab 7. Photosynthesis	20
W Oct 29	LAB EXAM II (Labs 5-7)	100
W Nov 12	Lab Quiz-Lab 8. Plant Form and Function	20

W	Nov 19	Lab Quiz-Lab 9. Animal Structure and Function: Epithelial/Connective Tissues	20
W	Nov 26	THANKSGIVING HOLIDAY	
W	Dec 3	FINAL EXAM (LAB EXAM III) (Labs 8-10)	100

**Provisions for tests and evaluations:**

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Make-up Labs/Quizzes:** Due to time constraints, there will be no make-up labs or make-up quizzes. However, students can drop one 20 point quiz during the semester.

**Make-up Exams:** No make-up exams will be given, but the student can replace one missed exam with the final exam grade. Students can make-up one exam only, if they have a valid medical or personal excuse. The student must get in contact with the professor before or the day of the scheduled exam. Any additional missed exams will be counted as a zero.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Grading Policy:**

		<u>Grading scale</u>
Quizzes/Assignments	160 pts	90-100 A
Exams	<u>300 pts</u>	80-89 B
	460 pts	70-79 C
		60-69 D
		Below 60 F

**Special dates of concern:**

Wednesday, August 20	First day of classes.
Friday, August 22	Last day to register or add classes.
Monday, September 1	Labor Day Holiday
Friday, October 3	Deadline to file for May graduation
Wednesday, October 29	Last day to drop with a grade W.
Monday, November 3	Preregistration for Spring 2015 begins
Friday, November 14	Preregistration for Spring 2015 ends.
Wednesday, November 26	No class; University offices open.
Thursday-Friday, November 27-28	Thanksgiving Holiday
Friday, December 5	Last day of classes.
M-F, December 8-12	Final exam period.
Wednesday, December 17	Fall conferral of degrees and awards.

### **Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

#### For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

### **Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exams.

University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
Principles of Biology I Course Syllabus  
Fall 2014, MWF 11:10 am-12:00 pm, SCI AUD

**Instructor Name:** Karen Fawley, Ph.D

**Instructor Location of Office:** Museum of Natural History, Room 101

**Instructor Phone:** 870-460-1165

**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)

**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>

**Office hours:** MW 9-10am; T 9:40-11am; Th 2-3:30pm or by appointment.

**Course Title and Credit Hours:** Biology 2053, Principles of Biology I, 3 credit hours

**Course Description:** The chemical basis of life, cell structure and function, metabolism, and genetics. Designed for biology and other life science majors or minors.

**Prerequisites:** ACT composite of 22 or BIOL 1063 (Introduction to Biological Science) (A.C.T. equivalent BIOL 1004) with a C or above. **You may be dropped from this class if you do not have the prerequisites.**

**Required Textbook:** *Campbell Biology*, Reece, Urry, Cain, Wasserman, Minorsky and Jackson, 10<sup>th</sup> Edition, ISBN 10: 0321775651

**Student Learning** **This course is designed for biology and other life science**

**Outcomes:** **majors or minors.** Upon completion of this course, students should have a general understanding of the scientific method, cellular structure and function, cellular respiration, photosynthesis, and plant and animal form and function.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** Use of tobacco products is not permitted on UAM grounds.

**Cell phones and all electronics should be turned off and put away during class. Any cell phone that is found on a student's desk during an exam or a quiz will result in an automatic zero. The use of cell phones as calculators during an exam or a quiz is prohibited.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4 of this syllabus will be applied to students guilty of cheating on exams.

**Course Content Outline/Calendar:**

Date	Lecture Topic	Reading from:	
<i>Campbell Biology</i>			
W	Aug 20	Introduction: Themes in the Study of Life	Ch 1
F	Aug 22	The Chemical Context of Life	Ch 2
M	Aug 25	The Chemistry Context of Life	Ch 2
W	Aug 27	Water and Life	Ch 3
F	Aug 29	Class cancelled by instructor	
M	Sept 1	LABOR DAY HOLIDAY-No class	
W	Sept 3	Carbon and Molecular Diversity of Life	Ch 4
F	Sept 5	The Molecules of Life-Large Biological Molecules	Ch 5
M	Sept 8	The Molecules of Life-Large Biological Molecules	Ch 5
W	Sept 10	EXAM I	Ch 1-5
F	Sept 12	A Tour of the Cell	Ch 6
M	Sept 15	A Tour of the Cell	Ch 6
W	Sept 17	Membrane Structure and Function	Ch 7
F	Sept 19	An Introduction to Metabolism	Ch 8
M	Sept 22	An Introduction to Metabolism	Ch 8
W	Sept 24	Cellular Respiration and Fermentation	Ch 9
F	Sept 26	Cellular Respiration and Fermentation	Ch 9
M	Sept 29	Cellular Respiration and Fermentation	Ch 9
W	Oct 1	EXAM II	Ch 6-9
F	Oct 3	Photosynthesis	Ch 10
M	Oct 6	Photosynthesis	Ch 10
W	Oct 8	Plant Structure, Growth and Development	Ch 35
F	Oct 10	Extra credit assignment- Plants and Biotechnology	
M	Oct 13	Plant Structure, Growth and Development	Ch 35
W	Oct 15	Angiosperm Reproduction and Biotechnology	Ch 38
F	Oct 17	Resource Acquisition and Transport in Vascular Plants	Ch 36
M	Oct 20	Plant Responses to Internal and External Signals	Ch 39
W	Oct 22	EXAM III	Ch 10; 35-36;38-39
F	Oct 24	Basic Principles of Animal Form and Function	Ch 40
M	Oct 27	Animal Nutrition	Ch 41

W	Oct 29	Animal Nutrition	Ch 41
F	Oct 31	Circulation and Gas Exchange	Ch 42
M	Nov 3	Circulation and Gas Exchange	Ch 42
W	Nov 5	The Immune System	Ch 43
F	Nov 7	Class cancelled by instructor	
M	Nov 10	The Immune System	Ch 43
W	Nov 12	EXAM IV	Ch 40-43
F	Nov 14	Hormones and the Endocrine System	Ch 45
M	Nov 17	Hormones and the Endocrine System	Ch 45
W	Nov 19	Hormones and the Endocrine System	Ch 45
F	Nov 21	Animal Reproduction	Ch 46
M	Nov 24	Animal Reproduction	Ch 46
W	Nov 26	THANKSGIVING HOLIDAY	
F	Nov 28	THANKSGIVING HOLIDAY	
M	Dec 1	Animal Development	Ch 47
W	Dec 3	Neurons, Synapses and Signaling	Ch 48
F	Dec 5	Neurons, Synapses and Signaling	Ch 48
M	Dec 8	FINAL EXAM (EXAM V), 1:30-3:30pm, SCI AUD	Ch 45-48

**Provisions for tests and evaluations:**

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Make-up Exams:** No make-up exams will be given, but the student can replace one missed exam with the final exam grade. Students can make-up one exam only, if they have a valid medical or personal excuse. The student must get in contact with the professor before or the day of the scheduled exam. Any additional missed exams will be counted as a zero.

**Grading Policy:**

		<u>Grading scale</u>	
Exam 1	100 pts	90-100	A
Exam 2	100 pts	80-89	B
Exam 3	100 pts	70-79	C
Exam 4	100 pts	60-69	D
Exam 5 (final exam)	<u>100 pts</u>	Below 59	F
	500 pts		

**Special dates of concern:**

Wednesday, August 20	First day of classes.
Friday, August 22	Last day to register or add classes.
Monday, September 1	Labor Day Holiday
Friday, October 3	Deadline to file for May graduation
Wednesday, October 29	Last day to drop with a grade W.
Monday, November 3	Preregistration for Spring 2015 begins
Friday, November 14	Preregistration for Spring 2015 ends.
Wednesday, November 26	No class; University offices open.
Thursday-Friday, November 27-28	Thanksgiving Holiday
Friday, December 5	Last day of classes.
M-F, December 8-12	Final exam period.
Wednesday, December 17	Fall conferral of degrees and awards.

**Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;



- e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exam.

**Biology 2083—Principles of Biology II**  
**(ACTS BIOL 1014, when combined with BIOL 2091)**  
**Department of Mathematical and Natural Sciences**  
**Spring 2015, MWF, 11:10-12:00**  
**Science Center B-18**

**Instructor:** Dr. John L. Hunt. Office: B-11, Science Center. Phone: 870-460-1466  
E-mail: [huntj@uamont.edu](mailto:huntj@uamont.edu). Web page: <http://www.uamont.edu/facultyweb/Huntj>.  
Office Hours: 10-11 MWF; 8:30-9:30 TTh; 2-3 MTThF, or by appointment.

**Prerequisites:** BIOL 2053 and BIOL 2041, each with a grade of C or above.

**Required text:** J. B. Reece et al. 2010. *Campbell Biology*, 9<sup>th</sup> edition. Benjamin Cummings, San Francisco, 639+ pp, ISBN 9780321649546. Available at UAM bookstore (\$199.00 used, \$119.36 rental). The textbook website is at: [www.masteringbiology.com](http://www.masteringbiology.com) (registration required). Older editions of this text are also acceptable.

**Course Objectives:** To acquaint the student with the basic concepts of biology, with emphasis on evolution, diversity, and ecology of organisms. This course will strive to convey knowledge of basic biological concepts and to stimulate an interest and understanding of the natural environment.

**Class web page.** The class web page may be found at: [www.uamont.edu/facultyweb/Huntj/Principles.htm](http://www.uamont.edu/facultyweb/Huntj/Principles.htm). On this page there are lists of terms to know and lecture outlines for each of the chapters of the text we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Tests and grading:** Grades will be computed as a percentage of 500 points. Of these, 300 points will come from 3 hourly exams, 150 will come from the final exam, and 50 will come from unannounced quizzes. Grading will be on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). There is no curving of the grade or “extra” credit. **No test scores will be dropped.** Points will be earned from scheduled examinations and from unannounced quizzes.

Tests will consist of a mixture of objective and subjective questions, and will be on the dates listed below. These dates *will not* change. Exams may include bonus questions on material from the text that has never been discussed in class. The final exam will be Thursday, April 30, at 1:30 p.m. The final will be 33% comprehensive; other exams are not comprehensive. Bring a Scantron on exam days.

The number of quizzes is approximate. There will be an average of 1 quiz per week at the beginning of one of the lecture periods. There will be at least 10 quizzes during the semester; if there are more, students will drop the lowest scores and count only their 10 best quizzes. These quizzes will be unannounced and will consist of one to five questions from the previous day’s lecture. Quizzes are

designed to encourage daily review and study, and regular attendance and promptness, and therefore, MAY NOT be made up.

**Attendance:** Attendance at all lectures and exams is mandatory. Attendance will be taken on a daily basis. Quizzes may not be made up. However, missed quizzes will not count against the grade of any student who presents the instructor with an approved excuse for his absence on the next class day. Approved excuses do not include “hung over,” “overslept,” “had a flat,” “worked an extra shift,” or “abducted by aliens.” Students with approved excuses may make up missed exams, by arrangement with the instructor. Please be aware that make-up exams will NOT be the same exam given during the normal class period. *It is important for you to note that you are responsible for material covered in every class, even if you miss the class with an excused absence.* It is your responsibility to obtain the material you have missed; the instructor will NOT provide notes for missed classes. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment. Tutor service is available at Harris Hall—call 870-460-1054 for details.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **If I see you text-messaging during class, you will be asked to leave.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. You may not read outside material, study other classes, or work crossword puzzles during class. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is March 18. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty: a) Copying from another student’s paper; b) Use during the examination of prepared materials,

notes, or texts other than those specifically permitted by the instructor; c) Collaboration with another student during the examination; d) Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material; e) Substituting for another person during an examination or allowing such substitutions for oneself.

**Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class). You will not be allowed to wear a Pebble or other phone-watch during exams. Use of such technology constitutes cheating and will result in assignment of an F for the class.

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Subjects to be covered (with associated text chapters):** Subjects to be covered will be determined by our speed moving through the material—we will move as quickly as possible, but as slowly as we need. In general, we will cover muscle and skeletal systems, cell division (including mitosis and meiosis), genetics, evolution, ecology, biodiversity (including classification), and conservation biology.

**Important Dates:**

January 7	First Day of Class
January 19	Martin Luther King Day—No Class
February 4	Exam I
March 2	Exam II
March 18	Last Day to Drop with a W
March 23-27	Spring Break (Woo-hoo!)—No Class
April 8	Exam III
April 27	Last Day of Class
April 30	Final Exam, 1:30 p.m. 33% comprehensive.

Class Website: [www.uamont.edu/facultyweb/Huntj/Principles.htm](http://www.uamont.edu/facultyweb/Huntj/Principles.htm).

Dr. Hunt's Website: <http://www.uamont.edu/facultyweb/huntj/>

Textbook Website: [www.masteringbiology.com](http://www.masteringbiology.com)

UAM Home Page: <http://www.uamont.edu/>

UAM Bookstore: <http://www.bkstr.com/uamontstore/home>

Study Tips: <http://www.uamont.edu/facultyweb/Huntj/Study%20tips.htm>

Dr. Hunt's Phone Number: 870-460-1466

Special Student Services: 870-460-1026

**Biology 2091—Principles of Biology II Laboratory  
(ACTS BIOL 1014, when combined with BIOL 2083)  
Department of Mathematical and Natural Sciences  
Spring 2015, Wednesday 1:10-3:00 p.m. (Section 01)  
Wednesday 3:10-5:00 p.m. (Section 02)  
Science Center B7**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Web page:** <http://www.uamont.edu/facultyweb/Huntj>.  
**Office Hours:** 10-11 MWF; 8:30-9:30 TTh; 2-3 MTThF, or by appointment.

**Prerequisites:** BIOL 2053 and BIOL 2041 (each with a grade of at least C).

**Corequisite:** BIOL 2083; Principles of Biology II.

**Required texts:** none.

**Course Objectives:** Students will participate in exercises and demonstrations on animal and plant diversity, as well as structure, function, and behavior of these organisms. This lab is designed for biology and other life science majors and minors.

**Tests and grading:** Grades will be computed as a percentage of approximately 300 points. Of these, 200 points will come from exams, 50 will come from quizzes and lab performance, and 50 will come from a written assignment. Grading will be on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). There is no curving of the grade or “extra” credit. Points will be earned from scheduled examinations, assignments, and quizzes.

**Attendance:** Attendance at all lab sessions and exams is mandatory. You will sign an attendance sheet for each lab. Unexcused absences may result in the loss of ten points from your final average for each lab missed. It is important for you to note that you are responsible for material covered in every lab, even if you miss the lab with an excused absence. It is your responsibility to obtain the material you have missed, and to be prepared when you return to class. Students who miss an exam with an excused absence will take a make-up exam, which may be an essay type. Make-up exams will be given at a time and place determined by the instructor. **Quizzes may not be made up.**

**Class policies.** Please note that some of the labs require dissection. All students are required to participate in dissections; those students who do not participate will lose points. The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment. Tutor service is available at Harris Hall—call 870-460-1054 for details.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **If I see you text-messaging during class, you will be asked to leave.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. You may not read outside material, study other classes, or work crossword puzzles during class. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is March 18. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

**Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty: a) Copying from another student's paper; b) Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor; c) Collaboration with another student during the examination; d) Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material; e) Substituting for another person during an examination or allowing such substitutions for oneself.

**Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

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Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Tentative course outline:**

Januray 7	No lab.
January 14	Introduction, mitosis.
January 21	Bone and muscle tissues, bone identification.
January 28	Genetics.
February 4	Dissection of a vertebrate.
February 11	Protists.
February 18	LAB EXAM 1.
February 25	Fungi.
March 4	Animal behavior, technical writing.
March 11	Animal diversity.
March 18	Animal diversity.— <b>Writing Assignment Due</b>
March 25	Spring Break (Woo-hoo!).
April 1	TBD
April 8	Embryology.
April 15	Ecology.
April 22	FINAL EXAM.



University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
General Botany Course Syllabus  
Spring 2015, TTh, 9:40-11am, B18

**Instructor Name:** Karen Fawley, Ph.D

**Instructor Location of Office:** Museum of Natural History, Room 101

**Instructor Phone:** 870-460-1165

**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)

**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>

**Office hours:** MW, 9-11am; Th, 1:30-3pm or by appointment.

**Course Title and Credit Hours:** Biology 2143, (A.C.T. equivalent BIOL 1034)  
General Botany, 3 credit hours

**Course Description:** Structure, physiology, and phylogeny of plants, fungi, and algae.

**Corequisites:** English 1013 (A.C.T. equivalent ENGL 1013)

**Required Textbook:** *Plant Biology*, Graham, Graham, and Wilcox, 2006,  
Pearson/Prentice Hall, 2<sup>nd</sup> edition, ISBN: 0-13-146906-1

**Student Learning Outcomes:** To familiarize students with plant biology through an understanding of plant structure and function, plant reproduction, genetics, and evolution, and the diversity of plants, prokaryotes, protists, and fungi.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** Use of tobacco products is not permitted on UAM grounds.

**Cell phones and all electronics should be turned off and put away during class. Any cell phone that is found on a student's desk during an exam will result in an automatic zero.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4-5 of this syllabus will be applied to all exams.

**Course Content Outline/Calendar:**

Date	Lecture Topic	Chapter Readings from <i>Plant Biology</i>
Th Jan 8	Introduction to Plant Biology	Ch 1
T Jan 13	Naming and Organizing Plants	Ch 17
Th Jan 15	Class cancelled by instructor	
T Jan 20	Plant Cells	Ch 4
Th Jan 22	Plant Cells	Ch 4
T Jan 27	Plant Structure and Growth	Ch 8
Th Jan 29	EXAM I	Ch 1,4, 8, 17
T Feb 3	Stems and Material Transport	Ch 9
Th Feb 5	Leaves	Ch 11
T Feb 10	Leaves	Ch 11
Th Feb 12	Roots and Plant Nutrition	Ch 10
T Feb 17	Photosynthesis	Ch 5
Th Feb 19	EXAM II	Ch 5, 9-11
T Feb 24	Reproduction, Meiosis, and Life Cycles	Ch 13
Th Feb 26	Protists and the Origin of Eukaryotic Cells	Ch 19
T Mar 3	Protists and the Origin of Eukaryotic Cells	Ch 19
Th Mar 5	Fungi and Lichens	Ch 20
T Mar 10	Fungi and Lichens	Ch 20
Th Mar 12	EXAM III	Ch 13, 19-20

T	Mar 17	Seedless Plants	Ch 21
Th	Mar 19	Seedless Plants	Ch 21
M-F	Mar 23-27	SPRING BREAK!	
T	Mar 31	Seedless Plants	Ch 21
Th	Apr 2	EXAM IV	Ch 21
T	Apr 7	Gymnosperms	Ch 22
Th	Apr 9	Gymnosperms	Ch 22
T	Apr 14	Angiosperms	Ch 23
Th	Apr 16	Angiosperms	Ch 23
T	Apr 21	Angiosperms	Ch 23
Th	Apr 23	Flowering Plant and Animal Coevolution	Ch 24
T	Apr 28	Plants and People	Ch 2
F	May 1	FINAL EXAM (EXAM V), 1:30pm -3:30pm	Ch 2, 22-24

**Provisions for tests and evaluations:**

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Make-up Exams:** No make-up exams will be given, but the student can replace one missed exam with the final exam grade. Students can make-up one exam only, if they have a valid medical or personal excuse. The student must get in contact with the professor before or the day of the scheduled exam. Any additional missed exams will be counted as a zero.

**Grading Policy:**

		<u>Grading scale</u>
Exam 1	100 pts	90-100 A
Exam 2	100 pts	80-89 B
Exam 3	100 pts	70-79 C
Exam 4	100 pts	60-69 D
Exam 5 (final exam)	<u>100 pts</u> 500 pts	Below 59 F

**Special dates of concern:**

Wednesday, January 7	First day of classes.
Monday, January 19	Martin Luther King, Jr. Day
Tuesday, January 9	Last day to register of add classes.
Friday, February 27	Deadline to file for Aug and Dec 2015 graduation
M-F (March 23-27)	Spring Break!
Wednesday, March 18	Last day to drop W.
Monday, April 6	Preregistration for Fall and Summer 2015 begins
Friday, April 17	Preregistration for Fall and Summer 2015 ends.
Tuesday, April 28	Last day of classes.
W-T, Apr 29-May 5	Final exam period.
Friday, May 8	Commencement

**Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 121; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exam.

**BIOL 2153 (ACT: BIO 1054)**

**General Zoology Lecture**

**Summer 2015**

**Lecture M-Th 8:00-10:15**

**Science Center B-3**

**Instructor:** Glenn Manning

**Office:** B-27

**Office Phone:** 460-1166

**E-mail:** manning@uamont.edu

**Webpage:** <http://www.uamont.edu/facultyweb/Manning/>

**Office Hours:** Before or after class or by appointment. Changes in this schedule may occur and will be posted outside my door or announced in class.

BIOL 2153, General Zoology Lecture, 3 credit hours

**Objectives:** To acquaint the student with the basic concepts of zoology and to study classification, phylogenetic relationships, morphology, function, and life histories of invertebrates and vertebrates.

**Lecture Textbook:** Required Text: Hickman, C. P., L.S. Roberts, S. L. Keen, A. Larson, and D. J. Eisenhour. 2012. Animal Diversity. 7<sup>th</sup> Edition. ISBN: 978-0-07-302806-4.

**Student Learning Outcomes:** By the conclusion of the course you should be able to have an understanding of the form function, distribution of animal life on earth.

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory. Attendance will be recorded regularly and anyone missing the equivalent of two weeks of class will be dropped from the course unless appropriate documentation can be provided. Your success in this course is directly dependent on your attendance and participation in lectures.

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

Cheating in any form will not be tolerated and will automatically result in failure of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication device) during a test will be considered an attempt to cheat by the student.

Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor.

**\*\*\*\*\*NO EXTRA CREDIT** will be given under any circumstances!!!

<b>Course Grade:</b>	<u>GRADING SCALE</u>	<u>GRADE POINTS</u>
	90 - 100A	Hour Exam I 125
	80 - 89 B	Hour Exam II 125
	70 - 79 C	Hour Exam III 125
	60 - 69 D	Hour Exam IV 125
	00 - 59 F	-----
		Total Points 500

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted either by hard copy or on the Internet. If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone.

**Lecture Schedule: CONTENT: (Subject to change); Anticipated test dates are underlined CHAPTERS LISTED FOR EXAMS MAY VARY.**

<u>LECTURE TOPICS</u>	<u>READING ASSIGNMENT</u>	
Introduction		1
Animal Architecture		3
Classification and Phylogeny Of Animals		4
Protozoan Groups		5
Phylum Porifera		6
<b>HOUR EXAMINATION I (3 Jun)</b>		<b>1, 3, 4, 5 AND 6</b>
Radiate Animals: Cnidarians and Ctenophorans		7
Phylum Platyhelminthes & Nemertea		8
Gnathiferans and lesser Lophotrochozoans		9
Phylum Mollusca		10
<b>HOUR EXAMINATION II (11 Jun)</b>		<b>7, 8, 9 AND 10</b>
Segmented Worms: Annelids		11
Smaller Ecdysozoans		12
Arthropods		13
Phylum Chaetognatha and Echinodermata		14
<b>HOUR EXAMINATION III (18 Jun)</b>		<b>11, 12, 13, and 14</b>
The Chordates and Fishes		15 and 16
Early Tetrapods and Modern Amphibians		17
Amniote Origins and Reptilian Groups		18
Birds		19
Mammals		20
<b>HOUR EXAMINATION IV (24 June)</b>		<b>15, 16, 17, 18, 19, and 20</b>

**Important Dates:**

- 27 May- last day to register or add a class**
- 19 June - last day to drop with a W**
- 24 June - last day of classes**

**Students with disabilities:** It is the policy of the University of AR at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the

responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**Statement on disruptive behavior:** The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. THIS INCLUDES THE USE OF CELL PHONES (RINGING OR TEXTING DURING CLASS)

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will fail the course.



**BIOL 2161(ACT: BIO 1054)**  
**General Zoology Lab**  
**Summer 2015**  
**Lab M-Th 10:30-1:20**  
**Science Center B-5**

**Instructor:** Glenn Manning

**Office:** B-27

**Office Phone:** 460-1166

**E-mail:** manning@uamont.edu

**Webpage:** <http://www.uamont.edu/facultyweb/Manning/>

**Office Hours:** Before or after class or by appointment. Changes in this schedule may occur and will be posted outside my door or announced in class.

BIOL 2161, General Zoology Lab, 1 credit hour

**Objectives:** To acquaint the student with the basic concepts of zoology and to study classification, phylogenetic relationships, morphology, function, and life histories of invertebrates and vertebrates through hands on experiences.

**Lecture Textbook:** Hickman, C. P. And L. B. Kats. 2008. Laboratory Studies in Integrated Principles of Zoology. 16th Edition. ISBN: 978-0-07-750888-3.

**Student Learning Outcomes:** By the conclusion of the course you should be able to have an understanding of the form function, distribution of animal life on earth.

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory. Attendance will be recorded regularly and anyone missing the equivalent of two weeks of class will be dropped from the course unless appropriate documentation can be provided. Your success in this course is directly dependent on your attendance and participation in lectures.

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

Cheating in any form will not be tolerated and will automatically result in failure of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication devise) during a test will be considered an attempt to cheat by the student.

Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor.

There will be 11 in class lab assignments worth 8 points each. You will be allowed to drop your lowest score.

\*\*\*\*\***NO EXTRA CREDIT** will be given under any circumstances!!!

<b>Course Grade:</b>	<u>GRADING SCALE</u>	<u>GRADE POINTS</u>	
	90 - 100	LAB EXAM I	80
	80 - 89	LAB EXAM II	80
	70 - 79	LAB EXAM III	80
	60 - 69	LAB EXAM IV	80
	00 - 59	LAB ASSIGNMENTS	<u>80</u>
		TOTAL POINTS	400

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted either by hard copy or on the Internet. If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone.

**COURSE CONTENT (Subject to change)**

<u>DATE</u>	<u>TOPIC</u>	<u>CHAPTER</u>
26 May	Microscopy and Animal Cells & Tissues Mitosis and Development	1, 2, 3, 4
27 May	Unicellular Animals: Protozoans	6
28 May	Phylum Porifera	7
	Phylum Cnidaria	8
<b>1 June</b>	<b>LABORATORY EXAMINATION I</b>	<b>1, 2, 3, 4, 6, 7 and 8</b>
2 June	Lophotrochozoa Worms: Phylum Platyhelminthes & Annelida	9&12
	Phylum Rotifera & Acanthocephala	Pg 163 & 164
3 June	Phylum Mollusca	11
<b>4 June</b>	<b>LABORATORY EXAMINATION II</b>	<b>9, 11 and 12</b>
8 June	Ecdysozoa Worms: Phylum Nematoda & Nematomorpha	10
	Phylum Arthropoda: <u>Chelicerate</u>	13
	Phylum Arthropoda: <u>Crustacean</u>	14
	Phylum Arthropoda: <u>Uniramia</u>	15
9 June	Phylum Echinodermata	16
<b>10 June</b>	<b>LABORATORY EXAMINATION III</b>	<b>10,13,14,15,and16</b>
16 June	Phylum Chordata	17 –22
	Frog Anatomy	19
17 June	Fetal Pig Anatomy	22
18 June	Mammalian Heart, Brain, & Eye	22
<b>22 June</b>	<b>LABORATORY EXAMINATION IV</b>	<b>17– 22</b>

**Important Dates:**

**27 May- last day to register or add a class**

**19 June - last day to drop with a W**

**24 June - last day of classes**

**Students with disabilities:** It is the policy of the University of AR at Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**Statement on disruptive behavior:** The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. **THIS INCLUDES THE USE OF CELL PHONES (RINGING OR TEXTING DURING CLASS)**

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student’s paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;

- c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
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For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will fail the course.

University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
General Botany Lab Course Syllabus  
Spring 2015, M, 2:10-5:00pm, B5

**Instructor Name:** Karen Fawley, Ph.D

**Instructor Location of Office:** Museum of Natural History, Room 101

**Instructor Phone:** 870-460-1165

**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)

**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>

**Office hours:** MW, 9-11am; Th, 1:30-3pm or by appointment.

**Course Title and Credit Hours:** Biology 2171, General Botany Lab, 1 credit hour

**Course Description:** Morphological survey of plants, fungi, and algae, including the anatomy of seed plants.

**Corequisite:** Biology 2143 (A.C.T. equivalent BIOL 1034)

**Required Textbook:** *Photo Atlas for Botany*, Perry and Morton, 1998, Wadsworth Publishing Company, 1<sup>st</sup> edition, ISBN: 0-534-52938-0

**Student Learning Outcomes:** To familiarize students with plant biology through an understanding of plant structure and function, plant reproduction, genetics, and evolution, and the diversity of plants, prokaryotes, protists, and fungi.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** Use of tobacco products is not permitted on UAM grounds.

**Cell phones and all electronics should be turned off and put away during class. Any cell phone that is found on a student's desk during an exam or a quiz will result in an automatic zero.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4 of this syllabus will be applied to all assignments, quizzes and exams.

**Course Content Outline/Calendar:**

Date	Lab Topic
M Jan 12	Lab 1. Introduction/Microscopy
M Jan 19	No class
M Jan 26	Lab 2. Plant Cell Structures
M Feb 2	LAB EXAM I (Labs 1-2)/Lab 3. Stems/Secondary Growth and Wood Anatomy
M Feb 9	Lab 4. Leaves
M Feb 16	Lab 5. Roots
M Feb 23	LAB EXAM II (Labs 3-5)
M Mar 2	Lab 6. Protists Lab
M Mar 9	Lab 7. Fungi and Lichens
M Mar 16	LAB EXAM III (Labs 6-7)
M-F Mar 23-27	SPRING BREAK!
M Mar 30	Lab 8. Seedless plants-Bryophytes
M April 6	Lab 9. Lycophytes, Ferns, and Fern Allies
M Apr 13	LAB EXAM IV (Labs 8-9)/ Lab 10-Gymnosperms
M Apr 20	Lab 11. Angiosperms-Flowers/ Lab 12. Angiosperms-Fruits
M Apr 27	FINAL EXAM (Exam V) (Labs 10-12)

**Lab Quiz/Exam Schedule:**

			<u>Total points</u>
M	Jan 26	Quiz -Lab 1. Microscopy	20
M	Feb 2	Lab Exam I- Labs 1-2	100
M	Feb 9	Quiz -Lab 3. Stems/Secondary Growth and Wood Anatomy	20
M	Feb 16	Quiz -Lab 4. Leaves	20
M	Feb 23	Lab Exam 2-Labs 3-5	100
M	Mar 9	Quiz -Lab 6. Protists	20
M	Mar 16	Lab Exam 3-Labs 6-7	100
M	Apr 6	Quiz -Lab 8. Seedless plants-Bryophytes	20
M	Apr 13	Lab Exam 4-Labs 8-9	100
M	Apr 20	Quiz-Lab 10. Gymnosperms	20
M	Apr 27	Lab Exam 5-(Final Exam)-Labs 10-12	100

**Provisions for tests and evaluations:**

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Make-up Exams:** No make-up exams will be given, but the student can replace one missed exam with the final exam grade. Students can make-up one exam only, if they have a valid medical or personal excuse. The student must get in contact with the professor before or the day of the scheduled exam. Any additional missed exams will be counted as a zero.

**Make-up Labs/Quizzes:** Due to time constraints, there will be no make-up labs or make-up quizzes. However, students can drop 1 lab and 1 quiz during the semester.

**Grading Policy:**

		<u>Grading scale</u>
Lab Quizzes	100 pts	90-100 A
In-Lab Evaluation	220 pts	80-89 B
Lab Exams	<u>500 pts</u>	70-79 C
	820 pts	60-69 D
		Below 60 F

**Special dates of concern:**

Wednesday, January 7	First day of classes.
Monday, January 19	Martin Luther King, Jr. Day
Tuesday, January 9	Last day to register of add classes.
Friday, February 27	Deadline to file for Aug and Dec 2013 graduation
M-F (March 23-27)	Spring Break!
Wednesday, March 18	Last day to drop W.
Monday, April 6	Preregistration for Fall and Summer 2015 begins
Friday, April 17	Preregistration for Fall and Summer 2015 ends.
Tuesday, April 28	Last day of classes.
W-T, Apr 29-May 5	Final exam period.
Friday, May 8	Commencement

**Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 121; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;

- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
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  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exam.



**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
MOLECULAR BIOLOGY LAB (BIOL 3331) COURSE SYLLABUS  
SPRING 2015**

**COURSE**

Molecular Biology lab (BIOL 3331), 1 credit hour

Lab meeting time: Monday 1:10 – 4:00 pm, Science Center B36/B32

**PLEASE NOTE:**

There will be some weeks when you will need to come into the lab outside of normally scheduled lab time.

**PRE-REQUISITES**

BIOL 3354 (Genetics Lecture and Lab).

**CO-REQUISITE:** Concurrent enrollment in Molecular Biology (BIOL 3333) is required.

**REQUIRED TEXTBOOKS AND SUPPLEMENTARY MATERIALS**

No lab manual is required. Lab protocols and other reading material will be supplied or students will be directed to the appropriate web sites for protocols/reading material. Some background reading will be assigned from the textbook used in the co-requisite course (Molecular Biology, BIOL 3333).

A new, lined and bound composition notebook is needed for lab.

**INSTRUCTOR**

Mary Stewart, Ph.D. Phone: 870-460-1767

Email Address: [stewartm@uamont.edu](mailto:stewartm@uamont.edu) (Please remember to put the **m** after stewart in my email)

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B12

Office Hours: Monday, 10:00 – 11:00 am

Tuesday and Thursday: 9:00 – 10:00 am and 1:00 -2:00 pm

Wednesday and Friday: 10:00 – 11:00 am and 1:00 – 2:00 pm

Also by appointment.

## **STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, LAB SAFETY, ETC.**

- 1. Lab attendance is required.** If you have an excused reason for missing lab, contact me (in advance if possible) to discuss what you need to do to make up the lab work. **For each unexcused absence from lab**, you grade will be penalized by 20 points plus any other points that might have been available for that lab such as quizzes, worksheets, lab notebook points and lab report points.

Leaving lab early (for unexcused reasons) without satisfactorily completing the work will count as an unexcused absence from lab.

**Excused and unexcused absences.** **Excused absences** include, but are not limited to, participating in a UAM sponsored event, being so ill that you visit a medical facility, or a death in your immediate family. For each excused absence, it is your responsibility to contact me to discuss whether your absence is excused and to bring the appropriate written documentation. I reserve the right to contact the appropriate people to determine that your excused absence is valid. If it turns out that your “excused” absence really is not for a valid reason, you will have an unexcused absence.

The information in the paragraph below is from the UAM student handbook:

### **“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the student's name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

**Unexcused absences** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for an exam, etc.

**No cell phone use in lab! Using your cell phone in lab will be considered as disruptive behavior and you will be asked to leave lab.** This will count as an unexcused absence from lab and you will be docked 20 points. In addition to the 20- point penalty, you will lose other points associated with that lab such as assignments, worksheets, lab participation points and points associated with a lab report for that lab.

**Cheating.** Academic dishonesty and cheating will not be tolerated.

Cheating: Students shall not give, receive, offer, or solicit information on

examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- i. Copying from another student's paper;
  - ii. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - iii. Collaboration with another student during the examination;
  - iv. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - v. Substituting for another person during an examination or allowing such substitutions for oneself.
- a. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
  - b. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
  - c. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be zero points earned on the item involved. If the item on which student(s) cheat is a ten-point lecture quiz, that quiz will *not* be dropped. In other words, if you earn zero points on a ten-point quiz because you cheated, your zero on that quiz will *not* be dropped even if it is one of your two lowest lecture quiz scores.

- 2. Punctuality.** Be on time for lab. Don't take off early. If you miss the pre-lab lecture, you will be considered as being absent for the entire lab period, you will not be allowed to do the lab. If you miss the pre-lab lecture for an excused reason, see me as soon as possible to discuss your absence and make arrangements for making up the lab. If you miss the pre-lab lecture for an unexcused reason, grade penalties will apply.
- 3. Turning in assignments late.** Late assignments will be accepted only if graded assignments have not been returned to other students, the assignment has not been discussed in class, or if a key has not been posted.

Late assignments will have a 10% penalty per weekday (Monday through Friday, excluding holidays).

- 4. Lab safety policies:** Handouts for lab safety policies will be provided.
- 5. Checked-out lab equipment and financial cost of replacement or repair of this equipment:** A set of lab equipment items will be checked out to you and possibly a lab partner(s) that you work with. Only you and your lab partner(s) should use these

items. You and your lab partner(s) will be responsible for locking these items in your assigned lab drawer and for returning the drawer key to the instructor at the end of every lab period. At the end of the semester, if any of the items are missing or damaged (other than normal wear and tear), you and/or your lab partner(s) will be charged the cost of replacing or repairing the item(s), whichever is appropriate for the item(s).

- a. **Disruptive Behavior:** Disorderly conduct is prohibited under the Student Conduct Code. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. You may be asked to leave lab for the day for disorderly conduct (this will be considered as an unexcused absence and grade penalties for unexcused absences will apply. You may be dropped from the class/lab for disorderly conduct.

### **SPECIAL DATES OF CONCERN TO THE COURSE**

Predicted dates for lab exams and lab reports are within the tentative schedule section of this syllabus. These dates may change for reasons such as the University closes for inclement weather.

### **COURSE OBJECTIVES AND COURSE DESCRIPTION**

**Course description:** This laboratory course is designed to familiarize students with laboratory techniques applicable to modern biology and associated disciplines.

Students will learn and use methods to analyze nucleic acids and proteins. In addition to experimental methods, this course incorporates developing hypotheses, applying lab techniques to address scientific questions, critically evaluating data, and organizing data for verbal and written presentation.

#### **Course objectives:**

By the end of this course, students should be able to:

- Demonstrate proper techniques for working with nucleic acids and proteins.
- Describe the theoretical basis for lab methods used.
- Be able to follow written laboratory protocols.
- Trouble-shoot experiments to determine and correct the probable cause(s) of failed experiments.
- Describe the applicability of the lab methods used to the specific scientific questions addressed in this lab course.
- Demonstrate the ability to think critically about how lab methods used in this course could be applied to scientific questions not specifically addressed in this lab course.
- Critically evaluate, analyze and interpret data.
- Communicate experimental results in written and verbal formats.

## COURSE OUTLINE AND SCHEDULE\*. MOLECULAR BIOLOGY LAB (BIOL 3331), SPRING 2015.

\* This schedule may change for reasons such as the University closes for some reason (e.g. inclement weather).

For the first nine weeks of the 2015 spring semester, we will learn and use methods used in DNA analysis to carry out a project to PCR, clone, sequence and bioinformatically analyze GADPH genes from different plant species. The remainder of the semester will be focused on methods to analyze protein expression in *Drosophila melanogaster*, a model organism used for studies in molecular biology, biochemistry, molecular genetics and developmental biology.

DATE	LAB TOPIC / EXPERIMENTS
Week 1 (Jan 7-9)	No lab this week.
Week 2 (Jan 12-16)	<b>Lab 1:</b> <ul style="list-style-type: none"><li>• Lab Safety, equipment check-in.</li><li>• Overview of lab project one (PCR clone , sequence and analyze a gene)</li><li>• PCR review</li><li>• Primer design</li></ul>
Week 3 (Jan 19-23)	Monday Jan 19: No lab today. Martin Luther King holiday.
Week 4 (Jan 26-30)	<b>Lab 2:</b> <ul style="list-style-type: none"><li>• Isolate genomic DNA.</li><li>• Set up PCR reactions.</li><li>• Digest cloning vector.</li><li>• Pour agarose gels for use next week.</li></ul>
Week 5 (Feb 2-6)	<b>Lab 3</b> <ul style="list-style-type: none"><li>• Gel electrophoresis: check an aliquot of the cloning vector and an aliquot of PCR reactions by gel electrophoresis.</li><li>• Purify PCR product. Purify cloning vector.</li></ul>
Week 6 (Feb 9-13)	<b>Lab 4:</b> <ul style="list-style-type: none"><li>• Quantify purified PCR product and purified cloning vector.</li><li>• Set up ligation reactions to ligate PCR product and vector. Also set up a control ligation of vector alone.</li><li>• Prepare and pour X-Gal/ITPG LB amp plates.</li></ul>

Week 7 (Feb 16-20)	<p><b>Lab 5:</b></p> <ul style="list-style-type: none"> <li>• <b>Lab exam 1</b> (on methods and applications used up to this date in the course, but not including competent bacteria and transformation).</li> <li>• Prepare competent <i>Escherichia coli</i></li> <li>• Transform <i>E. coli</i></li> </ul> <p><b>Note:</b> Outside of normal lab time, each student will need to come into lab two additional days this week, each time for about 15-20 minutes. See the instructor to arrange times.</p>
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Week 8 (Feb 23-27)	<p><b>Lab 6:</b></p> <ul style="list-style-type: none"> <li>• Isolate plasmid DNA</li> <li>• Set up restriction digestions of plasmid DNA</li> <li>• Pour agarose gels for use next week</li> </ul>
Week 9 (March 2-6)	<p><b>Lab 7:</b></p> <ul style="list-style-type: none"> <li>• Prepare DNA samples for sequencing.</li> <li>• Discussion, demonstration and practice problems in DNA sequence analysis and genomics web tools.</li> <li>• DNA analysis practice set assignment will be handed out. For this, you will use your own computer or a UAM computer to use genomics databases and analysis tools to do a small-scale analysis of DNA sequences that the instructor will provide.</li> </ul>
Week 10 March 9-13)	<p><b>Lab 8:</b></p> <ul style="list-style-type: none"> <li>• <b>DNA analysis practice set assignment due.</b></li> <li>• We will meet only briefly for lab on Monday this week to discuss the DNA analysis practice set problems and any issues you may have had when working with DNA and genomics analysis tools.</li> <li>• On your own time, analyze your experimentally obtained DNA sequences. This will require that you work independently on a UAM computer or your own computer to use genomics databases and analysis tools. Do not hesitate to contact me for help.</li> </ul>
Week 11 (March 23-27)	Spring break: no lab this week
Week 12 (March 30 – April 3)	<p><b>Lab 10:</b></p> <ul style="list-style-type: none"> <li>• Wrap-up of cloning project, discussion of DNA sequence and genomics results.</li> <li>• Lab reports on the cloning project are due next week.</li> <li>• Discussion of protein analysis methods.</li> </ul>

Week 13 (April 6-10)	<b>Lab 11:</b> <ul style="list-style-type: none"> <li>• <b>Lab reports on the cloning project due.</b></li> <li>• Preparation of protein extracts from <i>Drosophila melanogaster</i>.</li> <li>• Spectrophotometric or fluorometric analysis of protein concentration.</li> <li>• Preparation of samples for SDS-PAGE ( to be frozen until use next week).</li> </ul>
Week 14 (April 13-17)	<b>Lab 12:</b> <ul style="list-style-type: none"> <li>• Run SDS-PAGE gels.</li> <li>• Western blot transfer</li> <li>• Prepare solutions needed to finish Western blot analysis next week.</li> </ul>

Week 15 (April 20-24)	<b>Lab 13:</b> <ul style="list-style-type: none"> <li>• Finish Western blot analysis. <b>Note: Each group must arrange times for this with the instructor.</b> This process will require two continuous days. Approximately 2-3 hours is needed each day. Each day, there are several “hurry up and wait” steps, so you will be able to do other things during the wait times.</li> </ul>
Week 16 (April 27 – May 1)	<b>Lab 14:</b> <ul style="list-style-type: none"> <li>• Discussion of Western blot results.</li> <li>• <b>Lab exam 2</b> (on methods used to analyze proteins)</li> <li>• <b>Lab report on the protein expression labs is due by 5:00 pm on Friday this week.</b></li> </ul>
Finals Week (May 4-8)	No lab this week

### **SPECIAL PROJECTS, ASSIGNMENTS FIELD TRIPS, ETC.**

This course does not include field trips.

There will be some weeks when you will need to come into the lab, outside of lecture or lab time. Please arrange this with the instructor.

Some experiments will require that you work outside of lab to use free online computer databases and software to analyze data.

### **EXAMS AND OTHER EVALUATIONS**

**Your grade in this laboratory course will be based two lab exams, two lab reports, a lab notebook, and various assignments, worksheets and quizzes.** Most labs (but not all) will

have associated worksheets/assignments/quizzes that have a total worth of 10 to 20 points.

**Lab exams** are designed primarily to assess your understanding of the methods used in lab but some portions will assess your ability to troubleshoot experiments and/or interpret results.

**Makeup lab exams, assignments, worksheets and quizzes** are possible only for excused absences.

**Makeups for lab experiments: If you miss lab for excused reasons**, contact me as soon as possible to arrange how to makeup the work. If you know in advance that you will miss a lab for an excused reason, contact me as far in advance as possible. **If you miss a lab for unexcused reasons**, you will be docked 20 points per missed lab, you will not be allowed to makeup the lab work, you will receive zero credit for any worksheet/assignments/quizzes associated with that lab, and your lab reports will have a grade reduction for the portion of the work you did not do.

### **GRADING POLICY**

The letter grade that you earn in this course will be based on the items described below.

#### **Points possible**

Two lab exams at 50 points each.	100 points
Lab report 1	30 points
Lab report 2	30 points
Lab notebook	60 points
Lab assignments/worksheets/quizzes	200 points
Total points	420 points

**No lab scores will be dropped in the calculation of your final grade. Grading**

#### **Scale:**

A	(89.50 – 100%)	<b>Note that 89.49% is a B and does not round up to 89.5%. Likewise, 79.49% is a C; 69.49% is a D and 59.49% is an F.</b>
B	(79.50 – 89.49%)	
C	(69.50 – 79.49%)	
D	(59.50 – 69.49%)	
F	(59.49% and below)	

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accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870 460-1926.

McGehee: Office of Special Student Services representative on campus; phone 870 222- 5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870364- 6414; fax 870 364-5707.

### **STATEMENT ON DISRUPTIVE BEHAVIOR**

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#### **BLACKBOARD**

If you are officially enrolled in this class at UAM, you automatically will be enrolled in the Blackboard site for this class. To access the Blackboard site for this class, go to <http://www.uamont.edu/academiccomputing/> and follow the onscreen instructions.

I will be putting your scores in this class on Blackboard. Your Blackboard account is password protected. To protect against others seeing your grades, do not share your login information and password with others. Also, after you are finished looking in your Blackboard account, **be sure to logout of Blackboard and close the browser window. If you do not wish to have your scores on Blackboard, you must let me know, preferably by email.**

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**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
MOLECULAR BIOLOGY LECTURE (BIOL 3333) COURSE SYLLABUS  
SPRING 2015**

**COURSE**

Molecular Biology lecture (BIOL 3333), 3 credit hours

Lecture meeting time and place: Tuesday and Thursday 11:10 am – 12:30 pm, Science Center B19

**PREREQUISITES**

BIOL 3354 (Genetics Lecture and Lab).

**REQUIRED TEXTBOOKS AND SUPPLEMENTARY MATERIALS**

Genetics Analysis & Principles, 5th edition. Author: Robert J. Brooker. Publisher: McGraw Hill. ISBN: 9780073525341.

Some topics will be supplemented with required readings from other sources or from the primary scientific literature. These readings will be handed out, available online or on reserve at the UAM library.

**INSTRUCTOR**

Mary Stewart, Ph.D.

Phone: 870-460-1767

Email Address: [stewartm@uamont.edu](mailto:stewartm@uamont.edu) (Please remember to put the **m** after stewart in my email)

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B12

Office Hours: Monday, 10:00 – 11:00 am

Tuesday and Thursday: 9:00 – 10:00 am and 1:00 -2:00 pm

Wednesday and Friday: 10:00 – 11:00 am and 1:00 – 2:00 pm

Also by appointment.

**STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, ETC.**

- 1. Attendance is required.** If you miss more than six class periods for unexcused reasons, your grade will be penalized by 60 points for *each* class period that you miss after six (a loss of 60 points correlates to a loss of one letter grade).

**Excused and unexcused absences.** **Excused absences** include, but are not limited to, participating in a UAM sponsored event, being so ill that you visit a medical facility, or a death in your immediate family. For each excused absence, it is your

responsibility to contact me to discuss whether your absence is excused and to bring the appropriate written documentation. I reserve the right to contact the appropriate people to determine that your excused absence is valid. If it turns out that your “excused” absence really is not for a valid reason, you will have an unexcused absence.

The information in the paragraph below is from the UAM student handbook:

**“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the student's name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

**Unexcused absences** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for an exam, etc.

- 1. Cell phone use in class:** Cell phones and other electronic devices are not to be used during class. Turn your cell phones and electronic devices off and put them away during class. If you use your cell phone during class, you may be asked to leave. **If your cell phone is out during an exam or quiz, you will be considered as cheating. Turn cell phones off and put them away!**

**Cheating.** Academic dishonesty and cheating will not be tolerated.

- a. Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - i. Copying from another student's paper;
  - ii. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - iii. Collaboration with another student during the examination;
  - iv. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - v. Substituting for another person during an examination or allowing such substitutions for oneself.
- b. Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
- c. Duplicity:** Duplicity is defined as offering for credit identical or substantially

unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**d. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others. For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be zero points earned on the item involved. If the item on which student(s) cheat is a ten-point lecture quiz, that quiz will *not* be dropped. In other words, if you earn zero points on a ten-point quiz because you cheated, your zero on that quiz will *not* be dropped even if it is one of your two lowest lecture quiz scores.

**2. Punctuality.** Be on time for class. Don't take off early. If you attend only long enough to take a quiz or see if there are some points available for that day, you will be considered as being absent for the entire class or lab period and you will receive zero points for the item (the exception to this is if you have an excused reason for leaving early or arriving late). If, for unexcused reasons, you miss part of the time set aside for a quiz, you will have only whatever time remains for that quiz. You will not receive extra time and you will not be able to take a makeup for the item.

**3. Turning in assignments late.** Late assignments will be accepted only if graded assignments have not been returned to other students, the assignment has not been discussed in class, or if a key has not been posted.

### **SPECIAL DATES OF CONCERN TO THE COURSE**

Predicted dates for various items can be found in the tentative schedule within this syllabus. These dates may change for reasons such as we are ahead or behind in topics or if the University closes for some reason (e.g. inclement weather).

### **COURSE OBJECTIVES AND COURSE DESCRIPTION**

**Course description:** Study of genes and their activities at the molecular level with an emphasis on applications useful in the analysis of genomes and treatment of genetic diseases.

**Course objectives:** By the end of this course, students should be able to:

- Demonstrate a working knowledge of the concepts of molecular biology and molecular genetics.
- Demonstrate a working knowledge of experimental approaches used in modern molecular biology and molecular genetics. Demonstrate an ability to integrate concepts from various molecular biology topics to develop hypotheses and propose potential solutions to scientific questions.
- Clearly communicate (verbally and in written formats) concepts and experimental approaches used in molecular biology.
- Read papers from the primary scientific literature and, in verbal and written formats:
  - Identify the scientific question being addressed in the paper.

- Identify the hypotheses proposed in the paper.
- Understand, interpret, evaluate and discuss experiments in the paper.
- Critically evaluate and discuss if (and why) the experiments support or do not support the conclusions made by the authors of the paper.

**COURSE OUTLINE AND SCHEDULE\*. MOLECULAR BIOLOGY (BIOL 3333), SPRING 2015.**

\* This schedule may change if we get ahead or behind in topics or if the University closes for some reason (e.g. inclement weather).

DATE	CLASS TOPIC AND READING
Week 1 (Jan 7-9)	<ul style="list-style-type: none"> <li>● Thurs: Course information. Review the basics of genes in terms of Mendelian genetics. Review of genes as functional molecular units.</li> </ul>
Week 2 (Jan 12-16)	<ul style="list-style-type: none"> <li>● All week: Gene organization into operons. Transcriptional and translational regulation of gene expression in bacteria. Review structure and regulation of the <i>lac</i> operon on pages 347-355 of Brooker. Transcriptional regulation of the <i>trp</i> operon in bacteria (pages 356-360 in Brooker)</li> </ul>
Week 3 (Jan 19-23)	<ul style="list-style-type: none"> <li>● All week: Eukaryotes: Gene organization and transcriptional regulation. (Read all of chapter 15 in Brooker)</li> </ul>
Week 4 (Jan 26-30)	<ul style="list-style-type: none"> <li>● Tuesday: Eukaryotic gene organization and transcriptional regulation (chap 15 in Brooker)</li> <li>● <b>Thursday: Paper discussion 1</b></li> </ul>
Week 5 (Feb 2-6)	<p><b>Tues, Feb 3: Exam 1</b> (over class material up to this point).</p> <ul style="list-style-type: none"> <li>● Thursday: Recombination and gene conversion. Read pages 473-479 in Brooker, chapter 19. Also read the section on DNA repair on pages 461-467 in Brooker, chapter 18.</li> </ul>
Week 6 (Feb 9-13)	<ul style="list-style-type: none"> <li>● Tuesday: Recombination and gene conversion, continued.</li> <li>● Thursday: Transposable elements, features and characteristics (pages 481 –491 in Brooker chap. 19).</li> </ul>
Week 7 (Feb 16-20)	<ul style="list-style-type: none"> <li>● Tuesday: Transposable elements as tools in molecular genetics. Read the end of chapter 19 in Brooker. Additional reading will be assigned.</li> <li>● <b>Thursday: Paper discussion 2</b></li> </ul>

Week 8 (Feb 23-27)	<ul style="list-style-type: none"> <li>• <b>Tuesday, Feb. 24: Exam 2 (over course material since exam 1)</b></li> <li>• Thursday: Genetically modified animals, transgenic animals <ul style="list-style-type: none"> <li>○ Transgenic animals (pages 531-527 in Brooker chapter 21)</li> <li>○ Gene replacements in animals (pages 533 – 537 in Brooker chapter 21)</li> <li>○ Human gene therapy (pages 545-549 in Brooker chapter 21)</li> </ul> </li> </ul>
Week 9 (March 2-6)	<ul style="list-style-type: none"> <li>• Tues: Reproductive cloning and stem cells (pages 537 – 541 in Brooker chapter 21). Additional reading will be assigned.</li> <li>• <b>Thursday, March 5: Paper discussion 3</b></li> </ul>
Week 10 March 9-13)	<ul style="list-style-type: none"> <li>• All week: Gene Regulation in Eukaryotes II: Epigenetics and Regulation at the RNA Level (read all of Brooker chapter 16).</li> </ul>

Week 11 (March 23-27)	<ul style="list-style-type: none"> <li>• Spring break!</li> </ul>
Week 12 (March 30 – April 3)	<ul style="list-style-type: none"> <li>• Tuesday: Gene Regulation in Eukaryotes II: Epigenetics and Regulation at the RNA Level (read all of Brooker chapter 16).</li> <li>• Thursday: RNA interference.</li> </ul>
Week 13 (April 6-10)	<ul style="list-style-type: none"> <li>• <b>Tuesday, April 7: Paper discussion 4</b></li> <li>• <b>Thursday, April 9: Exam 3 (over course material since exam 2)</b></li> </ul>
Week 14 (April 13-17)	<ul style="list-style-type: none"> <li>• All week: Genomics I: Analysis of DNA, localizing genes to chromosomes, cloning DNA, DNA sequencing on a large scale and metagenomics. (Read chapter 22 in Brooker)</li> </ul>
Week 15 (April 20-24)	<ul style="list-style-type: none"> <li>• Tuesday: Genomics I, continued.</li> <li>• Thursday: Genomics II: Functional genomics, proteomics, bioinformatics</li> </ul>
Week 16 (April 27 – May 1)	<ul style="list-style-type: none"> <li>• Tuesday, April 28: Genomics II, continued. Last day of class.</li> <li>• <b>Wednesday, April 29: FINAL EXAM at 1:30 pm.</b> The final exam is over course material since exam 3.</li> </ul>

### **SPECIAL PROJECTS, ASSIGNMENTS, FIELD TRIPS, ETC.**

This course does not include field trips. See below for an explanation of exams, quizzes, assignments and primary literature paper write-ups/participation.

### **EXAMS AND OTHER EVALUATIONS**

- 1. EXAMS AND QUIZZES.** Some lecture material builds on previous material. Thus, on any given exam or quiz, you may be responsible for material that was previously covered/assigned and that was previously tested on.

**Early exams and early quizzes.** There will be no early exams or quizzes.

**Exam and quiz format.** The exam format for exams and quizzes will depend on the topic.

The format for all exams or quizzes may not be the same. Depending on the particular exam

or quiz, there may be problems to work, data to analyze, and/or processes to explain; these all lend themselves to essay type answers or answers that require that you work through a problem and possibly show your work to demonstrate how you arrived at an answer. Other topics lend themselves to multiple choice/matching/true-false type questions.

**Makeups for lecture exams and quizzes.** Makeups for lecture exams and quizzes are possible only if you have an excused absence and the appropriate documentation. There will be no makeups for unexcused absences; if you miss an exam or quiz for an unexcused reason, you will have zero points on that item.

Makeup exams and quizzes will be given outside of normal class or lab time. All students that need to take a makeup for a given lecture exam or quiz should take the makeup at the same time.

Makeup exams and quizzes will not necessarily consist of the same questions or be in the same format as the regularly scheduled exam. There may be more essay format questions on makeup exams.

**Makeup assignments (other than primary literature paper assignments/participation).** You are responsible for checking if there were any assignments, worksheets or handouts on a day that you are absent.

### **GRADES ON PAPER DISCUSSION WRITE-UPS AND PAPER DISCUSSION PARTICIPATION.**

We will read and discuss four papers from the primary literature during the semester.

**Write-ups on primary literature papers:** You will need to prepare a typed write-up for **two** of the four primary literature papers (your choice as to which two). Because we will read four papers during the semester and you can choose to do your write-up on any two of these, there are no makeups for write-ups on the primary literature papers.

**Participation points for discussions on primary literature papers.** All students are expected to read the primary literature papers in advance, do any pre-discussion assignments in advance and actively participate in the in-class discussions. Even though each student will do a write-up on only two of the four papers that we discuss, all students will be responsible for reading all four papers and participating in the in-class discussions. Participation points will come from student participation in all four in-class discussions. Participation points will be primarily based on meaningful contributions to the in-class discussion, but some points may come from pre-class assignments/worksheets that will be due in advance of the in-class discussion.

Because successful and meaningful in-class discussions require the participation of all students, there are no makeups for participation points for in-class discussions. If you miss an in-class paper discussion for an excused reason, your total participation points will be based your participation on the other in-class discussions for which you are present. In other words, if you miss one in-class discussion for an excused reason, your participation points on other three in-class discussions will be weighted to potentially add up to 40 points maximum.

If you are not present for an in-class paper discussion for an unexcused reason, you will be penalized by 25% of the total participation points possible (in addition to any points you may be penalized if this happens to be your seventh or later unexcused absence).

Turning in pre-class assignments/worksheets on the primary literature papers and then not being present for the in-class discussion (for excused or unexcused reasons) will *not* result in earning “partial” points for the missed in-class discussion.

### GRADING POLICY

The letter grade that you earn in this course will be based on the items below (points possible) and the grading scale below will be used to determine your final letter grade in the course.

#### Grading Scale:

A	(89.50 – 100%)	<b>Note that 89.49% is a B and does not round up to 89.5%. Likewise, 79.49% is a C; 69.49% is a D and 59.49% is an F.</b>
B	(79.50 – 89.49%)	
C	(69.50 – 79.49%)	
D	(59.50 – 69.49%)	
F	(59.49% and below)	

#### Points possible

Four lecture exams at 100 points each.	400 points
Your average on lecture quizzes/activities* (your two lowest lecture quiz/activity scores will be dropped)	100 points
Two paper discussion write-ups at 30 points each	60 points
Paper discussion participation	40 points
<b>Total points</b>	<b>600 points</b>

**No lecture exams scores, paper discussion write-ups or paper discussion participation scores will be dropped. Your two lowest lecture quiz/activity scores will be dropped.**

#### \*Lecture quizzes/activities.

Your lecture quiz/activity **average** will be used to calculate the number of points you earn in this category. In the calculations of your lecture quiz/activity average, your two lowest lecture quiz/activity scores will be dropped.

Your overall lecture quiz/activity average will be calculated by dividing your points by the total points possible in this category and then multiplying that number by 100. An example of how your points in this category will be calculated is shown below.

#### Example

Quiz #	Hypothetical student's scores	Points possible
Quiz 1	10	10
Quiz/activity 2	10	10
Quiz 3	7	10



Quiz/activity 4	10	10
Quiz 5	5	10
Quiz 6	9	10
Quiz 7	3	10
Quiz 8	5	10
Quiz/activity 9	10	10
Totals	69	90

In this hypothetical scenario, the score of five on quiz 5 and the score of three on quiz 7 would be dropped. This gives a total of 61 points out of 70 points possible.

To calculate the overall average for this person in the lecture quiz/activity category:  $61/70 \times 100 = 87.143\%$

Since this person has a quiz/activity average of 87.143%, this person would earn 87.143 points out of 100 possible in the lecture quizzes/activities category.

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I will be putting your scores in this class on Blackboard. Your Blackboard account is password protected. To protect against others seeing your grades, do not share your login information and password with others. Also, after you are finished looking in your Blackboard account, **be sure to logout of Blackboard and close the browser window. If you do not wish to have your scores on Blackboard, you must let me know, preferably by email.**

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## COURSE OUTLINE

**COURSE:** Ornithology/Mammalogy (Biol. 3324). Prerequisites for this course are General Zoology (1153) and General Zoology Laboratory (1161).

**TEXTS:** (1) Robbins, C. S., B. Bruun, and H. S. Zim. 1966. A guide to field identification: birds of North America. Golden Press, N.Y. 360 pp.; (2) Sealander, J. A., and G. A. Heidt. 1990. Arkansas mammals: their natural history, classification, and distribution. Univ. of Arkansas Press, Fayetteville. 308 pp.

**INSTRUCTOR:** Dr. Robert W. Wiley (Office in Museum). Office hours are 1-4 TH & 2-4 W.

**COURSE FORMAT:** Lecture 3 hours per week; lab 3 hours per week.

**OBJECTIVE:** To become familiar with the methods and principles of systematic zoology, and to gain a knowledge of the identification, classification, distribution, and natural history of birds and mammals, with special emphasis on local forms.

### **COURSE CONTENT:**

Taxonomy  
Definitions  
Principles of Classification and Zoological Nomenclature  
Evolution  
Speciation

Birds  
Literature  
Avian Classification and  
Natural History

Mammals  
Literature  
Mammalian Classification  
and Natural History

**LAB SCHEDULE:** The lab will consist of the following activities: lecture, osteological terminology, vertebrate collecting and observation in the field, cataloging procedures and study specimen preparation, identification of vertebrate study specimens, vertebrate audiovisuals.

**GRADING:** There will be approximately four lecture tests and two laboratory tests each counting 100 points. A few short, unannounced tests may be given. The final may or may not be a comprehensive exam. Additional work in the form of library assignments, term papers, and lab reports may be assigned. Your final grade will be determined by your final average. A = 100-90; B = 89-80; C = 79-70; D = 69-60; D = 59-0.

Scores on exams will be posted by a code number assigned on the first exam. If scores are not posted, I do not have the exams graded. I do not return exams. However, you are welcome to visit my office any time during the semester to examine any or all of your exams. At that time you may view the exam key and discuss any questions with the instructor.

In the event an exam is missed, a make-up exam will be given near the end of the semester. Exceptions will be made for students missing an exam as a result of partaking in a required activity in another University sponsored course, provided I am notified prior to the activity. It is to your advantage to take exams as scheduled. There is no makeup for short unannounced tests.

**ATTENDANCE:** Lectures and laboratories are the backbone of most all academic courses. All students are expected to attend class. You are at all times responsible for everything that takes place in the classroom or laboratory. In the event a student misses more than one lab field trip or more than four lectures, he will be assigned a written library report to substitute for the educational material and experience missed. It is the student's responsibility to see the instructor as soon as possible after missing to receive the assignment. In the event a report is not turned in, is turned in late, or is judged not acceptable, the final grade will be reduced by one letter grade. No extra credit will be given for the report.

A laboratory is as important as any other course and is generally more difficult to make up than a missed lecture. Therefore it is important that you do not miss lab. Additionally, it is important that you attend lab on time so that you don't miss the instructions presented at the beginning of lab.

**CLASSROOM POLICIES:** No drinks or tobacco use in the classroom. Please do not write on the desks. A seating chart will be established to check roll, learn student names, and discourage students from writing on the desks. Students found cheating will be given a grade of 'F' for the course and an attempt will be made to have the student expelled from the University.

**STATEMENT ON DROP DATES:** Students dropping a class between the 11th class day and 10 April will receive the grade of "W". Students dropping a course after 10 April will receive the grade of "W" if passing and the grade of "F" if not passing. The last day to withdraw from class is 3 May. No withdrawals will be permitted during the last three days of class.

**OTHER:** On lab field trips it is unlikely that we will be able to return by 4:00 p.m. due to travel time. From past experience we usually arrive back on campus before 6:00 p.m. In the event you are unable to make this adjustment in your schedule for these trips, I suggest you enroll during another semester when you are able to do so. All field trips are an integral part of the course.

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of

Special Student Services located in the southeast corner of the Student Services Center;  
Phone - 870-460-1154; TDD - 870-460-1251; FAX - 870-460-1810.

**DISORDERLY CONDUCT:** The following action is prohibited under the Student Conduct Code. Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

FINAL EXAMS: Lecture - 10:30-12:30 Wednesday, 15 May 2002, Science Center  
Room B-19; Lab - 8:00-10:00 Monday, 13 May 2002, Museum.

[15 January 2002]

**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
GENETICS LECTURE AND LAB (BIOL 3354) COURSE SYLLABUS  
Fall 2014**

**COURSE**

Genetics lecture and lab (BIOL 3354), 4 credit hours

Lecture meeting time and place: MWF 1:10 – 2:00 pm, Science Center room B3

Lab meeting time: Section 51: Monday 2:10 – 5:00 pm, Science Center room B36

Section 52: Tuesday 9:40 am – 12:30 pm, Science Center room B36

**NOTE:**

There will be some weeks when you will need to come into the lab, outside of normally scheduled lab or lecture time.

**PREREQUISITES**

BIOL 1083 and BIOL 1091 (Principles of Biology II and Lab, ACTS Equivalent #BIOL 1014) CHEM 1113 and CHEM 1131 (General Chemistry II and lab, ACTS Equivalent #1424).

**REQUIRED TEXTBOOKS AND SUPPLEMENTARY MATERIALS**

Genetics Analysis & Principles, 5th edition. Author: Robert J. Brooker. Publisher: McGraw Hill. ISBN: 9780073525341. For lab, you also will need a bound composition notebook or a spiral bound notebook with lined paper.

**INSTRUCTOR**

Dr. Mary Stewart, Ph.D.

Phone: 870-460-1767

Email Address: [stewartm@uamont.edu](mailto:stewartm@uamont.edu) (Please remember to put the **m** after stewart in my email)

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B12

Office Hours: Monday, 10:00 – 11:00 am

Tuesday, 2:00 – 4:00 pm

Wedn, Thurs and Fri: 10:00 – 11:00 am and 2:00 – 3:00 pm

Also by appointment.

**STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, LAB SAFETY, ETC.**

- 1. Attendance is required. Lab attendance is always required, regardless of whether we have lab theory or lab exams during your normal lab time or during lecture time.** Grade penalties will result from unexcused absences from lab, whether lab items occur during lecture time or lab time. Contact me, in advance if possible, if you have an excused reason for missing class or lab.

Leaving lab early (for unexcused reasons) without satisfactorily completing the work will count as an unexcused absence from lab.

**Excused and unexcused absences.** **Excused absences** include, but are not limited to, participating in a UAM sponsored event, being so ill that you visit a medical facility, or a death in your immediate family. For each excused absence, it is your responsibility to contact me to discuss whether your absence is excused and to bring the appropriate written documentation. I reserve the right to contact the appropriate people to determine that your excused absence is valid. If it turns out that your “excused” absence really is not for a valid reason, you will have an unexcused absence.

The information in the paragraph below is from the UAM student handbook:

**“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her

to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the student's name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

**Unexcused absences** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for an exam, etc.

1. **No cell phone use in lab! Using your cell phone in lab will be considered as disruptive behavior and you will be asked to leave lab.** This will count as an unexcused absence from lab and you will be docked 20 points. In addition to the 20-point penalty, you will lose other points associated with that lab such as assignments, worksheets, lab participation points and points associated with a lab report for that lab. **For some labs (see pages 10-11), being asked to leave lab will result in you not being allowed to do certain future labs.**
2. **Cheating.** Academic dishonesty and cheating will not be tolerated.
  - a. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
    - i. Copying from another student's paper;
    - ii. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
    - iii. Collaboration with another student during the examination;
    - iv. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
    - v. Substituting for another person during an examination or allowing such

substitutions for oneself.

- b. **Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
- c. **Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
- d. **Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be zero points earned on the item involved. If the item on which student(s) cheat is a ten-point lecture quiz, that quiz will *not* be dropped. In other words, if you earn zero points on a ten-point quiz because you cheated, your zero on that quiz will *not* be dropped even if it is one of your two lowest lecture quiz scores.

- 3. **Punctuality.** Be on time for class and lab. Don't take off early. If you attend only long enough to take a quiz or see if there are some points available for that day, you will be considered as being absent for the entire class or lab period and you will receive zero points for the item (the exception to this is if you have an excused reason for leaving early or arriving late). If, for unexcused reasons, you miss part of the time set aside for a quiz, you will have only whatever time remains for that quiz. You will not receive extra time and you will not be able to take a makeup for the item.

**Regardless of whether you have an excused reason for being late to lab, if you miss the pre-lab lecture/safety/skills training for that lab, you will not be allowed to do that lab on that day.** If you miss the pre-lab lecture/safety/skills training for unexcused reasons, grade penalties will apply and, depending on the particular lab you miss, you may not be allowed to do related future labs (see pages 10-11). If you have an excused reason for being late to lab, you may or may not be allowed to do "makeup" work for that lab, depending on the particular lab experiments being done that day (see pages 10-11).

- 4. **Turning in assignments late.** Late assignments will be accepted only if graded assignments have not been returned to other students, the assignment has not been discussed in class, or if a key has not been posted. Late assignments will have a 10% penalty per weekday (Monday through Friday, excluding holidays). Assignments that are due at the beginning of class or lab will be considered as one day late if they are turned in after the beginning of class or lab (this applies even if the lab assignment is due at the beginning of lecture time). This means if an assignment is due at the beginning of lecture time on Monday and you turn it in after lecture begins on Monday, you will be docked 10% of the points possible for that assignment. If an assignment is due on Monday and you turn it in on Tuesday, you will be

docked 10% of the points possible. In an assignment is due on Monday and you turn it in on Wednesday, you will be docked 20% of the points possible.

## 5. Lab safety policies

- a. **No cell phone use in lab!** Using your cell phone in lab will be considered as disruptive behavior and you will be asked to leave lab. This will count as an unexcused absence from lab and you will be docked 20 points. In addition to the 20 point penalty, you will lose other points associated with that lab such as assignments, worksheets, lab participation points and points associated with a lab report for that lab. **For some labs (see pages 10-11), being asked to leave lab will result in you not being allowed to do certain future labs, and you will lose 20 points per lab you are not allowed to do.**
- b. **Absolutely no food, drink, candy or gum in lab.** Finish or dispose of any food or drink before you come to lab. Any food or drink in the lab will be taken by the instructor and disposed of. Do not chew gum or have candy in your mouth during lab. Do not chew on other items (pens, toothpicks, etc.) or place items in your mouth, nose or eyes during lab.
- c. **Personal items in lab:** Personal items such as cell phones should not be brought into lab with you. Other personal items such as coats, books, purses, items such as keys that do not fit into your clothing pockets should not be brought into lab with you. If you bring these types of items to lab with you, you will need to place them into a pad-locked cabinet in room B32. Coats can be hung on hooks in room B32. If you do not wish to put the items in B32, then don't bring them with you. If you have these types of items on your person, such as in a pocket, and you get them out during lab, the items may be taken from you for the duration of lab time or you may be asked to leave the lab and you will have an unexcused absence for that day, which means you lose one letter grade. In the case of cell phone use during lab, you will be asked to leave for the day and you will have an unexcused absence with associated grade penalties.
- d. **Safety rules.** You are responsible for following all safety rules given by the instructor, whether written or verbal. If you fail to follow safety rules, the behavior will be considered as "disorderly conduct" and you may be asked to leave for the day, penalized one letter grade in the course, assigned an F for the entire course or dropped from the course.
- e. **Contact lenses.** I strongly discourage wearing contact lenses to lab! We will work with bacteria and chemicals in lab. Chemicals or fumes may be irritating to contact lens wearers. To avoid placing bacteria or chemicals in your eyes, you should not touch your eyes during lab, whether or not you wear contacts. You should thoroughly wash your hands after leaving lab, before touching your eyes and before handling contact lenses.
- f. **Do not apply cosmetics during lab.** You do not want to accidentally introduce bacteria or a lab chemical to your skin or eyes by applying cosmetics in lab!
- g. **Visitors.** No visitors allowed in lab. Your children, friends, parents, pets or anyone else not currently enrolled in the course will not be allowed in lab. This policy is for the safety of everyone.
- h. **Checked-out lab equipment and financial cost of replacement or repair of this equipment:** A set of lab equipment items will be checked out to you and a lab



partner(s). Only you and your lab partner(s) should use these items. You and your lab partner(s) will be responsible for

locking these items in your assigned lab drawer and for returning the drawer key to the instructor at the end of every lab period. At the end of the semester, if any of the items are missing or damaged (other than normal wear and tear), you and/or your lab partner(s) will be charged the cost of replacing or repairing the item(s), whichever is appropriate for the item(s).

- i. **Disruptive Behavior:** Disorderly conduct is prohibited under the Student Conduct Code. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. You may be asked to leave lab for the day for disorderly conduct (this will be considered as an unexcused absence and grade penalties, as described in policy #1, will apply). You may be dropped from the class/lab for disorderly conduct.

#### **SPECIAL DATES OF CONCERN TO THE COURSE**

Predicted dates for lecture exams, lab exams and days when we will have lab items during lecture time are in the tentative schedule within this syllabus. These dates may change for reasons such as we are ahead or behind in topics or if the University closes for some reason (e.g. inclement weather).

**Other dates:** October 29 (Wednesday): Last day to drop this class for a grade of "W".

## **COURSE OBJECTIVES AND COURSE DESCRIPTION**

Course description: Principal laws of heredity, including Mendelian and non-Mendelian heredity; molecular genetics, gene expression and its regulation; cytogenetics

Course objectives:

- Describe and apply the rules of Mendelian genetics
- Describe and apply the exceptions to Mendelian genetics
- Obtain and use a working knowledge of the vocabulary and concepts of genetics
- Apply rules of probability and statistical analysis to inheritance
- Discuss various mechanisms of sex determination in different organisms
- Describe chromosomes and their composition, structure and function
- Describe the organization of genes on chromosomes
- Discuss the basis for and the consequences of mutations
- Describe and discuss the processes of DNA replication, transcription and translation
- Demonstrate a working knowledge of the theoretical and technical applications of laboratory methods and experiments
- Demonstrate a working knowledge of molecular genetics theory and applications
- Demonstrate lab skills and knowledge in molecular genetics
- Demonstrate the ability to design, execute and interpret experiments.
- Critically evaluate, analyze and interpret data
- Communicate experimental results in written and verbal formats

### **COURSE OUTLINE AND SCHEDULE\*. GENETICS, FALL 2014.**

\* This schedule may change if we get ahead or behind in topics or if the University closes for some reason (e.g. inclement weather).

<b>DATE</b>	<b>CLASS TOPIC AND READING</b> Be sure to check the reading and objectives sheets for specific chapter pages to read.	<b>LAB</b> (This is the predicted general order of lab items, but there is a chance that we will get off schedule).
Aug 20-22	<ul style="list-style-type: none"> <li>• Wedn, Aug 21: Introductory items. Read chapter 1.</li> <li>• Fri: Chap 1 (introductory material) and Chap 9, Molecular structure of DNA and RNA</li> </ul>	
Aug 25-29	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chap 9, Molecular structure of DNA and RNA</li> <li>• Fri: Chapter 11, DNA replication</li> </ul>	<b>Lab 1:</b> <ul style="list-style-type: none"> <li>• Lab basics, safety, equipment in lab drawers.</li> <li>• Working with pipettes</li> <li>• Pipette challenge</li> <li>• Gel electrophoresis and gel loading (We may do both items today if time allows. We may do one of the items next lab).</li> </ul>
Sept. 1-5	<ul style="list-style-type: none"> <li>• Mon: Holiday, no class or lab today.</li> <li>• Wedn and Friday: Chapter 11, DNA replication</li> </ul>	Monday Sept. 1: Holiday, no lab today. Tuesday, Sept 2: Tuesday lab will not meet this week.
Sept. 8-12	<ul style="list-style-type: none"> <li>• All week: Chapter 12, Gene transcription and RNA modification.</li> </ul>	<b>Lab 2:</b> <ul style="list-style-type: none"> <li>• Genomic DNA isolation</li> <li>• Possibly gel electrophoresis and/or gel loading</li> </ul>
Sept. 15-19	<ul style="list-style-type: none"> <li>• Monday: Start chapter 13, Translation. We will look only at select parts of chapter 13. See the reading and objective sheets for materials to read.</li> <li>• <b>Wednesday, Sept 17: LECTURE EXAM 1</b> (Lecture exam 1 will be on chapters 1, 9, 11 and 12. Chapter 13 material will be on lecture exam 2, not lecture exam 1).</li> <li>• Friday: Chapter 18, Gene mutation and DNA repair.</li> </ul>	<b>Lab 3</b> <ul style="list-style-type: none"> <li>• Lab safety and working with bacteria</li> <li>• GFP</li> <li>• Biotechnology</li> <li>• Transform <i>Escherichia coli</i></li> <li>• Prepare LB/amp media</li> </ul> <p><b>NOTE:</b> Outside of normally scheduled lab or lecture time, you will need to come into lab this week on Wednesday or Thursday</p>

<b>DATE</b>	<b>CLASS TOPIC AND READING</b> Be sure to check the reading and objectives sheets for specific chapter pages to read.	<b>LAB</b> (This is the predicted general order of lab items, but there is a chance that we will get off schedule).
Sept. 22-26	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 18, Gene mutation and DNA repair.</li> <li>• Friday: Chapter 10, Chromosome structure</li> </ul>	<b>Lab 4</b> <ul style="list-style-type: none"> <li>• Plasmid DNA isolation</li> <li>• Restriction enzyme digestion</li> <li>• Pour gels today for use next week</li> </ul>
Sept. 29 – Oct 3	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 10, Chromosome structure</li> <li>• Friday: Chapter 3, Chromosome transmission during cell division and sexual reproduction.</li> </ul>	<b>Lab 5:</b> <ul style="list-style-type: none"> <li>• <i>First thing:</i> Load gels with plasmid DNA</li> <li>• <i>Second thing:</i> RNA interference (RNA interference is a chapter 13 topic. Questions about RNA interference will be on lecture exam 2).</li> <li>• <i>Last thing:</i> Stain, examine and photograph gels</li> </ul>
Oct. 6-10	<ul style="list-style-type: none"> <li>• Monday and Wedn: Chapter 3, Chromosome transmission during cell division and sexual reproduction.</li> <li>• <b>Friday, October 10: Lab exam 1 during lecture time</b> (Lab exam 1 will be over genomic DNA isolation, gel electrophoresis, transformation, plasmids, restriction enzymes, using restriction enzymes to generate plasmid maps)</li> </ul>	<b>Lab 6:</b> <ul style="list-style-type: none"> <li>• Discuss and finishing interpreting last week's lab results</li> <li>• Meiosis</li> </ul>
Oct. 13-17	<ul style="list-style-type: none"> <li>• <b>Monday, October 13: Lecture exam 2</b> (lecture exam 2 will be over a select portion of chapter 13, chapter 18 and the majority of chapter 3).</li> <li>• Wedn and Friday: Chapter 2, Mendelian inheritance</li> </ul>	<b>Lab 7:</b> <ul style="list-style-type: none"> <li>• Transmission Genetics <ul style="list-style-type: none"> <li>○ Plant seeds of <i>Brassica rapa</i></li> <li>○ Start working with <i>Nasonia vitripennis</i></li> </ul> </li> </ul>

Oct 20-24	<ul style="list-style-type: none"> <li>All week: Chapter 2, Mendelian inheritance, part of chapter 3.</li> </ul>	<p><b>Lab 8:</b></p> <ul style="list-style-type: none"> <li>Examine and count <i>B. rapa</i> seedlings</li> <li>Collect <i>N. vitripennis</i> males and virgin females</li> </ul> <p><b>NOTE that you will need to come into lab this week (possibly several days), outside of normal lab and lecture time, to collect <i>N. vitripennis</i> males and virgin females.</b></p>
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<b>DATE</b>	<b>CLASS TOPIC AND READING</b> Be sure to check the reading and objectives sheets for specific chapter pages to read.	<b>LAB</b> (This is the predicted general order of lab items, but there is a chance that we will get off schedule).
Oct. 27-31	<ul style="list-style-type: none"> <li>All week: Chapter 4, Extensions of Mendelian inheritance</li> </ul>	<p><b>Lab 9:</b></p> <ul style="list-style-type: none"> <li>Finalize experimental design and set matings with <i>N. vitripennis</i>.</li> </ul>
Nov. 3-7	<p>Monday, Nov. 3: PCR and DNA fingerprinting . Read section 20.2 in chapter 20 of the Brooker textbook. Read the handout on DNA fingerprinting. <b>Note:</b> Questions about this material will be on <i>lab exam 2</i>.</p> <ul style="list-style-type: none"> <li><b>Wednesday, November 5: Lecture exam 3.</b> (Lecture exam 3 will be over chapters 2 and 4 as well as a small portion of</li> </ul>	<p><b>Lab 10:</b></p> <ul style="list-style-type: none"> <li>Isolate genomic DNA to use in PCR</li> <li>Set up PCR and/or restriction digestions</li> <li>Pour gels for use next week</li> </ul>
Nov. 10-14	<ul style="list-style-type: none"> <li>Monday and Wednesday, Nov 10: Chapter 5, Non-Mendelian inheritance.</li> <li><b>Friday, Nov. 14: Lab exam 2 today at 1:10 pm.</b> If you miss the lab exam today for an unexcused reason, you will earn a zero on the lab exam and will not have the opportunity for a makeup lab exam. Lab exam 2 will be over the theory and practice of bacterial transformation, plasmid DNA, plasmid DNA isolation, GFP, antibiotic resistance and restriction</li> </ul>	<p><b>Lab 11:</b></p> <p><i>First thing:</i> Load gels</p> <p><i>Second thing:</i> Examine <i>N. vitripennis</i> progeny</p> <p><i>Last thing:</i> Stain, examine and photograph gels</p>
Nov. 17-21	<ul style="list-style-type: none"> <li>Monday and Wedn: Chap 10 (also select parts of chap 8)</li> <li>Friday: Chapter 14, Gene regulation in bacteria</li> </ul>	<p><b>Lab 12:</b></p> <ul style="list-style-type: none"> <li>Continue to analyze progeny of <i>N. vitripennis</i></li> </ul>

Nov. 24-25	<ul style="list-style-type: none"> <li>Monday : Chapter 14, Gene regulation in bacteria</li> <li>Wedn and Fri: Thanksgiving break.</li> </ul>	<b>Lab 13:</b> <ul style="list-style-type: none"> <li>Discussion of <i>N. vitripennis</i> results</li> <li>DNA sequencing or Bioinformatics</li> </ul>
Dec. 1-5	<ul style="list-style-type: none"> <li>Monday, Chapter 14, Gene regulation in bacteria.</li> <li>Wedn and Friday: Select parts of chapter 15, Gene regulation in eukaryotes I: <u>transcriptional regulation</u></li> </ul>	<b>Lab 14:</b> <ul style="list-style-type: none"> <li>DNA sequencing or Bioinformatics</li> </ul>
Dec. 8-12 Finals Week	<b>FINALS WEEK</b> <b>The genetics final exam will be at 8:00 am Tuesday, Dec. 9.</b> The final exam will be over chapters 10, 14, 15 and assigned parts of chapter 8.	No genetics labs this week.

#### **SPECIAL PROJECTS, ASSIGNMENTS FIELD TRIPS, ETC.**

This course does not include field trips. There will be some weeks when you will need to come into the lab, outside of lecture or lab time. Please arrange this with the instructor.

#### **EXAMS AND OTHER EVALUATIONS**

**Lecture exams, lecture quizzes and lab exams.** Some lecture and lab material builds on previous material. Thus, on any given exam or quiz, you may be responsible for material that was previously covered/assigned and that was previously tested on. Some lecture and lab items overlap, so there may be some questions on quizzes, worksheets and exams that are difficult to classify as “lecture questions” or “lab questions”. Some labs, such as the meiosis lab, are designed to complement lecture material and help you understand lecture material. Thus, some lab topics are integrated with lecture material and will be tested over in lecture exams. Some lecture material applies to lab, so even though we may discuss the material in lecture, but not in lab (or visa versa), you may need to know and apply it for lab work, for lab exams, for lecture exams or for lecture quizzes.

**Early exams and early quizzes.** There will be no early exams or quizzes in lecture or lab.

**Lecture exam, lecture quiz and lab quiz format.** The exam format for lecture exams, lecture quizzes and for lab exams may depend on the topics. The format for all exams or quizzes may not be the same.

Depending on the particular exam or quiz, there may be problems to work, data to analyze, and/or processes to explain; these all lend themselves to essay type answers or answers that require that you work through a problem and possibly show your work to demonstrate how you arrived at an answer. Other topics lend themselves to multiple choice/matching/true-false type questions.

**Makeups for lecture work and for lab exams.** Makeups for any lecture work and for lab exams are possible only if you have an excused absence and the appropriate documentation. There will be no makeups for unexcused absences; if you miss a lecture or lab exam or quiz for an unexcused reason, you will have zero points on that item. You are responsible for checking if there were any assignments, worksheets or handouts on a day that you are absent.

For the possibility of earning points on makeup work, you must ask about any class work by the date that you are supposed to be back in class.

For example, if your sports team returned to campus on Monday evening, then you should be back in class on Wednesday and you need to ask about making up work that Wednesday. If you decide to skip class on Wednesday, then return to class on Friday and find that there was an assignment due that Friday, you will not have the opportunity to make up the work.

Makeup exams will be given outside of normal class or lab time. If at all possible, all students that need to take a makeup for a given lecture or lab exam should take the makeup at the same time. The instructor will try to schedule a time that works for all people needing to take that makeup, with the time being as soon as feasible after the normally scheduled exam. If we cannot find a mutually agreeable time outside of normal class or lab time, then if lab time allows, makeup exams (whether lecture or lab exams) might be given between November 17 and December 2, during lab time when we are finished with lab work. Makeup exams will be on the same topics as the regularly scheduled

exams, but may not consist of the same questions or be in the same format as the regularly scheduled exam. There may be more essay format questions on makeup exams.

#### **Makeups for lab work and lab experiments.**

There are no makeups for labs “per se”, regardless of whether your absence from lab is for an excused or unexcused reason. **If you miss a lab for unexcused reasons, you will be docked 20 points for each lab missed for an unexcused absence.** Regardless of your reason for missing lab, you will be responsible for all material from that lab as far as lab exams or assignments.

**If, for excused or unexcused reasons you miss certain labs (labs scheduled as labs 1, 3 and 7), in which we learn particular skills or safety issues that impact future labs, I will work with you on a “makeup” for those skills or safety issues.** If you miss the lab for unexcused reasons and do the “makeup” skill/training, you will still be docked 20 points. If you fail to do the “makeup” skill/safety training at all, you will not be allowed to do any

future labs in which that skill or safety training is required and you will be docked 20 points per lab that you are not allowed to do. You also will not be able to earn any worksheet, lab report, assignment points or other points associated with those labs.

**You must contact me and complete the skill/safety training PRIOR TO the next lab in which the skills or safety issues apply.** If, for unexcused reasons, you miss the appointment for “makeup” skill/safety training that we set up, your grade will be docked 20 points in addition to points docked for missing the regularly scheduled lab.

**The labs that I will work with you for makeup skill/safety training are:**

**Lab 1, which is the first lab of the semester, scheduled for Aug. 25-26.** Contact me immediately if you miss this lab. You will not be able to do **any** future labs until you complete general lab safety training. You will not be able to do future labs that require pipetting until you and I work together on pipetting skills. As part of this “makeup” skill training, we will cover general lab safety items and I will show you how to use a pipette and load gels (if applicable), but you will not make up any other parts of the Aug. 25-26 lab.

**Lab 3, which is the lab scheduled for Sept. 15-16.** Unless you complete this skill/safety training, you will not be able to do the next scheduled lab of Sept. 23-24, which involves using bacteria. You must complete this “makeup” skill/safety training with me regardless of whether you are currently enrolled in microbiology lab or have taken a microbiology lab in the past. As part of this “makeup” training, we will discuss biosafety, basic safety and skills related to working with bacteria, but you will not do *Escherichia coli* transformation.

**Lab 7, which is the lab scheduled for Oct. 13-14.** Unless you complete skill training on working with *Nasonia vitripennis*, you will not be able to do any future labs that involve *N. vitripennis*. Labs 7, 8, 9, 11 and 12 all involve working with *N. vitripennis* as part of a single large project that spans several weeks. **Note** that if the “time window” for working with *N. vitripennis* is past by the time you contact me about making up this lab, you will not be able to do lab 7 and you will not be able to do future labs that involve *N. vitripennis* (see the next page).

**Labs 7, 8, 9, 11 and 12** (scheduled for Oct 12/13, Oct 20/21, Oct 27/28, Nov 10/11, and Nov 17/18) are all part of a single, multi-week project involving *Nasonia vitripennis* (a small wasp that parasitizes certain fly species).

**If, for excused reasons,** you miss even one of these labs (labs 7, 8, 9, 11 and 12), you may not be able to complete the lab series and if this is the case, you will have to do an alternative, independent project(s). If you miss one of these labs (for excused



reasons), it may be possible for you to “catch up,” but this will depend on which particular lab you miss, how many of the labs you miss, and/or whether it is feasible for you to “catch up” outside of normal lab time.

**If, for unexcused reasons,** you miss one or more of these labs (labs 7, 8, 9, 11 or 12), you will be docked 20 points per missed lab in addition to any other points associated with the missed lab(s) such as worksheets, points on lab reports, etc. Depending on which lab(s) you miss, I may determine that it is not feasible for you to complete the lab series and you will be given an alternative, independent project(s). You will likely find that the alternative project(s) is/are more work for you than the regularly scheduled lab(s) that you missed.

**Why would it not be feasible for you to do the *N. vitripennis* project if you miss just one of these labs?**

The series of labs scheduled as labs 7, 8, 9, 11 or 12 involve learning to work with the organism

*N. vitripennis*, collecting males and virgin females that are in the pupal stage of development, designing appropriate experimental matings, setting up the matings, collecting and examining the progeny and then finally interpreting the results. If you miss when we collect the males and virgin females, then you may have missed the “time window” in which it is possible to collect the males and females. Thus, you will not be able to set up the experiment and you will not be able to complete the rest of the labs in this series. If you do collect the males and virgin females, but then are absent when it is time to set up the matings, you may have missed the “time window” in which the animals are alive, fertile and able to mate; thus you will have no results to analyze in future labs. For the purposes of doing lab reports or worksheets/assignments, you will not be allowed to “just look at and use” the data of other students.

**GRADING POLICY**

The letter grade that you earn in this course will be based on your lecture and lab scores. Three- fourths of your grade will come from lecture scores and one-fourth will come from lab scores.

**Grading Scale:**

- A (89.50 – 100%)
- B (79.50 – 89.49%)
- C (69.50 – 79.49%)
- D (59.50 – 69.49%)

**Note that 89.49% is a B and does not round up to 89.5%. Likewise, 79.49% is a C; 69.49% is a D and 59.49% is an F.**

F (59.49% and below)

**Points possible**

Three lecture exams at 100 points each. 300 points

Final lecture exam at 125 points.

125 points Your average on lecture quizzes/activities\* (your two lowest lecture

quiz/activity scores will be dropped) 100 points

Two lab exams (each worth 25 points) 50 points

Two lab reports (each worth 25 points) 50 points

Lab worksheets, lab notebook and other lab items 75 points

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Total points 700 points

**No scores from lab will be dropped. No lecture exams or lab exams will be dropped. Your two lowest lecture quiz/activity scores will be dropped.**

**Homework:** Homework problems will be assigned throughout the semester, but homework will not be graded. Answers to homework will be available so that you can check your own understanding and progress. If you need help with homework, please do not hesitate to talk with me. Give the homework your best try, look at the answers, try to figure out why your answer does not match the keyed answer, and then we can discuss how to approach the problems. If time allows, we may spend some class and/or lab time reviewing homework problems and you should be prepared to participate by discussing your answers, showing others how to work problems and/or by asking questions.

It is very important that you do the homework, study and keep up with genetics material daily/weekly. Cramming the week, weekend or night before an exam is NOT a good approach to doing well in genetics! Much like math classes, problem solving is an important part of genetics. Becoming skilled at successfully solving problems takes time and repetition. If you do not spend sufficient time to study and to do and understand the homework, the probability that you will do well on quizzes, assignments and exams is low!

Lecture quizzes/activities.

Your lecture quiz/activity **average** will be used to calculate the number of points you earn in this category. In the calculations of your lecture quiz/activity average, your two lowest lecture quiz/activity scores will be dropped.

Your overall lecture quiz/activity average will be calculated by dividing your points by the total points possible in this category and then multiplying that number by 100. An example of how your points in this category will be calculated is shown below.

### Example

<u>Quiz #</u>	<u>Hypothetical student's scores</u>	<u>Points possible</u>
Quiz 1	10	10
Quiz 2	10	10
Quiz 3	7	10
Quiz/activity 4	10	10
Quiz 5	5	10
Quiz 6	9	10
Quiz 7	3	10
Quiz 8	5	10
Quiz 9	10	10
Totals	69	90

In this hypothetical scenario, the score of five on quiz 5 and the score of three on quiz 7 would be dropped. This gives a total of 61 points out of 70 points possible.

To calculate the overall average for this person in the lecture quiz/activity category:

$$61/70 \times 100 = 87.143\%$$

Since this person has a quiz/activity average of 87.143%, this person would earn 87.143 points out of 100 possible in the lecture quizzes/activities category.

### STUDENTS WITH DISABILITIES

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any approved accommodations at the beginning of the course. Any student with questions regarding accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460- 1626; fax 870 460-1926.

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

### STATEMENT ON DISRUPTIVE BEHAVIOR

The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
CELL BIOLOGY (BIOL 3363) COURSE SYLLABUS  
SPRING 2015**

**COURSE**

Cell Biology, (BIOL 3363). Three credits  
Class time: Mon, Wedn, Friday: 9:10 am – 10:00 am  
Meeting place: Science Center Room B19

**PREREQUISITES**

CHEM 1113 (Gen Chem II), CHEM 1131 (Gen Chem II lab) and BIOL 3363 (Genetics). In addition to the prerequisite classes listed above, you should have completed Principles of Biology I and II (BIOL 1053 and BIOL 1083) since these are prerequisites for BIOL 3363.

**REQUIRED TEXTBOOK**

Becker's World of the Cell, 8th edition by Hardin, Bertoni and Kleinsmith. Publisher Benjamin Cummings. ISBN 9780321716026. Other reading material may be handed out or assigned.

**INSTRUCTOR**

Dr. Mary Stewart  
Phone: 870-460-1767  
e-mail: [stewartm@uamont.edu](mailto:stewartm@uamont.edu)

Please be sure to put the **m after stewart** in my email address ([stewartm@uamont.edu](mailto:stewartm@uamont.edu)).

Please visit with me in person if you would like to discuss your grades. I will not discuss your grades by phone.

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B12  
Office Hours: Monday: 10-11 am  
Tuesday and Thursday: 9:30 – 10:30 am and 1:30 – 2:30 pm  
Wednesday and Friday: 10 – 11 am and 1:30 – 2:30 pm

**STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, ETC.**

**Absenteeism.** The opportunity to makeup exams, quizzes and other class work is possible only for excused absences. If you do miss class, you are responsible for checking if there were any announcements, changes to the tentative schedule, assignments or handouts that day.

***Excused absences*** include, but are not limited to, participating in a UAM sponsored event (see the paragraph below from the UAM student handbook), being so ill that you visit a medical facility, or a death in your immediate family. It is your responsibility to contact me to discuss whether your absence is excused and to bring the appropriate documentation for your absence.

The information in the paragraph below is from the UAM student handbook:

**“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the student's name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

**Unexcused absences** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for an exam, etc.

**Cheating and plagiarism.** Academic dishonesty and cheating will not be tolerated.

- a. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - i. Copying from another student's paper;
  - ii. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - iii. Collaboration with another student during the examination;
  - iv. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - v. Substituting for another person during an examination or allowing such substitutions for oneself.
- b. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
- c. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
- d. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

**Copying other student's answers to homework is considered plagiarism. The person who copied the answers, as well as the person who allowed their answers to be copied, will both be considered as cheating.**

For any instance of academic dishonesty that is discovered, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be zero points earned on the item involved. If you are caught cheating on any item, the student(s) involved will earn a zero on that item. Additionally, for student(s) involved in cheating, all quiz/homework grades will be used in calculating the final quiz/homework average; no quiz/homework grades will be dropped.

**Cell phones and electronic devices.** Cell phones and other electronic devices are not to be used during class. Turn your cell phones and electronic devices off and put them away during class. If you use your cell phone during class, you may be asked to leave. **If your cell phone is out during an exam or quiz, you will be considered as cheating. Turn cell phones off and put them away!**

**SPECIAL DATES OF CONCERN TO THE COURSE.**

- Monday, April 27, 2015: All makeups for ten-point quizzes and any in-class activities will be today during class time. Makeup quizzes are possible only if you have a documented excused absence for your absence the day of the quiz/activity.
- Wednesday, April 29, 2015: Cell Biology final at 10:30 am. The final exam date is set by the University and will not change unless the University changes it.

**COURSE OBJECTIVES AND COURSE DESCRIPTION**

By the end of this course, students should be able to

- Describe the components and organelles of a typical cell, their functions and the integration of these components into cellular function.
- Discuss proteins and their properties.
- Describe cell membranes, their properties, how materials are transported across membranes and how proteins are inserted into selected cell membranes.
- Discuss and apply concepts of the endomembrane system.
- Discuss and apply concepts related to cell junctions and the extracellular structures and matrix of animal cells.
- Discuss and apply concepts of signal transduction mechanisms and the application of signaling to the cell cycle and cell function.
- Discuss and apply concepts of the cell cycle and the application of this to cell function.
- Apply cell biology topics to human health situations.
- Describe methods used to explore cell structure and function, discuss how these methods are used in experimental situations and derive conclusions from data obtained with these methods.

**ELL BIOLOGY, SPRING 2015**

**COURSE OUTLINE AND TENTATIVE SCHEDULE.** Changes to this tentative schedule may occur because of missed class days (e.g. if the University closes because of inclement weather), if we get ahead or behind on a topic, or for other unpredicted events.

DATE	TOPIC	READING in Becker’s World of the Cell (WotC) is below. For some topics, there may be handouts or other assigned materials.
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<p>Jan 7-9 (Friday, Jan 9: last day to register or add classes)</p>	<p><b>Wedn and Friday</b></p> <ul style="list-style-type: none"> <li>• Introductory things</li> <li>• Visualization of cells (part of chap. 2)</li> <li>• Cell structure and Function (chapter 4 topics)</li> </ul>	<p><b>Topic: Visualization of cells. The pages to read in chapter 2 of Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• The section on "visualization of cells" on pages 6-8 in chapter 2.</li> </ul> <p><b>Topic: Cell structure and function. The pages to read in chapter 4 of Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• Pages 75-99 On pages 76 – 78, skip the section about limitations on cell size. On page 99, skip the information on viruses, viroids and prions.</li> </ul>
<p>Jan 12 – 16</p>	<p><b>Monday</b></p> <ul style="list-style-type: none"> <li>• Cell structure and function continued (chap 4).</li> </ul> <p><b>Wedn and Friday</b></p> <ul style="list-style-type: none"> <li>• Proteins</li> </ul>	<p><b>Topic: Proteins. The pages to read in Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• Chapter 3: Pages 41- 54 (skip the info. on nucleic acids)</li> <li>• Chapter 2: Read "The importance of self-assembly" on pages 32 – 35.</li> </ul>
<p>Jan 19 – 23</p>	<p><b>Monday: Holiday, no classes.</b></p> <p><b>Wedn</b></p> <ul style="list-style-type: none"> <li>• Proteins</li> </ul> <p><b>Friday</b></p> <ul style="list-style-type: none"> <li>• Enzymes (chap 6)</li> </ul>	<p><b>Topic: Enzymes. Pages to read in chapter 6 of Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• Pages 129-138 (skip the section on enzyme kinetics).</li> <li>• Pages 144 (beginning with "Enzyme inhibitors act irreversibly or reversibly) through 151.</li> </ul>
<p>Jan 26 – 30</p>	<p><b>Monday and Wedn:</b></p> <ul style="list-style-type: none"> <li>• Enzymes, continued</li> </ul> <p><b>Friday:</b> finish or review topics, or other.</p>	
<p>Feb 2 – 6</p>	<p><b><u>Monday, Feb. 2:</u></b> <b><u>Exam 1</u></b></p> <p><b>Wedn and Friday</b></p> <ul style="list-style-type: none"> <li>• Membranes (chap. 7)</li> </ul>	<p><b><u>Monday, Feb. 2: Exam 1.</u></b> Exam will be over class material, readings and assignments up to this date.</p> <p><b>Topic: Membranes. Pages to read in Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• All of chapter 7</li> </ul>

Feb 9 – 13	<p><b>Monday and Wedn</b></p> <ul style="list-style-type: none"> <li>• Membranes</li> </ul> <p><b>Friday</b></p> <ul style="list-style-type: none"> <li>• Transport across membranes (chap. 8)</li> </ul>	<p><b>Topic: Transport across membranes. Pages to read in Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• 194 - 216, with the following exceptions <ul style="list-style-type: none"> <li>On page 200, skip box 8A.</li> <li>On page 201, skip the section "The rate of simple diffusion is directly proportional to the concentration gradient".</li> <li>On page 216, skip the section "The energetics of transport".</li> </ul> </li> </ul>
Feb 16 – 20	<p><b>Monday and Wedn</b></p> <ul style="list-style-type: none"> <li>• Transport across membranes (chap. 8)</li> </ul> <p><b>Friday</b></p> <ul style="list-style-type: none"> <li>• The endomembrane system (chap 12)</li> </ul>	<p><b>Topic: The endomembrane system. Pages to read in Becker's WotC are:</b></p> <p><b>Chapter 12 (the endomembrane system) reading</b></p> <p>Pages 324 – 355, with the following exceptions.</p> <ul style="list-style-type: none"> <li>▪ Skip Box 12A on pages 327-329</li> <li>▪ - On page 355, don't read the section on "The plant vacuole: a multifunctional</li> </ul>
Feb 23 – 27	<p><b>All week</b></p> <ul style="list-style-type: none"> <li>• The endomembrane system (chap 12)</li> </ul>	
March 2 – 6	<p><b><u>Monday, March 2</u></b> <b><u>Exam 2</u></b></p> <p><b>Wedn and Friday</b></p> <ul style="list-style-type: none"> <li>• Protein synthesis and sorting (chap. 22)</li> </ul>	<p><b><u>Monday, March 2: EXAM 2.</u></b> Exam 2 will be over class material, readings and assignments since exam 1.</p> <p><b>Topic: Protein synthesis and sorting. Pages to read in Becker's WotC are:</b></p> <ul style="list-style-type: none"> <li>• Pages 679 – 705, with the following exceptions. <ul style="list-style-type: none"> <li>On page 691, skip the information about "Protein synthesis typically utilizes a substantial fraction of a cell's energy budget".</li> </ul> </li> </ul>
March 9 – 13	<p><b>All week</b></p> <p>Protein synthesis and sorting (chap 22).</p>	
March 16 – 20 (March 18: last day to drop a full term	<p><b>All week</b></p> <p>Signal transduction (chap. 14)</p>	<p><b>Topic: Signal transduction. Pages to read in chapter 14 of Becker's WotC are:</b></p> <p>Pages 392 – 419, but skip Box 14B on pages 410 – 411.</p>



March 23 – 27	<b>Spring Break! No classes this week</b>	<b>Spring Break</b>
March 30 – April 3	<b>Monday and Wedn</b> <ul style="list-style-type: none"> <li>• Signal transduction.</li> </ul> <b>Friday, April 4:</b> The cell cycle (part of chapter 19)	<b>Topic: The cell cycle. Pages to read in chapter 19 of Becker’s WotC are:</b> <ul style="list-style-type: none"> <li>• Pages 549 – 551, but skip the section on page 551 about DNA replication. Page 580, beginning with “Regulation of the cell cycle” through page 591 (skip the section about “Apoptosis” on page 591). <b>Chapter 19 material will be on exam 4, not exam 3.</b></li> </ul>
April 6 – 10 (April 6: Preregistration for Summer and Fall 2015)	<b>Monday, April 7: Exam 3</b>  <b>Wedn and Friday:</b> The cell cycle	<b>Monday, April 7: EXAM 3.</b> Exam 3 will be over class material, readings and assignments since exam 2, <b>except</b> for chapter 19 material.
April 13 – 17	<b>Monday</b> <ul style="list-style-type: none"> <li>• The cell cycle</li> </ul> <b>Wednesday &amp; Friday</b> Cancer Cells (chap. 24)	<b>Topic: Cancer cells, chapter 24.</b>
April 20 – 24	<b>All week:</b> <ul style="list-style-type: none"> <li>• Cell adhesions, cell junctions and extracellular structures</li> </ul>	<b>Topic: Beyond the cell: cell adhesions, cell junctions, and extracellular matrix. Pages to read in chapter 17 of Becker’s WotC are:</b> <ul style="list-style-type: none"> <li>• Pages 477 – 486 (cell junctions) Pages 486 – 497 (extracellular matrix of animal cells)</li> </ul>
April 27 – May 1	<b>Monday, April 27:</b> <b><u>ALL makeups for ten-point quizzes or any in-class activities will be given today during class time.</u></b>  <b>Wedn, April 29: Cell Biology final at 10:30 am.</b>	<ul style="list-style-type: none"> <li>• <b>Monday, April 27: <u>ALL makeups for ten-point quizzes and any in-class activities will be today during class time.</u></b> Makeups for these items are possible only if you had a documented excused absence on a day we had a quiz or in-class activity.</li> </ul> <p>The final exam will be over class material, readings and assignments since exam 3.</p>

**SPECIAL PROJECTS, ASSIGNMENTS, FIELD TRIPS, ETC.**

This course does not include field trips.

## EXAMS AND OTHER EVALUATIONS

### Hour exams

Hour exams may have questions from class material, textbook readings and/or other assigned material. Exams may have questions in a variety of formats including essay, problem solving, short answer, multiple choice, true/false, ordering, matching and fill-in-the-blank.

There will be four hour exams (three during the semester and one during finals week). Hour exams are somewhat cumulative in that information from some topics carries over to other topics. For example, information about organelles, proteins and other cell macromolecules that we will discuss early in the semester will be applied to later topics in the semester. As another example, the topic of endomembrane systems (chapter 12) will be on exam two. Exam three will contain the topic of protein synthesis and protein sorting (chapter 22). Your success on some of chapter 22 materials will depend on your prior mastery of chapter 12 material.

### **Makeup Exams and Early Exams**

There will be no early exams. Makeup exams are possible only if you have an excused absence. If you miss an exam for an excused reason, please contact me as soon as possible about making up an exam. All makeup exams will be scheduled for a time outside of regular class time. I would like to schedule for all students who missed a given exam to take the makeup for that exam at the same time. Makeup exams may not be in the same format as the regular exam and may consist of more essay / free-response type questions than the regular exam.

### Quizzes and in-class activities

Ten-point in-class quizzes or other in-class activities may or may not be announced in advance.

**Makeups and early quizzes/in-class activities.** There will be no early quizzes or in-class activities. There will be no makeups for unexcused absences. All makeup quizzes and makeups for any other type of in-class activities will be on Monday, April 27 during normal class time. Depending on the in-class activity, it may not be possible for you to make up the same type of activity the rest of the class did. Thus, you may have to do an alternative activity or quiz as a makeup for an in-class activity.

**If you miss an in-class quiz or activity for a UAM sponsored event**, you may make up the quiz/activity if you discuss the absence with me at least one week in advance of the absence and have the appropriate sponsor documentation (see the UAM policy on page two of this syllabus). **If you miss an in-class quiz/activity for other types of excused absences**, makeups are possible **only** if you bring the appropriate written documentation such as a doctor's note.

### Homework

Ten-point homework assignments may be given out during the semester. If homework is due on a day when you will be out of town for a UAM sponsored, you need to turn the homework in before you leave, not after you return.

If you are absent on the day that homework is handed out, it is your responsibility to check if any assignments were given on the day of your absence. Late work will not be accepted if graded papers have been given back to other students or if a key has been distributed electronically or as a hard-copy.

### **GRADING POLICY**

#### **Letter grade and percent**

- A (89.50 – 100%)
- B (79.50 – 89.49%)
- C (69.50 – 79.49%)
- D (59.50 – 69.49%)
- F (59.49% and below)

Note that 89.49% is a B and does not round up to 89.5%. Likewise, 79.49% is a C; 69.49% is a D and 59.49% is an F.

#### **Grades of incomplete (I)**

**Below is a section from the UAM student handbook regarding grades of incomplete (I):** “An incomplete grade is a mark designating deficiencies in course work, which must be completed within one calendar year, or less as designated by the instructor. Permission to receive an I rests with the instructor. When deficiencies are completed, the appropriate grade will be assigned. After the specified year or shorter specified time, an I will become an F if the work has not been completed.”

A grade of incomplete will only be considered if a student has completed at least three exams and has completed 75% of the homework and quizzes. Additionally, based on grades of completed work and on the points possible for the work left to be completed, the student must have a mathematical possibility of passing the class.

**The grade that you earn in this course will be based on your scores on four exams and on your quiz/homework/in-class activity average.**

<b>Item</b>	<b>Points Possible</b>
Four hour exams, each worth 100 points	40
0 points	
Your quiz/homework/in-class activity average	100 points*
(see explanation below)*	
Total points possible points	500 points

No exam scores will be dropped.

\*Calculating your points on ten-point “quiz/homework/in-class activity” items.

Your quiz/homework /in-class activity score will be averaged and the average will be used to determine your points in the “quiz/homework” category. Your two lowest ten-point quiz/homework/in-class activity scores will be dropped and will not be used to calculate your average in the “quiz/homework/in-class activity” category.

Below is an example of how your points in the “quiz/homework” category would be calculated after your two lowest ten-point “quiz/homework/in-class activity” category items are dropped. In this example, only nine ten-point “quiz/homework/in-class activity” items were available in the semester.

Your scores on ten-point items		Points possible
	10	10
	8	10
	7	10
	9	10
	10	10
	10	10
	9	10
	5	10
	10	10
Total	78	90

In the example above, the two lowest scores of “5” and “7”, so these would be dropped. Thus, the average for this category would be 94.29% ( $66/70 \times 100 = 94.29\%$ ) This person would have 94.29 points (out of 100 possible) in the “quiz/homework/in-class activity” category.

However, if you are caught cheating on any item, the student(s) involved will earn a zero on that item. Additionally, for student(s) involved in cheating, all quiz/homework/in-class activity grades will be used in calculating the final quiz/homework average; no quiz/homework grades will be dropped.

**STUDENTS WITH DISABILITIES:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu).

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; room 300; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; room A-5; phone 870 364-6414; fax 870 364-5707.

### **STUDENT CONDUCT STATEMENT:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **BLACKBOARD**

If you are officially enrolled in this class at UAM, you automatically will be enrolled in the Blackboard site for this class. To access the Blackboard site for this class, go to <http://www.uamont.edu/academiccomputing/> and follow the onscreen instructions.

I will be putting your scores in this class on Blackboard. Your Blackboard account is password protected. To protect against others seeing your grades, do not share your login information and password with others. Also, after you are finished looking in your Blackboard account, **be sure to logout of Blackboard and close the browser window.**

**If you do not wish to have your scores on Blackboard, you must let me know, preferably by email.**

If you need help with Blackboard, I will be happy to help you if I can. There are some Blackboard tips available at <http://www.uamont.edu/academiccomputing/>. For help, you also can call the UAM Office of Academic Computing at 870-460-1663. If you forget your password, you will need to contact the Office of Academic Computing.

**BIOL 3384  
Herpetology  
Spring 2015  
Lecture 12:10-1:00  
Science Center B-18  
Lab 1:10-4:00  
Science Center B-31**

**Instructor:** Glenn Manning

**Office:** B-27

**Office Phone:** 460-1166

**E-mail:** manning@uamont.edu

**Webpage:** <http://www.uamont.edu/facultyweb/Manning/>

**Office Hours:** MWF 10-12 a.m.; TH 11-12 a.m.; MT 1:30-3 p.m. or by appointment. Changes in this schedule may occur and will be posted outside my door or announced in class.

BIOL 3384, Herpetology, 4 credit hours

**Objectives:** To acquaint the student with the current taxonomy and phylogenetic relationship of animals within the amphibians, reptiles, crocodylians, and turtles. We will look at this through understanding of morphology, function, and life histories of these very unique animals. Special emphasis will be placed on identification of the regional fauna. We will discuss how to locate and survey for these animals.

**Prerequisites:** BIOL 1153, General Zoology and BIOL 1161 General Zoology Lab

**Lecture Textbook:** Required Text: Laurie J. Vitt, and Janalee P. Caldwell. 2014. Herpetology: An Introductory Biology of Amphibians and Reptiles 2<sup>nd</sup> Edition. ISBN: 978-0-12-386919-7

Roger J. Conant and Joseph T. Collins. 1998. A field guide to reptiles & amphibians of eastern and central North America, 3rd ed., expanded. OR Stanley E. Trauth, Henry W. Robison, and Michael V. Plummer. 2004. The Amphibians and Reptiles of Arkansas.

**Student Learning Outcomes:** By the conclusion of the course you should be able to have an understanding how to identify amphibians, reptiles, crocodylians, and turtles. Also how these animals live and operate in their natural surroundings.

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory. Attendance will be recorded regularly and anyone missing the equivalent of two weeks of class will be dropped from the course unless appropriate documentation can be provided. Your success in this course is directly dependent on your attendance and participation in lectures.

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

Cheating in any form will not be tolerated and will automatically result in **failure** of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication devise) during a test will be considered an attempt to cheat by the student.

Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor.

**You will be given a zero (o) for this course if you free handle a venomous snake or purposely kill an animal without consent from your instructor.**

\*\*\*\*\*NO EXTRA CREDIT will be given under any circumstances!!!

<b>Course Grade:</b>	<b>GRADE POINTS</b>
90 - 100A	Hour Exam I 100
80 - 89B	Hour Exam II 100
70 - 79C	Lab Exam I 75
60 - 69D	Lab Exam II 75
00 - 59F	Project 100
	Participation 50
	-----
	Total Points 500

\*\*The project format and due date will be announced at a later date.

Exam dates will be set one week prior to each exam. Each test will cover material beginning with the previous exam, and continuing through the last class day before the exam.

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted either by hard copy or on the Internet. If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone.

**LECTURE CONTENT: (Subject to change)**

<b><u>CONTENT</u></b>	<b><u>CHAPTER</u></b>
Tetrapod Relationships and Evolutionary Systematics	1
Evolution of Ancient and Modern Amphibians and Reptiles	3
Anatomy of Amphibians and Reptiles	2
Classification and Diversity	
Caecilians	15
Salamanders	16
Frogs	17
Turtles	18
Crocodilians	19
Tuataras and Lizards	20
Snakes	21
Modes of Reproduction & Parental Care	4
Reproductive Ecology and Life Histories	5
Water Balance and Gas Exchange	6
Thermoregulation, Performance, and Energetics	7
Communication and Social Behavior	9
Foraging Ecology and Diets	10
Defense and Escape	11
Population Structure and Dynamics	12
Community and Geographical Ecology	13
Conservation Biology	14

**LAB CONTENT: (Subject to change)**

Amphibian identification and anatomy	14, 21 & 28 Jan
Amphibian practical	4 Feb
“Reptile” identification and anatomy	11, 18 & 25 Feb
“Reptile practical	4 March
Perform proper preservation of museum specimens and other such items	in lieu of bad weather
The rest of the labs will be spent in the field, weather permitting	11 March -22 April

\*\*\*We will have at least one night time amphibian lab (weather permitting) attendance is strongly encouraged, not mandatory, TBA

\*\*\*We will have one weekend (Friday-Sunday field trip). Attendance is strongly encouraged, not mandatory.

Date will be announced at a later date

**Tests will be announced at least one week in advance.**

**DATES TO REMEMBER:**

9 January – last day to register or add a class  
19 January – MLK Day  
18 March – last day to withdraw from a class  
23-27 March – Spring Break  
28 April – last day of classes

**Students with disabilities:** It is the policy of the University of AR at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**Statement on disruptive behavior:** The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. **THIS INCLUDES THE USE OF CELL PHONES (RINGING OR TEXTING DURING CLASS). You will be given a zero (0) for this course if you free handle a venomous snake or purposely kill an animal without consent from your instructor.**

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will fail the course.



# SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES SYLLABUS

**INSTRUCTOR NAME:** Dr. Edmond J. Bacon

**TELEPHONE:** Office 870- 460-1066 Home 870-367-0407 Cell 870-723-4671

**INSTRUCTOR EMAIL ADDRESS:** bacon@uamont.edu

**OFFICE NUMBER:** Room B-29 in Science Center

**OFFICE HOURS:** MW 10:00 – 12:00; MW 2:00 – 3:00; TTH 8:15 – 9:00

**COURSE TITLE AND CREDIT HOURS:** Biology 3394 Ichthyology, 4 credit hours

**COURSE DESCRIPTION:** Taxonomy and biology of fishes. Special emphasis is placed on the identification of the local and regional faunas.

**PREREQUISITES:** Biol. 1153 General Zoology and Biol. 1161 General Zoology Lab

**REQUIRED TEXTBOOKS:** Pflieger, W. 1997. The Fishes of Missouri

**TECHNICAL SUPPORT INFORMATION:** Issues with Blackboard: Contact Office of Academic Computing; phone 870-460-1663. Open Monday-Friday, 8 a.m.-4:30 p.m. **Help Desk** at [fendley@uamont.edu](mailto:fendley@uamont.edu) or phone 870-460-1663. The computer section in the Library is open during regular Library hours. Click here to see when the Taylor Library is open: <http://www.uamont.edu/library/>

Issues with Email: Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.

The Student Handbook for Distance Education is available at the following link: <http://www.uamont.edu/AcademicComputing/>

**MINIMUM TECHNOLOGY REQUIREMENTS:** For minimum technology requirements, visit: <http://kb.blackboard.com/pages/viewpage.action?pageId=38830689>

*Example:* Access to a working computer with Internet capability.  
Operating System: Windows 2000, XP, Vista or Macintosh OS X  
Hardware: 256 MB of RAM, 1GB free hard disk space  
Microsoft Office 2007 recommended  
Connection to the Internet: (broadband connection, such as RoadRunner, Satellite Internet or DSL, is preferred). Broadband connections are recommended for assessments.

**FEEDBACK SCHEDULE:** Information regarding instructor response and availability. *For example:* Most often, a student can expect a response to email within 24 hours Monday through Friday. No emails will be answered after 5 p.m. on Friday until the following Monday.

**ATTENDANCE POLICY /PARTICIPATION REQUIREMENTS:**

It is a University policy that students are expected to attend classes for which they are enrolled. Arriving **late** to class or **leaving early** is unacceptable. Students who are frequently absent from class and laboratory exercises consistently receive lower grades. Some field trips may depart before 1:00 p.m. and return after 5:00 p.m. **A total of 50 points in lab and field quizzes will be given.**

**EMERGENCY OR INTERRUPTION IN COMPUTER SERVICE POLICY:**

Prepare for unexpected problems and emergencies. Understand that problems and glitches do occur in online learning as they do in any learning environment. Have a back-up plan such as using the computers at a local library for submitting assignments in case your computer crashes or your service is interrupted.

**ASSESSMENTS:** The final grade will be based on three lecture exams, three laboratory exams, and laboratory and field quizzes. Laboratory examinations and quizzes constitute 54 percent of the final grade.

GRADING SCALE

90-100 = A  
80- 89 = B  
70- 79 = C  
60- 69 = D  
00- 59 = F

GRADE POINTS

Lecture Exam I = 100  
Lecture Exam II = 100  
Lecture Exam III = 100  
Lab Exam I = 100  
Lab Exam II = 100  
Lab Exam III = 100  
Lab & Field Quizzes = 50

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TOTAL POINTS = 650

**STUDENTS WITH DISABILITIES:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any approved accommodations at the beginning of the course. Any student with questions regarding

accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870-460-1926.

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **ACADEMIC DISHONESTY**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a zero grade for the examination.

**COURSE OUTLINE/CALENDER:**

<u>DATE</u>	<u>LECTURE</u>	<u>ASSIGNMENT</u>
20 - 27 Aug	Introduction	
27 - 31 Aug	Systematics	Study Guide
03 - 10 Sep	Basic Fish Anatomy	Supplemental
17 - 30 Sep	Classification of Fishes	Study Guide & pp. 23-351
<b>03 OCT</b>	<b>EXAMINATION I</b>	<b>SUPPLEMENTAL &amp; PP. 23-351</b>
06 - 15 Oct	Fish Anatomy	Study Guide
17 - 24 Oct	Physiology of Fishes	Study Guide
27 - 31 Oct	Ecology of Fishes	Study Guide and pp. 23-351
<b>03 NOV</b>	<b>EXAMINATION II</b>	<b>STUDY GUIDES &amp; PP. 23-351</b>
05 - 10 Nov	Age and Growth of Fishes	Study Guide
12 - 14 Nov	Reproduction of Fishes	Study Guide
17 – 21 Nov	Parasites and Diseases of Fishes	Study Guide
24 Nov - 05 Dec	Fish Culture	Study Guide
<b>11 DEC</b>	<b>EXAMINATION III</b>	<b>STUDY GUIDES</b>

### **LABORATORY SCHEDULE**

<b>21</b> – 28 Aug	Identification of Fishes: Families
04 Sep	Identification of Fishes: Family Centrarchidae
11 Sep	Identification of Fishes: Family Ictaluridae
18 – 25 Sep	Identification of Fishes: Family Percidae
<b>02 OCT</b>	<b>LABORATORY EXAMINATION I</b>
09 Oct	Identification of Fishes: Family Catostomidae
16 - 23 Oct	Identification of Fishes: Family Cyprinidae
30 Oct	Identification of Fishes: Miscellaneous Species
<b>06 NOV</b>	<b>LABORATORY EXAMINATION II</b>
13 Nov	Anatomy of Fishes: <u>Amia</u> Skull and <u>Perca</u> Skull and Skeleton
13 Nov	Anatomy of <u>Perca</u> and <u>Oncorhynchus</u>
20 Nov	Review of Fishes
<b>04 DEC</b>	<b>LABORATORY EXAMINATION III</b>

### **SPECIAL DATES OF CONCERN:**

**22 Aug - last day to register or add a class**

**29 Oct - last day to drop with a W**

**05 Dec – last day of class**

**08 – 12 Dec – Final exam week**

**STATEMENT ON DROP DATE: Students who drop a course before October 29, 2014 will receive the grade of "W."**

**GRADE REPORTS:** UAM will no longer mail grade reports to all students. You may access your grades through Campus Connect on the UAM homepage, <http://www.uamont.edu>. To have your grades mailed to you, complete the grade request form available in the Registrar=s Office in Monticello or the Student Services offices in Crossett and McGehee.

**BIOL 3413—Mammalogy**  
**Fall 2013, B19, Science Center**  
**MWF 12:10-1:00**

**Instructor:** Dr. John L. Hunt. **E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Phone:** 870-460-1466. **Web page:** <http://www.uamont.edu/facultyweb/Huntj>. **Office:** B11, Science Center. **Office hours:** M 2:00-3:00, TTh 9:00-9:30, F 2:00-3:00, or by appointment.

**Text:** Feldhamer, G. A., L. C. Drickamer, S. H. Vessey, J. F. Merritt, and C. Krajewski. 2007. *Mammalogy: adaptation, diversity, ecology*. (3<sup>rd</sup> edition—ISBN 978-0-8018-8695-9). Johns Hopkins University Press, Baltimore, 643 pp. (Available at UAM bookstore, \$99.50 new, \$74.75 used). You may also rent this textbook at the UAM Bookstore. Older editions of the text are also acceptable.

**Objective:** To introduce the student to characteristics, origins, ecology, behavior, reproduction, physiology, and diversity of mammals.

**Lab:** Mammalogy Lab is a separate class, covered by a separate syllabus, with a separate grade.

**Tests and grading:** Grades will be computed as a percentage of 600 points. Of these, 400 points will come from 4 hourly exams, 150 will come from the final exam, and 50 will come from unannounced quizzes. Grading will be on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). There is no curving of the grade or “extra” credit. Points will be earned from scheduled examinations and from unannounced quizzes.

Exams will consist of a mixture of essay, short answer, and objective-type questions, and may include some drawing. Bonus questions may come directly from reading assignments that may never have been discussed in class. Each test will cover material beginning with the previous exam, and continuing through the last class day before the exam. Exams will be on the dates listed below. These dates *will not* change. The final exam will be Thursday, December 12, at 10:30 a.m. The final exam is comprehensive; all other exams are not comprehensive.

The number of quizzes is approximate. There will be an average of 1 quiz per week at the beginning of one of the lecture periods. There will be at least 10 quizzes during the semester; if there are more, students will be allowed to drop the lowest scores to get down to 10 quizzes. These quizzes will be unannounced and will consist of one to five questions from the previous day’s lecture. Quizzes are designed to encourage daily review and study, and regular attendance and promptness, and therefore, **MAY NOT** be made up

**Attendance:** Attendance at all lectures, exams, and lab sessions is mandatory. Attendance will be recorded regularly. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance. Those students who miss more than three class periods without a university-approved excuse will be docked one point from the final grade for each missed class. For example, a

student who earns a 90 average for the class but has five unexcused absences will receive a grade of B for the class. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day*.

Quizzes may not be made up. However, missed quizzes will not count against the grade of any student who presents the instructor with an approved excuse for his absence. Approved excuses do not include “hung over,” “overslept,” “my car was busted,” “wacky frat party,” or “went hunting with some friends, and that should count, since we killed some squirrels, and squirrels are mammals.” Students with approved excuses may make up missed exams, by arrangement with the instructor, *at the convenience of the instructor*. Please be aware that make-up exams will NOT be the same exam given during the normal class period. It is important for you to note that you are responsible for material covered in every class and every lab session, even if you miss the class with an excused absence. It is your responsibility to obtain the material you have missed from your classmates.

**Class web page.** The class web page may be found at: <http://www.uamont.edu/facultyweb/Huntj/mammalogy.htm>. On this page there are lists of terms to know and lecture outlines for each of the chapters of the text we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Class policies:** Mammalogy is a demanding class, with a large number of terms and concepts to be mastered. Expect to spend a great deal of out-of-class time studying. The instructor is here to help you; please feel free to ask questions at any time. You are encouraged to seek my help outside of regular class hours if you are so inclined.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **IF I SEE YOU TEXT-MESSAGING OR SURFING THE WEB DURING CLASS, YOU WILL BE ASKED TO LEAVE.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is October 30. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Students with disabilities:** It is the policy of the University of Arkansas-Monticello to accommodate students with disabilities in accordance with federal law. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring

accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026; TDD 870-460-1626; fax 870-460-1926.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

5. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
6. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
7. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
8. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Material to be covered:** These topics will be covered in the order listed below. Students are expected to read the indicated chapters as we cover each topic.

Introduction and review (Chapter 1); History of mammalogy (Chapter 2); Techniques for study (Chapter 3); Evolution of mammals (Chapter 4); Skin, skeleton, muscle (Chapter 6); Locomotion (Chapter 6); Foods and feeding (Chapter 7); Nervous systems (Chapter 8); Environmental adaptations (Chapter 9); Reproduction (Chapter 10); Monotremes and marsupials (Chapter 11); Insectivora and relatives (Chapter 12); Chiroptera (Chapter 13); Primates (Chapter 14); Cingulata and relatives (Chapter 15); Carnivora (Chapter 16); Cetacea (Chapter 17); Rodentia and Lagomorpha (Chapter 18); Proboscidea and relatives (Chapter 19); Hoofed mammals (Chapter 20); Communication (Chapter 21); Reproductive behavior (Chapter 22); Social behavior (Chapter 23); Habitat selection (Chapter 24); Populations and life history (Chapter 25); Community ecology (Chapter 26); Zoogeography (Chapter 5); Parasites and diseases (Chapter 27); Domestication (Chapter 28); Conservation (Chapter 29).



**Important dates:**

First day of class	August 21
Labor day (no class)	September 2
Exam I	September 20
Exam II	October 14
Weekend Field Trip (Lab)	October 18-20
Last day to drop	October 30
Exam III	November 11
Thanksgiving holiday	November 27-29
Last day of class	December 6
Comprehensive final exam	December 12 (10:30 a.m.)

University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
Regional Flora Course Syllabus  
Spring 2015, TTh 8-9:40am, B18; T 1:40-4:30pm, B5

**Instructor Name:** Karen Fawley, Ph.D  
**Instructor Location of Office:** Museum of Natural History, Room 101  
**Instructor Phone:** 870-460-1165  
**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)  
**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>  
**Office hours:** MW, 9-11am; Th, 1:30-3pm or by appointment.  
**Course Title and Credit Hours:** Biology 3434, Regional Flora, 4 credit hours

**Course Description:** The identification, preparation, and classification of regional vascular plants

**Prerequisite:** Biology 2143 (A.C.T. equivalent BIOL 1034) (General Botany) and Biology 2171 (General Botany Lab)

**Required Textbooks:** Smith, E.B. *Keys to the Flora of Arkansas*. University of Arkansas Press, 1994. **ISBN-10:** 1557283125

Harris, J.G. and Harris, M.W. *Plant Identification Terminology: An Illustrated Glossary*, Spring Lake Publishing, 2<sup>nd</sup> edition. 2001. **ISBN-10:** 0964022168

**Student Learning Outcomes:** To familiarize students with regional vascular plants, plant identification, specimen preparation, and the principles of plant classification and nomenclature.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** **Use of tobacco products is not permitted on UAM grounds.**

**Cell phones and all electronics should be turned off and put away during class. Any cell phone that is found on a student's desk during a quiz will result in an automatic zero.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4-5 of this syllabus will be applied to all exams.

**Course Content Outline/Calendar:**

Date	Lecture/Lab* Topic
Th Jan 8	Introduction/Botanical Nomenclature
T Jan 13	Descriptive Terminology-vegetative characters *
Th Jan 15	Class cancelled by instructor
T Jan 20	Descriptive Terminology-flowers*
Th Jan 22	Quiz 1 - Descriptive Terminology-vegetative characters/flowers
T Jan 27	Descriptive Terminology-fruits*
Th Jan 29	Quiz 2- Descriptive Terminology-fruits
T Feb 3	Plant Collecting and Documentation*; Use of Keys*;
Th Feb 5	Review of Plant Evolution; Plant Classification; Basal Angiosperm Groups
T Feb 10	Basal Angiosperm Groups*/Eudicots, Part 1*
Th Feb 12	Quiz 3- Basal Angiosperm Groups; Eudicots, Part 1
T Feb 17	Eudicots, Part 2*
Th Feb 19	Quiz 4- Eudicots, Part 2
T Feb 24	Eudicots, Part 3*
Th Feb 26	Quiz 5 - Eudicots, Part 3
T Mar 3	Monocots, Part 1*
Th Mar 5	Quiz 6-Monocots, Part 1
T Mar 10	Monocots, Part 2*
Th Mar 12	Quiz 7-Monocots, Part 2

T	Mar 17	Arkansas Natural Divisions and Ecoregions, Part 1/ Keying/Plant Press Exercise #1*
Th	Mar 19	Arkansas Natural Divisions and Ecoregions, Part 1
M-F	Mar 23-27	SPRING BREAK!
T	Mar 31	Arkansas Natural Divisions and Ecoregions, Part 1 Keying /Plant Press Exercise #2*
Th	Apr 2	Class cancelled by instructor
T	Apr 7	Quiz 8-Arkansas Natural Divisions and Ecoregions, Part 1 Keying/Plant Press Exercise #3*
Th	Apr 9	Arkansas Natural Divisions and Ecoregions, Part 2
T	Apr 14	Arkansas Natural Divisions and Ecoregions, Part 2 Keying/Plant Press Exercise #4*
Th	Apr 16	Quiz 9-Arkansas Natural Divisions and Ecoregions, Part 2
T	Apr 21	Arkansas Natural Divisions and Ecoregions, Part 3 Keying /Plant Press Exercise #5*
Th	Apr 23	Arkansas Natural Divisions and Ecoregions, Part 3
T	Apr 28	Quiz 10-Arkansas Natural Divisions and Ecoregions, Part 3 Keying/Plant Press Exercise #6

**Fieldtrips:** Fieldtrip opportunities will most likely occur on weekends (usually on Saturday) in March and April. Transportation will be provided for each field trip.

**Provisions for tests and evaluations:**

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Make-up Quizzes:** Due to time constraints, there will be no make-up labs or make-up quizzes. However, students can drop 1 in-lab evaluation and 1 quiz during the semester.

**Grading Policy:**

		<u>%Grading scale</u>
Quizzes	180 pts	90-100 A
In-Lab Evaluation	280 pts	80-89 B
Plant Collection Assignments	<u>200 pts</u>	70-79 C
	660 pts	60-69 D
		Below 60 F

**Special dates of concern:**

Wednesday, January 7	First day of classes.
Monday, January 19	Martin Luther King, Jr. Day
Tuesday, January 9	Last day to register of add classes.
Friday, February 27	Deadline to file for Aug and Dec 2015 graduation
M-F (March 23-27)	Spring Break!
Wednesday, March 18	Last day to drop W.
Monday, April 6	Preregistration for Fall and Summer 2015 begins
Friday, April 17	Preregistration for Fall and Summer 2015 ends.
Tuesday, April 28	Last day of classes.
W-T, Apr 29-May 5	Final exam period.
Friday, May 8	Commencement

**Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 121; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exam.

**BIOL 3451—Mammalogy Lab**  
**Fall 2013, B31, Science Center**  
**Thursday 1:40-4:30**

**Instructor:** Dr. John L. Hunt. E-mail: [huntj@uamont.edu](mailto:huntj@uamont.edu). Phone: 870-460-1466. Web page: <http://www.uamont.edu/facultyweb/Huntj>. Office: B11, Science Center. Office hours: MWF, 8:00-9:00, Monday, Tuesday, and Friday, 2:00-3:00, or by appointment.

**Suggested text:** Sealander, J. A., and G. A. Heidt. 1990. Arkansas mammals: their natural history, classification, and distribution. The University of Arkansas Press, Fayetteville, 308 pp. This book is out of print, but copies are sometimes available from web-based booksellers.

**Objective:** To introduce the student to diversity of mammals in Arkansas, and to techniques used to study them.

**Tests and grading:** Grading will be on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). There is no curving of the grade or “extra” credit. Points will be earned from scheduled examinations, from a major paper, from lab exercises, and from announced and unannounced quizzes. Exams will consist of a mixture of practical, essay, short answer, and objective-type questions, and may include some drawing.

**Attendance:** Attendance at all lab meetings and exams is mandatory. Please note that some labs require attendance early in the morning, late at night, and on weekends. There will be a weekend field trip to the Ouachita Mountains Biological Station near Mena, October 18-20. Check out their website at: <http://www.theombs.org/> Your success in this course is directly dependent upon your attendance and participation in the lab. To this end, one percentage point will be removed from your class grade for each unexcused lab absence. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day*. It is important for you to note that you are responsible for material covered in every lab, even if you miss the lab with an excused absence. It is your responsibility to obtain the material you have missed.

**Missed exams:** Missed exams may be made up only by students with an approved university excuse, by arrangement with the instructor. Approved university excuses do not include “had to work,” “hung over,” “overslept,” or “my car is busted.” Please be aware that any made-up exam may NOT be the same exam given during the normal class period. Students are responsible for all material presented in class, even with an approved university excuse for missing a class. It is the responsibility of the student to obtain missed material from classmates.

**Class policies:** Mammalogy lab is a demanding class, with a large number of terms and concepts to be mastered. Expect to spend a great deal of out-of-class time

studying. The instructor is here to help you; please feel free to ask questions at any time. You are encouraged to seek my help outside of regular class hours if you are so inclined.

Mammalogy lab is designed as a FIELD LAB. You should come prepared to spend the entire lab time outdoors, rain or shine. Some labs will require you to get wet, muddy, or dirty. Labs will often entail moving through heavy brush and thorns, climbing up steep hills, and providing blood meals for mosquitoes, ticks, chiggers, and flies. If this doesn't sound like fun to you, you may be in the wrong line of work. Use common sense in deciding what to bring into the field with you. You may want sunglasses, hat, sunscreen, insect repellent, machete, and water. You should always dress appropriately--don't wear nice clothes. Long pants and heavy shoes are always recommended.

Use of tobacco products in University vehicles or on University property is strictly prohibited (this means no "dippin'"). You may bring food or snacks, but you must not leave paper or trash in the van or at any of the field sites we visit.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **IF I SEE YOU TEXT-MESSAGING OR SURFING THE WEB DURING CLASS, YOU WILL BE ASKED TO LEAVE.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM catalog.

The last date to drop this course with a W (and for most other courses at UAM) is October 30. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Students with disabilities:** It is the policy of the University of Arkansas-Monticello to accommodate students with disabilities in accordance with federal law. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026; TDD 870-460-1626; fax 870-460-1926.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

9. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;



- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for one's self.
10. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
11. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
12. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Tentative schedule:** Because of the vagaries of weather, the schedule of the mammalogy lab must be considered to be somewhat fluid. The following schedule is subject to change with or without notice. Be prepared!

August 22	Introduction
August 29	Skulls & Bones
September 5	Mammals of Arkansas
September 12	Library
September 19	Basic trapping (will require activity outside regular lab hours)
September 26	Scientific Writing
October 3	TBD
October 10	Mammals of Arkansas/Skull & Bones review
October 17	Mid-term Exam
October 18-20	Weekend field trip
October 24	Trapping grid (will require activity outside regular lab hours)
October 31	Tracks and Scats
November 7	TBD (First draft of paper due)
November 14	Zoo trip
November 21	TBD (Final draft of paper due)
November 27-29	Thanksgiving holiday
December 5	Lab Final



**BIOL 3484**  
**General Ecology**  
**4 Credit Hours**  
**Fall 2014**  
**Lecture: 9:10-10:00 MWF**  
**RM B19**  
**Lab: T 1:40-4:30**  
**RM B31**

**Instructor:** Dr. Christopher G. Sims

**Office:** B 4

**Office Phone:** 460-1664

**E-mail:** [simsc@uamont.edu](mailto:simsc@uamont.edu)

**Web Site:** [www.uamont.edu/facultyweb/sims](http://www.uamont.edu/facultyweb/sims)

**Office Hours:** 8:00-9:00 or 1:00-2:00 MWF; TH 9:00-11:00. I will be in the office at other times as well. Changes in this schedule may occur and will be posted outside my door or announced in class.

**Textbook:** Smith, T. M. and R. L. Smith, *Elements of Ecology*, 9<sup>th</sup> ed. ISBN-10: 0321934180 • ISBN-13: 9780321934185

**Prerequisites:** BIOL 2153 and 2161 General Zoology (ACTS #: BIOL 1054), BIOL 2143 and 2171 General Botany (ACTS #: 1034) and 6 hours of chemistry

**Objectives:** In this course we will study the environment and its components including energy flow, population and community structure, ecological succession, how evolution influences ecological structure.

<b>Course Grade:</b>	Exam 1:	100 pts.
	Exam 2:	100 pts.
	Exam 3:	100 pts.
	Final Exam:	100 pts.
	3 journal article summaries 20 pts each.	
	<u>Lab (lab summaries, paper discussions, etc.)</u>	<u>100 pts.</u>
	Total for Course:	500 pts.

**Grade Scale (percentage):**

A = 100-89.5, B = 89.4-79.5, C = 79.4-69.5, D = 69.4-59.5, F ≤ 59.4

\*\*\*\*\***NO EXTRA CREDIT** will be given under any circumstances!!!

**Assignments and grading may change at the discretion of the instructor.** Prior notice will be given in all cases.

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted on my website. If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone.

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory and will be recorded regularly.

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

Cheating in any form will not be tolerated and will automatically result in **failure** of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication device) during a test will be considered an attempt to cheat by the student.

Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor.

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to

to inform the instructor of any approved accommodations at the beginning of the course. Any student with questions regarding accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870 460-1926.

**Statement on disruptive behavior:** The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

<b>Tentative Lecture Schedule (some topics will not be covered):</b>	<b>Chapters:</b>
Introduction and Background	1 and 5
The Physical Environment	2-4
<b>Exam I</b>	
The Organism and Its Environment	7-8
<b>Exam II</b>	
Populations	9-13
<b>Exam III</b>	
Species Interactions	14-15
Communities	16-18
<b>Final</b>	<b>Wed. Dec. 10, 10:30 A.M.</b>

**Tests will be announced at least one week in advance.**

**Tentative Lab Schedule (dates will change so be sure to keep up):**

26-Aug	Intro to stats.
2-Sep	Muscle Sampling
9-Sep	Muscle Sampling Analysis
16-Sep	Paper Discussion 1
<b>23-Sep</b>	<b>Test #1</b>
30-Sep	Plot Sampling
6-Oct	Plot Sampling Analysis
14-Oct	Paper Discussion 2
<b>21-Oct</b>	<b>Test #2</b>
28-Oct	Succession
	5 Oaks Field trip (we will be late returning to
4-Nov	campus)
<b>11-Nov</b>	<b>Test #3</b>
18-Nov	Winter Territoriality
25-Nov	Paper Discussion 3
2-Dec	<b>TBA</b>

**Important Dates:**

**August 20 (Wed) – First day of classes for sessions 1 and 8W1. Admission application deadline.**

**August 22 (Fri) – Last day to register or add classes for sessions 1 and 8W1.**

**September 1 (Mon) – Labor Day Holiday. Offices and classes closed.**

**September 6 (Sat) – Parent/Family Appreciation Day.**

**October 3 (Fri) –Deadline to apply for May graduation.**

**October 11 (Sat) – Homecoming**

**October 29 (Wed) – Last day to drop a session 1 class or withdraw from the term (not**

**November 3 (Mon) - Preregistration for Spring 2015 begins.**

**November 14 (Fri) - Preregistration for Spring 2015 ends.**

**November 26 (Wed) - Classes closed.**

**November 27-28 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.**

**December 5 (Fri) - Last day of classes.**

**December 8-12 (Mon-Fri) - Final exam period.**

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
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4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be failure in the course.

**Biology 3493—Environmental Science**  
**Department of Mathematical and Natural Sciences**  
**Fall 2014, MWF 11:10-12:00**  
**Science Center, Room B3**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Web page:** <http://www.uamont.edu/facultyweb/Huntj>.  
**Office Hours:** 9-10 M-F, 2-3 M, T, Th, F, or by appointment.

**Text** (required): Cunningham, W. P., and M.A. Cunningham. 2015.  
*Environmental science: a global concern*. Thirteenth edition. (ISBN 978-0-07-353254-7). McGraw Hill Higher Education, Boston, Massachusetts. 614 pp. (Available from the UAM bookstore, \$167.25 used). You may also rent this textbook.

**Class Web Page.** The class web page may be found at:  
<http://www.uamont.edu/facultyweb/huntj/Environmental%20Science.htm>. On this page there are lists of terms to know and lecture outlines for each of the chapters of the text we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Course Objectives:** The class is a survey of the environment, to provide an understanding of and respect for the ecosystems upon which humans are dependent. We will focus on human impacts on the environment.

**Grading:** Grading is on the standard 10-point scale. Points will be computed as a percentage of 500 points. In the unlikely event that a curve is applied to the grade, it will be done at the end of the course. There are no “bonus” points, and no “extra” credit. Points will consist of the following:

Three 100-point exams	300
10 unannounced quizzes	50
Final exam (comprehensive)	150

Exam dates are September 19, October 15, November 10, and December 8.  
**These dates will not change.** Exams will consist of a mixture of essay, short answer, and objective-type questions, and may also require some drawing. Only the final exam will be comprehensive. The final exam will be on Monday, December 8, at 1:30 p.m. There will be at least one quiz per week; these quizzes will be unannounced and will consist of one to five questions from the lecture material from the previous day. Quizzes are designed to encourage daily review and study, as well as regular attendance and promptness, and therefore MAY NOT be made up. **Note:** the number of quizzes is approximate. There may be more than 10 quizzes; if this occurs you may drop your lowest quiz grades. Slight changes in the grading scheme may occur at the discretion of

the instructor.

**Attendance:** Attendance at all lectures and exams is mandatory. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance. Those students who miss more than three class periods without a university-approved excuse will be docked one point from the final grade for each missed class. For example, a student who earns a 90 average but has five unexcused absences will receive a grade of B for the class. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day.*

Missed exams may be made up only by students with an approved university excuse, by arrangement with the instructor. Approved university excuses do not include “hung over,” “overslept,” or “my car is busted.” Please be aware that any made-up exam may NOT be the same exam given during the normal class period. Students are responsible for all material presented in class, even with an approved university excuse for missing a class. It is the responsibility of the student to obtain missed material from classmates.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **IF I SEE YOU TEXT-MESSAGING OR SURFING THE WEB DURING CLASS, YOU WILL BE ASKED TO LEAVE.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is October 29. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

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- c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
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  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Subjects to be covered (with suggested reading assignments where appropriate):** Lecture subjects will follow the order in the textbook, beginning at Chapter 1 and continuing until we run out of time. We may skip some chapters, but the instructor will give you advance warning of any impending skips.

**Important dates:**

August 20	First day of class.
September 1	Labor Day—no class.
September 19	Exam I.
October 15	Exam II.
October 31	Last day to drop.
November 10	Exam III.
November 26-28	Thanksgiving holiday—no class.
December 5	Last day of class.
December 8	Final Exam, 1:30 p.m. <i>Comprehensive!!!</i>

## **SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES SYLLABUS**

**INSTRUCTOR NAME:** Dr. Edmond J. Bacon

**TELEPHONE:** Office 870- 460-1864 Home 870-367-0407 Cell 870-723-4671

**INSTRUCTOR EMAIL ADDRESS:** bacon@uamont.edu

**OFFICE NUMBER:** Room B 20 in Science Center

**OFFICE HOURS:** MW 9:00 – 10:00, 1:30 – 3:00; T 9:30 – 11:00; 1:30 – 3:00

**COURSE TITLE AND CREDIT HOURS:** Biology 3503 Marine Biology, 3 credits

Required Text: Castro and Huber. 2013. Marine Biology. 8<sup>th</sup> or 9<sup>th</sup> Edition

**PREREQUISITES:** Biol. 2153 and 2161 or Biol. 2083 and 2091

### **COURSE OBJECTIVES:**

To acquaint the student with the biological, chemical, and geological features of marine ecosystems with special emphasis on the identifications of common organisms found in the Gulf of Mexico.

### **STUDENT LEARNING/OUTCOMES:**

By the conclusion of this course the student should understand the morphology, function, ecology, and life histories of common marine ecosystems and animals living in the oceans of the world.

**TECHNICAL SUPPORT INFORMATION:** Include the information below in your syllabus: Issues with Blackboard: Contact Office of Academic Computing; phone 870-460-1663. Open Monday-Friday, 8 a.m.-4:30 p.m. **Help Desk** at [fendley@uamont.edu](mailto:fendley@uamont.edu) or phone 870-460-1663. The computer section in the Library is open during regular Library hours. Click here to see when the Taylor Library is open: <http://www.uamont.edu/library/Issues> with Email: Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.



The Student Handbook for Distance Education is available at the following link:  
<http://www.uamont.edu/AcademicComputing/>

**ATTENDANCE POLICY /PARTICIPATION REQUIREMENTS:**

It is a University policy that students are expected to attend classes for which they are enrolled. Arriving **late** to class or **leaving early** is unacceptable. Students who are frequently absent from the class typically receive lower grades. Make up exams and quizzes will be given at the end of the semester for students with official documentations for absences. **Cell telephones and electronic devices must be turned off during the class. No head phones or electronic devices are allowed to be used during examinations. Students will not be given the exam until they comply with these regulations.**

**EMERGENCY OR INTERRUPTION IN COMPUTER SERVICE POLICY:**

Prepare for unexpected problems and emergencies. Understand that problems and glitches do occur in online learning as they do in any learning environment. Have a back-up plan such as using the computers at a local library for submitting assignments in case your computer crashes or your service is interrupted.

**ASSESSMENTS:** The final grade will be based on three laboratory exams and laboratory exercises.

GRADING SCALE

90-100 = A  
80- 89 = B  
70- 79 = C  
60- 69 = D  
00- 59 = F

GRADE POINTS

Exam I = 150  
Exam II = 150  
Exercise I = 50  
Exercise II = 50

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TOTAL POINTS = 400

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's

commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a zero grade for the examination.

**COURSE OUTLINE/CALENDER:**

<u>TOPIC</u>	<u>CHAPTER</u>
The Science of Marine Biology	1
The Sea Floor	2
Chemical and Physical Features of the Oceans	3
Fundamentals of Biology	4
The Microbial World	5
Multicellular Primary Producers	6
An Introduction to Marine Ecology	10
<b>HOUR EXAM I</b>	<b>1, 2, 3, 4, 5, 6, &amp;10</b>
Marine Animals	7, 8, & 9
Marine Ecology	10
Life Between the Tides	11
Estuaries	12
Life on the Continental Shelf	13
Coral Reefs	14
Life Near the Surface	15
The Ocean Depths	16
<b>HOUR EXAM II</b>	<b>7 - 16</b>

**SPECIAL DATES OF CONCERN:**

**08 Jan - last day to register or add a class**

**18 Mar – last day to drop a class**

**23–27 Mar – Spring Break**

**28 Apr – last day of class**

**29 Apr–05 May – Final Exam Period**

## SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES

**INSTRUCTOR NAME:** Dr. Edmond J. Bacon

**TELEPHONE:** Office 870- 460-1864 Home 870-367-0407 Cell 870-723-4671

**INSTRUCTOR EMAIL ADDRESS:** bacon@uamont.edu

**OFFICE NUMBER:** Room B 20 in Science Center

**OFFICE HOURS:** MW 9:00 – 10:00, 1:30 - 3:00; T 9:30 – 11:00; 1:30 – 3:00

**COURSE TITLE AND CREDIT HOURS:** Biology 3511 Marine Biology Lab, 1 credit

Required Text: Castro and Huber. 2013. Marine Biology. 8<sup>th</sup> or 9<sup>th</sup> Edition

**PREREQUISITES:** Biol. 2153 and 2161 or Biol. 2083 and 2091

### **COURSE FORMAT AND/OR OBJECTIVES**

To acquaint the student with the biological, chemical, and geological features of marine ecosystems with special emphasis on the identifications of common organisms found in the Gulf of Mexico.

### **STUDENT LEARNINGS OUTCOMES:**

By the conclusion of this course you should understand the classification, morphology, function, identification, and life histories of common marine invertebrates in the Gulf of Mexico.

### **ATTENDANCE POLICY /PARTICIPATION REQUIREMENTS:**

It is a University policy that students are expected to attend classes for which they are enrolled. Arriving **late** to class or **leaving early** is unacceptable. Students who are frequently absent from the laboratory exercises consistently receive lower grades. Make up exams will be given at the end of the semester for students with official documentations for absences.

## ASSESSMENTS:

### GRADING POLICY

Lab Exam I	100
Lab Exam II	100
TOTAL POINTS	200

### GRADING SCALE

90 - 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
00 - 59 = F

**BASIS OF FINAL GRADE:** The final grade is based on two lab examinations.

### CELL PHONES AND ELECTRONIC DEVICES:

All cell phones and electronic devices must be turned off during the class and laboratory. Computers including ipads are allowed to be used during lectures and laboratory exercises, but cannot be used during examinations.

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

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## **ACADEMIC DISHONESTY:**

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  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
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For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a zero grade for the examination.

**COURSE OUTLINE/CALENDER:**

**LABORATORY**

<u>TOPIC</u>	<u>CHAPTER</u>
Analysis of Water	2 and Study Guides
Primary Productivity	4, 5, & 6
Marine Algae and Plants	4, 5, & 6
<b>LABORATORY EXAM I</b>	<b>2, 4, 5, 6 AND STUDY GUIDES</b>
Identification of Marine Animals	7, 8, 9 and Study Guides
<b>LABORATORY EXAM II</b>	<b>7, 8, 9, AND STUDY GUIDES</b>

**SPECIAL DATES OF CONCERN:**

**09 Jan - last day to register or add a class**

**18 Mar - last day to drop a class**

**23–27 - Mar – Spring Break**

**28 Apr - last day of class**

**29 Apr - 05 May - Final Exam Period**





University of Arkansas at Monticello  
School of Mathematical and Natural Science



## Ornithology

BIOL 3524

Spring 2014

Lecture MWF 12:10-11:00 RM B3

Lab H 8:10-11:00 RM B31

**Instructor:** Dr. Christopher G. Sims

**Office:** B 4

**Office Phone:** 460-1664

**E-mail:** [simsc@uamont.edu](mailto:simsc@uamont.edu)

**Web Site:** <http://www.uamont.edu/facultyweb/Sims/>

**Office Hours:** MWF 8:00-9:00 or 2:00-3:00; T 9:00-11:00; H 1:00-3:00. I will be in the office at other times as well. Changes in this schedule may occur at any time and will be posted outside my door or announced in class. If you need to see me it is strongly recommended that you e-mail and we can schedule an appointment.

**Course Title and Credits:** Ornithology (BIOL 3524); 4 Credit Hours

**Course Description:** In this course we will study the taxonomy and natural history of birds, emphasizing the local fauna. This will include knowledge of the basic biology of avian taxa as well as the evolutionary history that has resulted in such a diverse and interesting group of vertebrates. Along with this you will develop an ability to identify multiple species by sight as well as by song.

**Prerequisites:** BIOL 2153 and BIOL 2161

**Textbook:** Frank B. Gill, *Ornithology*, Third Edition. W. H. Freeman and Company. ISBN-13: 978-0-716749837

**Field Guide:** Roger Tory Peterson, *A Field Guide to Birds of Eastern and Central North America*, Houghton and Mifflin Co.

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory and will be recorded regularly.

**You will be allowed 3 unexcused absences during the semester. After the third unexcused absence your grade will be reduced one percentage point for each unexcused absence thereafter.**

**Field trip attendance is mandatory in order to develop adequate identification skills. Failure to attend on field trip days will result in loss of 1 letter grade from your semester grade.**

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

Cheating in any form will not be tolerated and will automatically result in **failure** of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication device) during a test will be considered an attempt to cheat by the student.

\*\*\*\*\*Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor. Failure to follow this rule will result in the student being asked to leave class.

**Ethics Rule:** Anyone known to be actively engaged in killing protected species of any kind (avian or other) will automatically receive an F in this course and will be reported immediately to the state and federal authorities. It is illegal to kill any species of animal that is not designated as a game species with a legal season or an introduced species that is not protected.

**Course Grade: Lecture and Lab:**

4 Lecture Exams:	100 pts. each
Lab Exam over avian orders and families:	100 pts.
Morphology Test	100 pts.
Paper summaries (2 @ 20 pts. each)	40 pts.
<u>Lab Final (field identification):</u>	<u>100 pts.</u>
Total:	640 pts.

**Point spread:**

A = 640-572.8 pts., B = 572.7-508.8 pts., C = 508.7-444.8 pts., D = 444.7-380.8 pts., F < 380.7

\*\*\*\*\***NO EXTRA CREDIT** will be given under any circumstances!!!

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted on my website (see above). If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone or E-mail.

Lecture Schedule:	Chapter #:	Lab:
The Diversity of Birds	1	Introduction
History	2	Field Trip
Flight	5	Topography of a bird
Physiology & Feeding	6	Field Trip
Brains and Senses	7	Feathers and feather tracts
<b>Exam #1</b>		Field Trip
Vocal Communication	8	Plumage and coloration
The Annual Cycles of Birds	9	Field Trip
Migration & Navigation	10	Skeleton
<b>Exam #2</b>		Field Trip
Visual Communication	4, 11, 12	External Characters
Social Behavior	11	Field Trip
Reproduction	14	Field Identification
<b>Exam #3</b>		Field Trip
Nests & Incubation	15	Field Technique Demonstration
Parents and Offspring	16	Field Trip
		Campus Birding
		Field Trip
		Orders and Families
		Field Trip
		Territoriality
		Field Trip

<b>Final</b>		<b>Thursday, May 3, 10:30-12:30 PM</b>
Tests will be announced at least one week in advance.		

\*\*\*\*\***The Lab schedule is a tentative schedule and will change often with weather etc. Check your UAM e-mail often for announcements and changes.**

**Important Dates:**

- January 8 (Wed) - First day of classes for sessions 1 and 8W1 classes. Admission application deadline.
- January 10 (Fri) - Last day to register or add classes.
- January 13 (Mon) – First day of classes for sessions 6W1 and C2.
- January 20 (Mon) - Martin Luther King Holiday. Offices and classes closed.
- February 21 (Fri) - Deadline to apply for August and December graduation.
- March 19 (Wed) - Last day to drop a Spring 2014 (session 1) class or withdraw from the term (not applicable to 8W1, 8W2, 6W1, C1, C2, or M1 session classes). Grade(s) will be W.
- March 24-28 (Mon-Fri) - Spring Break.
- April 7 (Mon) - Preregistration for Summer and Fall 2014 begins.
- April 18 (Fri) - Preregistration for Summer and Fall 2014 ends.
- April 29 (Tues) - Last day of classes (sessions 1 & 8W2).
- April 30 - May 6 (Wed-Tues) - Final exam period.
- May 9 (Fri) - Commencement.

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; email: whitingm@uamont.edu

**Student conduct statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

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  - a. Copying from another student’s paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
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For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a failing grade (F) in the course.

**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
MICROBIOLOGY (BIOL 3553) COURSE SYLLABUS  
SPRING 2015**

**COURSE**

Microbiology (BIOL 3553). Three credit hours  
Class time: Mon, Wedn, Fri: 11:10 am – noon  
Meeting place: Science Center Auditorium

**PREREQUISITES**

Six hours of chemistry and three hours of biology

**OR**

Anatomy & Physiology II lecture (BIOL 2243) and lab (BIOL 2301) (ACTS equivalent number 2414) and three additional hours of BIOL courses.

**REQUIRED TEXTBOOK**

Microbiology, a Systems Approach, fourth edition by Cowan. Published by McGraw Hill. ISBN 9780073402437.

**INSTRUCTOR**

Dr. Mary Stewart, Ph.D.  
Phone: 870-460-1767  
e-mail: [stewartm@uamont.edu](mailto:stewartm@uamont.edu)

Please be sure to put the **m after stewart** in my email address ([stewartm@uamont.edu](mailto:stewartm@uamont.edu)).

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B12  
Office Hours: Monday: 10-11 am  
Tuesday and Thursday: 9:30 – 10:30 am and 1:30 – 2:30 pm  
Wednesday and Friday: 10 – 11 am and 1:30 – 2:30 pm

**STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, PUNCTUALITY, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, ETC.**

**Absenteeism.** Attendance is required. The opportunity to makeup exams, quizzes or other work is possible only for excused absences.

***Excused absences*** include, but are not limited to, participating in a UAM sponsored event (see the paragraph below from the UAM student handbook), being so ill that you visit a medical facility, or a death in your immediate family. It is your responsibility to contact me to discuss whether your absence is excused and to bring the appropriate documentation for your absence.

The information in the paragraph below is from the UAM student handbook:

**“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the student's name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

**Unexcused absences** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for an exam, etc.

**Punctuality.** Be on time for class and do not leave early. If you are late for class or leave class early for unexcused reasons, you may miss a quiz and you will not have the opportunity to take a makeup quiz. Quizzes will have a time limit of 10 minutes maximum, but the quiz may end before 10 minutes passes if all students present at the outset of quiz time finish before 10 minutes is up. Quizzes may be at the beginning of class, at the end of class or anytime in between. If you are late for a quiz at the beginning of class and arrive before the 10-minute time limit is up, you will be able to take the quiz, but will have only whatever time remains in the 10-minutes. If you come to class just long enough to take a quiz and then leave before class is over, you will be considered as being absent for the entire class period and you will receive zero points for the quiz even if you took it.

**Cheating and plagiarism.** Academic dishonesty and cheating will not be tolerated.

**Cell phones:** If your cell phone is out during an exam or quiz, you will be considered as cheating. Turn cell phones off and put them away!

**Hats:** If you wear a baseball hat or any type of hat with a “bill” to an exam or quiz, you must either remove the hat and put it away or turn it around so that the bill is at the back of your head, rather than covering your eyes.

- a. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - i. Copying from another student's paper;
  - ii. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - iii. Collaboration with another student during the examination;
  - iv. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - v. Substituting for another person during an examination or allowing such substitutions for oneself.
- b. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the

work submitted.

- c. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
- d. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be zero points earned on the item involved. If you are caught cheating on any item, the student(s) involved will earn a zero on that item. Additionally, for student(s) involved in cheating, all quiz grades will be used in calculating the final quiz average; no quiz grades will be dropped.

**Cell phones and electronic devices.** Cell phones and other electronic devices are not to be used during class. Turn your cell phones and electronic devices off and put them away during class. If you use your cell phone during class, you may be asked to leave. **If your cell phone is out during an exam or quiz, you will be considered as cheating. Turn cell phones off and put them away!**

#### **SPECIAL DATES OF CONCERN TO THE COURSE.**

- **Friday, April 17.** Makeup exams and quizzes for excused absences: All makeups for exams 1, 2 and 3, as well as all makeup quizzes (for quizzes up to this date) will be Friday, April 17 during class time. If you have an *excused* absence for missing more than one exam or more than two quizzes, see me in advance to arrange alternate times.
- **Thursday, April 30:** Microbiology final at 1:30 pm.

#### **COURSE OBJECTIVES AND COURSE DESCRIPTION**

Microbiology is a topic that is relevant to many aspects of our everyday lives such as health, disease, food safety, water safety and agriculture. In this course, students will explore principles that apply to microbiology including chemistry and cell biology. Topics that students should gain a working knowledge of include:

- History of microbiology
- Biological and chemical concepts, particularly as applied to microorganisms
- Basic classification, characteristics and behavior of microorganisms
- Host-microbe interactions that result in infection
- Fundamentals of immunology
- Principles of asepsis, sterilization, and disinfection
- Principles of chemotherapy, as applied to treatment of microbial infections
- General methods for the prevention and control of infectious disease transmission
- Principles of epidemiology as they apply to the effect of microorganisms on the human population
- Microbial growth and metabolism
- Microbial genetics

**COURSE OUTLINE AND SCHEDULE** (changes to this tentative schedule may occur because of missed class days (e.g. if the University closes for inclement weather) or if topics take a different amount of time than expected).

If an exam is scheduled for a day on which the University closes for reasons such as inclement weather, the exam will take place on the next regularly scheduled class day when the University reopens.

DATE	CLASS TOPIC AND READING IN THE COWAN TEXTBOOK
Jan 7-9 (Friday, Jan 9: last day to register or add)	<ul style="list-style-type: none"> <li>• Wedn: General items</li> <li>• Fri: Chapter 1 topics</li> </ul>
Jan 12 – 16	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 1 topics</li> <li>• Friday: Chapter 2, The chemistry of biology</li> </ul>
Jan 19 – 23	<ul style="list-style-type: none"> <li>• Mon, Jan 19: Holiday, no classes</li> <li>• Wedn and Fri: Chapter 2, continued</li> </ul>
Jan 26 – 30	<ul style="list-style-type: none"> <li>• All week: Chapter 4, Prokaryotic profiles</li> </ul>
Feb 2 – 6	<ul style="list-style-type: none"> <li>• <b>Monday, Feb 2: Exam 1 (over chapters 1, 2 and 4)</b></li> <li>• Wedn and Fri: Chapter 5, Eukaryotic cells and microorganisms</li> </ul>
Feb 9 – 13	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chap. 5 continued</li> <li>• Fri: Chapter 9, Microbial genetics</li> </ul>
Feb 16 – 20	<ul style="list-style-type: none"> <li>• All week: Chap 9, continued</li> </ul>
Feb 23 – 27	<ul style="list-style-type: none"> <li>• All week: Chap. 6</li> </ul>
March 2 – 6	<ul style="list-style-type: none"> <li>• Mon: Chap 6</li> <li>• <b>Wednesday, March 4: Exam 2 (over chapters 5, 9 and 6)</b></li> <li>• Fri: Chapter 7, Microbial Nutrition, Ecology and Growth</li> </ul>
March 9 – 13	<ul style="list-style-type: none"> <li>• Mon: Chapter 7</li> <li>• Wedn and Fri: Chapter 8, The metabolism of microbes</li> </ul>
March 16 – 20 (March 18: last day to drop a full-term class with a "W")	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 8</li> <li>• Fri: Chapter 12, Drugs, microbes, host – the elements of chemotherapy</li> </ul>
March 23 – 27	<ul style="list-style-type: none"> <li>• Spring break: No classes</li> </ul>
March 30 – April 3	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 12</li> <li>• <b>Friday, April 3: Exam 3 (over chapters 7, 8 and 12).</b></li> </ul>
April 6 – 10 (April 6: Preregistration for Summer and Fall 2015 begins)	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 13, Microbe – human interactions</li> <li>• Friday, April 10: Chapter 14, Host defenses I</li> </ul>
April 13 – 17	<ul style="list-style-type: none"> <li>• Mon and Wedn: Chapter 14</li> <li>• <b>Friday, April 17: All makeup quizzes (for quizzes up to this date) and all makeups for exams 1, 2 and 3 will be Friday, April 17 at 11:10 am.</b></li> </ul>
April 20 – 24	<ul style="list-style-type: none"> <li>• All week: Chapter 15</li> </ul>
April 27 – May 1	<ul style="list-style-type: none"> <li>• Monday, April 27: Chapter 15</li> <li>• <b>Thursday, April 30: Microbiology final at 1:30 pm</b></li> </ul>

**SPECIAL PROJECTS, ASSIGNMENTS, FIELD TRIPS, ETC.** This course does not include field trips or special projects.



### Early Exams, early quizzes, makeup exams and makeup quizzes.

Early exams or quizzes will not be given. Makeup exams and quizzes are possible only for excused absences. All makeup quizzes and all makeup exams for exams 1, 2 and 3 will be during class time on Friday, April 17 during normal class time (11:10 am – noon). If you have an *excused* absence for missing more than one exam or more than two quizzes, see me to arrange alternate times.

### Quizzes/Activities

We will have several ten-point in-class quizzes/activities that may or may not be announced in advance. Quizzes/activities may be at the beginning of class time, at the end of class time or anytime in between. Quizzes will have a maximum time limit of 10 minutes, but quizzes may not take the full 10 minutes. If you are late for a quiz at the beginning of class and arrive before quiz is over you will be able to take the quiz, but will have only whatever time remains. **Note** that if the quiz did not take a full 10 minutes and quizzes have already been picked up, the quiz will be considered “over” and you will not be able to take the quiz. If you come to class just long enough to take a quiz/activity and then leave before class is over, you will be considered as being absent for the entire class period and you will receive zero points for the quiz/activity even if you did it.

### GRADING POLICY

#### Letter grade and percent

A	(89.50 – 100%)
B	(79.50 – 89.49%)
C	(69.50 – 79.49%)
D	(59.50 – 69.49%)
F	(59.49% and below)

Note that 89.49% is a B and does not round up to 89.5%. Likewise, 79.49% is a C; 69.49% is a D and 59.49% is an F.

**The grade that you earn in this course will be based on your scores on four exams and on your quiz/activity average.**

Item	Points Possible
• Three hour exams, each worth 100 points	300 points
• One final exam (Approximately 100 points will be on material with after exam 3 and approximately 20 points will be on comprehensive material. On the last page of this syllabus, you will find the list of key concepts for the comprehensive portion of the exam.)	120 points dealt
• <u>Your quiz/activity <b>average</b> (see explanation on the next page)*</u>	<u>100 points*</u>
Total points possible 520 points	

For the calculation of your final grade, no exam scores will be dropped. However, for the calculation of your quiz/activity average, your two lowest scores on ten-point quizzes/activities will be dropped.

\*Calculating your points in the quizzes/activities category. Your two lowest scores on ten-point quizzes/activities will be dropped. Your quiz scores on the remaining quizzes will be averaged and the average will be used to determine your points in the “quizzes/activities” category.

Below is an example of how your points in the quizzes/activities category would be calculated if we have nine ten-point quizzes/activities in the semester.

Example scores on ten-point quizzes		Points possible
Quiz 1	10	10
Quiz 2	8	10
Quiz 3	7	10
Quiz 4	9	10
Quiz 5	10	10
Quiz/activity 6	10	10
Quiz 7	9	10
Quiz 8	5	10
Quiz 9	10	10
Total	78	90

In this example, I would drop the **two** lowest quiz scores, which are the scores of “7” on quiz 3 and “5” on quiz 8. After dropping these two scores, the person would have a total of 66 points out of 70. To calculate a percent in the “quizzes/activities category” for this example, I would use the formula:  $66/70 \times 100 = 94.29\%$ . In this example, the person would have a 94.29 percent on quizzes/activities and thus would have 94.29 points (out of 100 possible) in the quizzes/activities category.

### Grades of incomplete (I)

#### Below is a section from the UAM student handbook regarding grades of incomplete (I):

“An incomplete grade is a mark designating deficiencies in course work, which must be completed within one calendar year, or less as designated by the instructor. Permission to receive an I rests with the instructor. When deficiencies are completed, the appropriate grade will be assigned. After the specified year or shorter specified time, an I will become an F if the work has not been completed.”

A grade of incomplete will only be considered if a student has completed at least three exams and has completed at least five of the quizzes. Additionally, based on grades of completed work and on the points possible for the work left to be completed, the student must have a mathematical possibility of passing the class.

### STUDENTS WITH DISABILITIES:

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any approved accommodations at the beginning of the course. Any student with questions regarding accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870 460-1926.

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

### STUDENT CONDUCT STATEMENT:

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must

not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **BLACKBOARD**

If you are officially enrolled in this class at UAM, you automatically will be enrolled in the Blackboard site for this class. To access the Blackboard site for this class, go to <http://www.uamont.edu/academiccomputing/> and follow the onscreen instructions.

I will be putting your scores in this class on Blackboard. Your Blackboard account is password protected. To protect against others seeing your grades, do not share your login information and password with others. Also, after you are finished looking in your Blackboard account, **be sure to logout of Blackboard and close the browser window.**

**If you do not wish to have your scores on Blackboard, you must let me know, preferably by email.**

If you need help with Blackboard, I will be happy to help you if I can. There are some Blackboard tips available at <http://www.uamont.edu/academiccomputing/>. For help, you also can call the UAM Office of Academic Computing at 870-460-1663. If you forget your password, you will need to contact the Office of Academic Computing.

### **KEY CONCEPTS FOR THE COMPREHENSIVE PORTION OF EXAM 4. ALL OR ONLY SOME OF THE KEY CONCEPTS LISTED BELOW MAY BE ON EXAM 4.**

- Compare and contrast prokaryotic and eukaryotic cells.
  - Distinguish between bacteria, fungi, viruses, helminthes and prions. Also describe the structural features of bacteria, fungi, viruses, helminthes and prions.
  - Compare and contrast the features of the cell wall of gram-positive bacteria and gram-negative bacteria.
- Be able to describe the flow of genetic information in eukaryotes and prokaryotes. This includes the concepts of DNA structure/function, mRNA structure/function, tRNA structure/function, transcription, translation, the cellular location of DNA, the cellular location of transcription and the cellular location of translation.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES**  
**MICROBIOLOGY LAB (BIOL 3561) COURSE SYLLABUS**  
Microbiology Lab (BIOL 3561), One credit hour  
Spring 2015 – Section 03: Tuesday 1:40 pm – 4:30 pm  
Section 01: Wednesday from 2:10 pm – 5:00 pm  
Section 02: Thursday from 1:40 pm – 4:30 pm

**INSTRUCTOR**

Mrs. Lauren Morgan  
Phone: 870-460-1816  
e-mail: [morganl@uamont.edu](mailto:morganl@uamont.edu)

Please be sure to use your UAM email account to e-mail me. If you use other email accounts, your email will be caught in my spam filter and I may not receive it.

Please be sure to put the **I after morgan** in my email address ([morganl@uamont.edu](mailto:morganl@uamont.edu)).

**OFFICE AND OFFICE HOURS**

Office: Science Center, Room B15  
Office Hours: M 1-3, T 10-12, W 9-10; 1-2, H 8-9; 11:30-12:30, F 8-10.  
Also by appointment.

**COURSE**

Microbiology Lab (BIOL 3561), One credit hour.  
Meeting place: Science Center Room B36

**PREREQUISITES**

To take this laboratory course, you must be currently enrolled in Microbiology Lecture (BIOL 3553) or you must have successfully completed BIOL 3553 in the past.

**REQUIRED TEXTBOOK**

The lab book required for this course is a custom lab manual available at the UAM bookstore. It is called:

Microbiology Lab  
BIOL 3561  
Mary Stewart  
Univ Of Arkansas at Monticello  
Mathematics and Natural Sciences

The lab book is published by McGraw-Hill and has an ISBN number of 978-1-12136-170-6.

**STATEMENT OF SPECIAL POLICIES SUCH AS ABSENTEEISM, PUNCTUALITY, CHEATING, PLAGIARISM, CELL PHONES, ELECTRONIC DEVICES, ETC.**

**Cell phones Cell phones and electronic devices.** Cell phones and other electronic devices are not to be used during lab. **TURN YOUR CELL PHONES OFF AND PUT THEM AWAY!** Use of or having a **CELL PHONE** on your desk during a quiz, exam, or when reviewing graded papers will result in a **ZERO** on the quiz or exam.

**If you are caught using your cell phone in the lab room (B36) or have your cell phone out, for any reason, you will automatically have a 20 point deduction from your lab points—no exceptions, no excuses.**

**Absenteeism.** Attendance is required. There are no makeups for labs missed for unexcused absences. If you miss lab for an unexcused absence, you will be docked 20 points in addition to losing any points available for that day, such as exam points, worksheet points, etc. **Missing lab for unexcused reasons will hurt your grade! Do not miss lab for unexcused reasons!**

**Punctuality.** Be on time for lab.

If, for excused or unexcused reasons, you miss all or part of the pre-lab lecture, which will start at the beginning of lab on non-exam days and after the exam on exam days, you will not be allowed to attend lab that day. If you miss the pre-lab lecture for excused reasons, you will be able to make up the lab at another time. If you miss the pre-lab lecture for unexcused reasons, you will not be able to makeup the lab, you will counted as absent for an unexcused reason and you will lose points as described above under absenteeism.

***Excused absences*** include, but are not limited to, participating in a UAM sponsored event (see the paragraph below from the UAM student handbook), being so ill that you visit a medical facility, or a death in your immediate family. It is your responsibility to contact me to discuss whether your absence is excused and to bring the appropriate documentation for your absence.

The information in the paragraph below is from the UAM student handbook:

**“ABSENCES DUE TO PARTICIPATION IN UNIVERSITY-SPONSORED EVENTS**

At times, a student may participate in a University-sponsored activity that causes him or her to miss one or more class meetings. When this occurs, the sponsor of the activity will provide the student with a memo which includes the event, dates and times of the event, and the students name to be provided to each academic instructor. The student will discuss the work and the class(es) to be missed with each academic instructor at least one week prior to the anticipated absence. The student is responsible for all materials covered and any class activities during the absence. The sponsor of the activity will also provide all academic unit heads and Academic Affairs a description of the activity, which includes the location, dates, and a list of campus participants.”

***Unexcused absences*** include, but are not limited to, items such as going on vacation, having to work, sleeping late, having a paper due in another class, wanting to study for an exam in another class, not being ready for lab, etc.

***Determination of an absence being excused or unexcused is at the instructor’s discretion.***

**Cheating and plagiarism.** Academic dishonesty and cheating will not be tolerated.

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- f. Copying from another student’s paper;
- g. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;

- h. Collaboration with another student during the examination;
  - i. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - j. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
  3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be failure of the lab course.

### **SPECIAL DATES OF CONCERN TO THE COURSE.**

For additional dates, such as tentative lab exam dates or other due dates, see the tentative schedule within this syllabus.

07 Jan	First day of classes
09 Jan	Last day to register or add spring classes
19 Jan	MLK holiday. All classes and offices closed
18 Mar	Last day to drop with W
23-27 Mar	Spring Break
06 Apr	Preregistration for summer and fall begins
17 Apr	Preregistration for summer and fall ends
28 Apr	Last day of classes
29 Apr-May 5	Final exams begin (29 April)

### **COURSE OBJECTIVES AND COURSE DESCRIPTION**

A laboratory course designed to supplement the basic lecture course in microbiology with experimentation and demonstration.

In this lab, students will carry out hands-on work to learn and apply lab methods and theory that are used to examine and identify microbes. By the end of the semester, students should be able to:

- Describe the parts of a microscope and their purposes.
- Properly use a microscope to examine and identify microbes.
- Prepare microscope slides and perform staining methods commonly used in microbiology.
- Describe the basis for how stains can be used to distinguish between different microbes.
- Use appropriate aseptic techniques and standard culture methods used in microbiology labs.
- Identify and distinguish between different types of microbes.
- Describe the growth requirements for microbes and some of the media used to culture microbes.

- Describe and use methods designed to destroy microbes or inhibit their growth.
- Carry out experimental tests to identify bacteria based on their biochemical properties. Also, explain the theory behind these tests and describe their applications.

**COURSE OUTLINE AND TENTATIVE SCHEDULE.** Changes to this tentative schedule may occur because of missed class days (e.g. if the University closes because of inclement weather or if labs take a different amount of time than expected).

<b>DATE (week of)</b>	<b>Lab exercise(s) and pages in the lab book. PLEASE NOTE</b> that the page numbers in this tentative schedule are the numbers in the green boxes in the <u>top right corner</u> of the lab book pages. On some pages of the lab book, there are page numbers in the bottom right corner of the lab book pages; ignore those!
Jan 6-8	No labs this week
Jan 13-15	<ul style="list-style-type: none"> <li>• <b>TAKE NOTE OF THE INSTRUCTIONS ON PROPER LAB ATTIRE! BE SURE YOU DRESS APPROPRIATELY FOR LAB!</b></li> <li>• Start and finish exercise 1, Lab Safety, pages 3-8 of the lab book. Also, read the Laboratory Safety Guidelines on page 1 of the lab book and the lab safety rules in the handout that will be given out during lab time.</li> <li>• Start exercise 6 and aseptic technique discussion. Students are <b>not</b> to take samples of their mouths, noses, other body places and not to take samples of the bathroom. Plates for this exercise have to be wrapped in parafilm.</li> </ul>
Jan 20-22	<ul style="list-style-type: none"> <li>• Start exercise 7, Aseptic technique, pages 17 – 24.</li> <li>• Finish exercise 6, Ubiquity of bacteria, pages 11-16 in the lab book.</li> <li>• Start exercise 50, Streak plate isolation, pages 29 – 35. Make streak plates of <b>unknown</b>.</li> </ul>
Jan 27-29	<ul style="list-style-type: none"> <li>• Finish exercise 50, streak plate isolation of an unknown.</li> <li>• Start and finish exercise 40 (pages 25 – 28), using the streak plate you made of your unknown and using the streak plate you made for exercise 6.</li> <li>• Make a “fishtail” streak of your unknown on a TSA <u>slant</u> today (OR, if your unknown streak plate did not turn out well, you may need to redo a streak plate of your unknown today and then make a TSA slant next week)</li> <li>• Start and finish exercise 2, Microscopes, pages 37 – 39 (we will not do the measurements portion of exercise 2).</li> <li>• Bacteria cell shapes and arrangements.</li> </ul>

Feb 3-5	<ul style="list-style-type: none"> <li>• <b>Lab exam 1</b> (25 points). This lab exam will be on exercises 1, 2, 6, 7, 40, 50, and on lab media and microbial growth information.</li> <li>• Start and finish exercise 42, Simple Staining, pages 49 – 54.</li> </ul>
Feb 10-12	<ul style="list-style-type: none"> <li>• <b>Start a starch agar slant of your unknown today.</b> You will need this for the endospore stain next week. <b>If you do not start a starch agar slant today, you will not have material to work with next week and you will be out of luck as far as doing the endospore stain next week!</b></li> <li>• Start and finish exercise 45, Gram staining, pages 55 – 60.</li> <li>• Start and finish the KOH string test (read the handout on the KOH test).</li> </ul>
Feb 17-19	<ul style="list-style-type: none"> <li>• Start exercise 53, Fluid Thioglycollate Medium, pages 69 – 72.</li> <li>• Start and finish exercise 46, Endospore staining, pages 61 – 64 (we will use the Schaeffer-Fulton method).</li> </ul>
Feb 24-26	<ul style="list-style-type: none"> <li>• <b>Lab exam 2</b> (25 points). The lab exam will be on the KOH string test, exercises 42, 45, 46 (heat fixed smears, simple stain, gram stain, endospore stain) and on bacteria cell shape and arrangement identification.</li> <li>• Examine exercise 34, Identification of bacterial unknowns, pages 141 – 162.</li> <li>• Finish exercise 53, Fluid Thioglycollate Medium, pages 69 – 72.</li> <li>• Start and finish exercise 72, Catalase test, pages 65 – 67.</li> <li>• Start exercise 81, Starch hydrolysis, pages 79 – 81.</li> <li>• Start exercise 85, Gelatinase test, pages 83 – 85.</li> <li>• Start exercise 32, pages 103 – 112. Today, you will do the procedure in the lab book for “period two” by inoculating KIA, SIM and urea media. (We will interpret the results of exercise 32 two weeks from today).</li> <li>• Inoculate a TSB (tryptic soy broth) tube with your unknown. You must start this today so that you can use it for the citrate test in a future lab period.</li> </ul> <p><b>There will be a limited amount of time next week to redo a Gram stain or an endospore stain. If you want to redo either of these stains for your unknown, keep reading.</b></p> <p><b>NEXT WEEK IS THE <u>LAST CHANCE</u> TO REDO THE GRAM STAIN AND ENDOSPORE STAIN <u>ON YOUR UNKNOWN!</u></b> You also can redo the Gram and endospores stains on controls next week if you wish to earn a better grade on your staining of controls. (There is one more day later this semester when you can redo the Gram stain or endospore stain on controls, but not on your unknown).</p> <p><b>If you need/wish to redo a Gram stain on your unknown next week, YOU MUST SIGN UP ON THE SIGNUP SHEET <u>TODAY!</u> By signing up, the instructor will know to start a fresh culture</b></p>



	<p><b>of your unknown one day prior to your lab period next week. If you don't sign up today, then you won't have a fresh culture of your unknown next week for the Gram stain and you won't be able to do the Gram stain next week on your unknown.</b></p> <p><b>If you need/wish to redo an endospore stain on your unknown next week, YOU MUST START A NEW STARCH AGAR SLANT OF YOUR UNKNOWN TODAY!</b> If you don't start a starch agar slant of your unknown today, you won't be able to do the endospore stain next week on your unknown.</p>
Mar 3-5	<ul style="list-style-type: none"> <li>• Finish exercise 81, starch hydrolysis, pages 79 – 81.</li> <li>• Finish exercise 85, gelatinase test, pages 83 – 85.</li> <li>• <b>Redo Gram stain and/or endospore stains on unknowns as needed. This is the last chance to redo these stains <u>on your unknown</u>. You also can do the Gram stain on controls today.</b></li> <li>• <b>DUE NO LATER THAN THE END OF LAB TODAY:</b> The sheet that indicates the Gram identity of your unknown and whether your unknown forms endospores. Next week, I will hand these back to you so that you will know whether you were correct or incorrect.</li> <li>• <b>Make sure that you do the 7.5-point worksheet (to be handed out today) on exercise 32 BEFORE you come to lab next week.</b> This 10-point work sheet is due <u>at the beginning</u> of lab next week. Papers turned in <u>after</u> lab starts will earn zero points.</li> </ul>
Mar 10-12	<ul style="list-style-type: none"> <li>• <b>Note that there is a 7.5-point worksheet on exercise 32 (pages 103 to 112) due <u>AT THE BEGINNING OF LAB TODAY!</u> Worksheets turned in after lab starts will earn zero points!</b></li> <li>• Today, I'll let you know if you were correct about the Gram identity of your unknown and if you were correct about its ability to form endospores.</li> <li>• Finish exercise 32 (KIA, SIM and urea), pages 103 – 112. (Note: Before lab, be sure to read the information in the lab book about exercise 32. Also, be sure to read the handout about the tests used in exercise 32).</li> <li>• Start exercise 76, citrate test, pages 99 – 102. You will <b>not</b> inoculate the citrate tube with bacteria from "your unknown pet" that is on a TSA slant. <b>Instead, you need to inoculate the citrate tube with your unknown from the liquid TSB culture that you started last week!</b></li> <li>• Start nitrate reduction test, page 119. Note that you should read only part of the information in the lab book for the nitrate reduction test. We will carry out the nitrate reduction test with a different method than the lab book describes (a handout for the method will be given). The portions on page 119 in the lab book that you should read are       <ol style="list-style-type: none"> <li>1. The italicized introductory paragraph on page 119 (which begins with "The nitrate reduction test is used....").</li> <li>2. The first paragraph on page 119 under "Principles and Applications". The paragraph begins "Anaerobic respiration involves....".</li> </ol> </li> </ul>

	<p>3. Pay attention to figure 74.1 on page 119.</p> <ul style="list-style-type: none"> <li>• Start exercise 69, Phenol Red Broth, pages 91 – 94.</li> <li>• Start exercise 71, Methyl Red and Voges-Proskauer Tests, pages 95 – 98.</li> </ul>
<p>Mar 17-19</p>	<ul style="list-style-type: none"> <li>• <b>Lab exam 3</b> (25 points) on exercises 53, 72, 32, 81 and 85 (fluid thioglycolate, catalase test, identification of Enterobacteriaceae, starch hydrolysis, and the gelatinase test)</li> </ul> <p><b>NOTE: TODAY, YOU WILL RECEIVE A WORKSHEET ON SERIAL DILUTIONS THAT IS DUE AT THE BEGINNING OF LAB the week of APRIL 7-9! Worksheets turned in after lab starts the week of APRIL 7-9 will earn zero points!</b></p> <ul style="list-style-type: none"> <li>• Decide on foods to test the week of April 7 – 11.</li> <li>• Finish exercise 71, Methyl Red and Voges-Proskauer tests, pages 95 – 98.</li> <li>• Finish exercise 74, Nitrate reduction test.</li> <li>• Finish exercise 69, Phenol red broth, pages 91 – 94.</li> <li>• Finish exercise 76, Citrate test, pages 99 – 102.</li> <li>• By the end of lab today, you should be able to figure out the genus name and species name of your unknown. If you cannot do this, then you probably need to redo some lab tests. Keep reading and be sure to sign up for the appropriate materials for the next lab period.</li> <li>• <b>SIGN UP TODAY FOR ANY MEDIA YOU NEED FOR NEXT WEEK TO REDO LAB EXPERIMENTS ON YOUR UNKNOWN.</b> If you don't sign up for media today, then there will not be media for you to use next lab period and you will not be able to redo any lab experiments next lab period or at any other time.</li> </ul>
<p>Mar 24-26</p>	<p><b>NO CLASS—Spring Break</b></p>
<p>Mar 31- Apr 2</p>	<ul style="list-style-type: none"> <li>• <b>Catch up / Make up day:</b></li> </ul> <p>Lab this week is for redoing lab tests that you need to redo on your unknown. This is the last chance to redo any lab tests.</p> <p style="padding-left: 40px;">If you missed a lab(s) prior to today (for excused reasons only), this is the only day to makeup those labs.</p> <p style="padding-left: 40px;">For some things that you start today, such as inoculating media with bacteria, you will need to interpret the results next week.</p> <p>If you wish to redo the Gram stain on controls (<i>Escherichia coli</i> and <i>Micrococcus luteus</i>), today is the last chance to do so.</p>

	<p>If you wish to redo the endospore stain on the control (<i>Bacillus megaterium</i>), today is the last chance to do so.</p> <p>If you do not want to redo lab tests on your unknown and you do not want to redo the Gram or endospore stain, then you do not need to come to lab today.</p>
Apr 7-9	<p><b>NOTE THAT THE WORKSHEET ON SERIAL DILUTIONS IS DUE <u>AT THE BEGINNING OF LAB TODAY!</u></b>  <b>Worksheets turned in after lab starts will earn zero points!</b></p> <ul style="list-style-type: none"> <li>• <b>Lab exam 4</b> (25 points). This lab exam is on exercises 76, 69, 71 and 74 (citrate test, phenol red test, methyl red test, Voges-Proskauer test, and the nitrate reduction test).</li> <li>• Start exercise 20 (Kirby Bauer) and the exercise on antibacterial effects of chemicals.</li> <li>• Start exercise 30, food on pages 123 - 127.</li> <li>• Interpret the results of experiments you set up last week.</li> </ul>
Apr 14-16	<ul style="list-style-type: none"> <li>• Finish exercise 20 (Kirby Bauer) and the exercise on antibacterial effects of chemicals.</li> <li>• Finish exercise 30, food on pages 123 - 127.</li> <li>• <b>DUE TODAY by the end of your lab period: Unknown reports due.</b></li> <li>• <b>All makeup lab exams for lab exams 1, 2, 3 and 4 will be during your lab period this week.</b></li> </ul>
Apr 21-23	<ul style="list-style-type: none"> <li>• <b>Lab exam 5</b> (20 points). This lab exam is on exercise 20 (antibiotics and the Kirby Bauer test), the exercise on antibacterial effects of chemicals, exercise 30 (serial dilutions and determining CFUs in food).</li> </ul>
Apr 28-30	No class
Apr 29-May 5	Finals week: No microbiology labs during finals week

## **SPECIAL PROJECTS, ASSIGNMENTS, FIELD TRIPS, ETC.**

This course does not include field trips. A portion of your grade will be based on an “unknown report”. Information on the unknown report will be handed out in lab.

## **PROVISIONS FOR TESTS AND EVALUATIONS:**

### **Exams and Other Evaluations:**

#### **Lab exams**

Your grade in this class will be based on several items, including lab exams (see the next page for a list of items on which your grade is based).

**Lab exams.** There are five lab exams scheduled during the semester. All lab exams are not necessarily of the same point value. All questions on exams may not be of the same value. Additionally, exams of equal point values may have a different number of questions. For example, a 25-point exam might have 12 questions while a different 25-point exam may have 5, 10, or 20 questions.

**Be on time for lab exams!** Lab exams will be given during the first 15 minutes of lab. If you come in late, you will have only the amount of time remaining in the 15 minutes to complete the exam.

**Makeup lab exams** There will be no early lab exams. If you miss a lab exam for an excused reason, you may take a makeup lab exam. All makeups for lab exams 1, 2, 3 and 4 will be during your lab period of a designated week (see the tentative schedule within this syllabus). Makeups for lab exam 5 (excused absences only) will be arranged---contact me!

**There are no makeups for any lab work in the case of unexcused absences.**

#### **Grade Posting**

Scores on exams will be posted by a code number assigned on the first exam unless a student requests not to have his/her scores posted.

## **GRADING POLICY**

### **Letter grade and percent**

- A (89.5 – 100%)
- B (79.5 – 89.4%)
- C (69.5 – 79.4%)
- D (59.5 – 69.4%)
- F (59.4% and below)

### **Grades of incomplete (I)**

**Below is a section from the UAM student handbook regarding grades of incomplete (I):**

“An incomplete grade is a mark designating deficiencies in course work, which must be completed within one calendar year, or less as designated by the instructor. Permission to receive an I rests with the instructor. When deficiencies are completed, the appropriate grade will be assigned. After the specified year or shorter specified time, an I will become an F if the work has not been completed.”

Because of the nature of the work in this lab and the difficulties in scheduling time to makeup lab work, a grade of incomplete will only be considered if no more than two-week’s worth of wet-bench lab work

remains to be completed and at least four of the lab exams have been completed. One week's worth of wet-bench work typically will require one lab period (about three hours) to set up the exercises and one additional lab period (about three hours) to interpret the results. Wet-bench work is work in which lab media must be inoculated, microscope slides must be prepared, or other hands-on work at the lab bench must be done.

**The grade that you earn in this course will be based on your scores on the items listed below.**

<b>Item</b>	<b>Points Possible</b>
Lab exams	120 points
Various items that may include participation, worksheets, unannounced quizzes, and or lab book sheets	25 points
Streak plate	15 points
Gram stain of controls	15 points
Endospore stain of control	15 points
Identification of your unknown as Gram positive or negative	10 points
Identification of your unknown as an endospore former or non-former	10 points
Unknown report	30 points
<hr/>	
Total points possible	240 points

**No lab scores on any items will be dropped.**

**If you are caught using your cell phone in the lab room (B36) or have your cell phone out, for any reason, you will automatically have a 20 point deduction from your lab points—no exceptions, no excuses.**

**If you miss lab for an unexcused absence, you will be docked 20 points in addition to losing any points available for that day, such as exam points, worksheet points, etc. On top of those lost points, you also may lose points on your unknown lab report if you were not in lab (for unexcused reasons) to start or complete tests necessary for the unknown identification. Take-home message: Do not miss lab for unexcused reasons!**

**There will be a grade deduction if you improperly clean, use or store a microscope.** You will be assigned a specific microscope to use during the semester and that is the only microscope that you should use. To prolong the life of the microscopes and maintain their quality, it is important that you follow the instructions that the instructor provides for microscope cleaning, use and storage. If you improperly clean, use or store a microscope, grade penalties will be assessed as follows:

- 1<sup>st</sup> offense: You will be docked six points.
- 2<sup>nd</sup> offense: You will be docked six more points.
- 3<sup>rd</sup> offense: You will be docked 15 more points.

4<sup>th</sup> offense and any thereafter: You will be docked 15 additional points for each offense.

**Improperly cleaning, using or storing a microscope includes, but is not limited to the following:**

- storing the microscope with any objective other than the 4X objective rotated into place over the stage
- failing to clean immersion oil off of any of the objectives
- putting a microscope away with a slide left on the stage
- storing the microscope with the stage in any position other than its lowest
- storing the microscope with a slide on the stage
- failing to properly wrap the electrical cord of the microscope
- failing to follow any of the instructions given for microscope use

**If, because of your misuse and failure to follow instructions for the proper use of an item, you damage a microscope or other equipment so that it requires repair or replacement, you will be charged the financial cost of the repair or replacement.** The Nikon microscopes that we use cost approximately \$1400.00 each.

**Before you use your microscope (or other equipment), it is important that you check it and let the instructor know of any problems.** Otherwise, the instructor will have to assume that you caused the problem.

**STUDENTS WITH DISABILITIES:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any approved accommodations at the beginning of the course. Any student with questions regarding accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870 460-1926.

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**STUDENT CONDUCT STATEMENT:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**OTHER COURSE POLICIES**

**SAFETY.** You are responsible for following all safety rules. **Safety rules will be discussed in lab, are found in the required laboratory manual and are found on a handout that will be given in laboratory.** If you fail to follow safety rules, the behavior will be considered as "disorderly conduct" and you will be asked to leave the lab (this will count as an unexcused absence and grade penalties will apply).

So that you are aware of what to wear and bring to lab, below is a **PARTIAL** list of lab safety rules.

- 1. Absolutely no food, drink, candy or gum in lab.** Finish or dispose of any food or drink **before** you come to lab. Do not walk into the lab with food or drink in your hand and throw it into the trashcans in lab. **Dispose of any food or drink before you come into the lab room!** Disregarding this safety rule will be considered as disorderly conduct. Do not chew gum or candy during lab. Do not chew on other items (pens, toothpicks, etc.) or place items in your mouth, nose or eyes during lab.
- 2. Attire. Rules for lab attire are for safety purposes.** You must wear closed shoes (completely closed, no open toes, heels or sides). Sandals are not allowed. You must wear shirts that completely cover your midriff. “Spaghetti strap” shirts and tank tops are not to be worn in lab, or if they are worn, you must wear a closed and sleeved shirt over the top. When you sit down, your pants or skirt should cover your knees. These policies are for your safety and are meant to potentially reduce the amount of bacteria that would land on exposed skin if you should spill or splash bacteria. If you arrive in lab with improper attire, you will not be allowed to participate in lab that day unless you come back that day with proper attire *and* there is sufficient time remaining in the lab period to complete the lab work. If you do not come back to lab with appropriate attire that day, you will be considered as absent for an unexcused reason and grade penalties will apply.
- 3. Minimize** the amount of “things” you bring to lab. Bring as few books (for other classes), backpacks, bags, etc. as possible to lab. All personal items (phones, backpacks, books, purses, coats, etc.) that you bring with you and that do not fit into the pockets of your clothing will be stored in room B32, which is adjacent to room B36, in which lab is held. Those items will not be in room B36 with you. If you do not want to store those items in room B32, then do not bring them with you.
- 4. NO CELL PHONE USE IN LAB! If you are caught using your cell phone in the lab room or have your cell phone out, for any reason, you will automatically have a 20 point deduction from your lab points—no exceptions, no excuses.**
- 5. Contact lenses and putting things into your eyes.** If you are a contact lens wearer, wear glasses to lab instead of your contacts. **Do not rub your eyes or put your fingers or anything else into your eyes during lab.**

**Biology 3574—Comparative Anatomy**  
**School of Mathematical and Natural Sciences**  
**Fall 2014, MWF 10:10-11:00**  
**Science Center, Room B19**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Website:** <http://www.uamont.edu/facultyweb/Huntj/>.  
**Office Hours:** 9-10 M-F, 2-3 M, T, Th, F, or by appointment.

**Prerequisites:** BIOL 2153, BIOL 2161.

**Lecture Text:** (Required) Kardong, K. V. 2014. *Vertebrates: Comparative Anatomy, Function, and Evolution* (7<sup>th</sup> Edition—ISBN 9780078023026). McGraw Hill, New York, 794 pp. Available at the UAM Bookstore, \$242.00 (new). You may also rent this text. Older editions of the text are also acceptable.

**Lab Manual:** (Required) Kardong, K.V., and E. J. Zalisko. 2014. *Comparative Vertebrate Anatomy: A Laboratory Dissection Guide* (6<sup>th</sup> Edition—ISBN 9780077657055). McGraw Hill, New York, 226+ pp. Available at the UAM Bookstore, \$148.00 (new). Older editions of the text are also acceptable.

**Course Objectives:** To provide an understanding of the anatomy of vertebrates by focusing on basic principles of structure, development, function and evolution of organs and organ systems in the different vertebrate groups. The course also explores evolution of and evolutionary relationships between vertebrate groups.

**Grading:** Approximately one-third (28%) of the grade for this class is from the lab. The lab is covered under a separate syllabus.

Grading is on the standard 10-point scale. Points will be computed as a percentage of 725 points. There is no “extra” credit. Points will consist of the following:

Three 100-point exams	300
10 5-point unannounced quizzes	50
One 25-point mini exam	25
Final exam (comprehensive)	150
Lab grade	200

Exam dates are September 17, October 13, November 7, and December 11.

***These dates will not change.*** Exams will consist of a mixture of essay, short answer, and objective-type questions, and may include some drawing. Bonus questions may come directly from reading assignments that have never been discussed in class. Material for each exam will begin at the previous exam and will continue through the last class day before each exam. *Only the final WILL be comprehensive.* The final exam will be on Thursday, December 11, at 1:30 p.m. There will be approximately one quiz per week; these quizzes will be unannounced and will consist of one to five questions from the previous day’s lecture. Quizzes are designed to encourage daily review and study, and regular attendance and promptness, and therefore MAY NOT be made up. If more than



10 quizzes are given, students will be allowed to drop their lowest quiz scores to get down to 10 quizzes. The 25-point mini-exam will cover vertebrate taxonomy, and will occur on the next class day after we complete the lectures on taxa. Minor changes to the grading scheme may be made at the discretion of the instructor.

**Class web page.** The class web page may be found at: <http://www.uamont.edu/facultyweb/Huntj/Comparative.htm>. On this page there are lists of terms to know and lecture outlines for each of the chapters of the text we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Attendance:** Attendance at all lectures, exams, and lab sessions is mandatory. Attendance will be recorded regularly. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance. Those students who miss more than three class periods without a university-approved excuse will be docked one point from the final grade for each missed class. For example, a student who earns a 90 average for the class but has five unexcused absences will receive a grade of B for the class. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day*.

Quizzes may not be made up. However, missed quizzes will not count against the grade of any student who presents the instructor with an approved excuse for his absence. Approved excuses do not include “hung over,” “overslept,” “my car was busted,” “wacky frat party,” or “went fishing with some friends, and that should count, since we cut up some fish, and fish are vertebrates.” Students with approved excuses may make up missed exams, by arrangement with the instructor, *at the convenience of the instructor*. Please be aware that make-up exams will NOT be the same exam given during the normal class period. It is important for you to note that you are responsible for material covered in every class and every lab session, even if you miss the class with an excused absence. It is your responsibility to obtain the material you have missed from your classmates.

**Class policies:** Comparative anatomy is a challenging subject with many complex concepts and a language of its own. Please plan on massive amounts of study. The instructor is here to help you; please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **IF I SEE YOU TEXT-MESSAGING OR SURFING THE WEB DURING CLASS, YOU WILL BE ASKED TO LEAVE.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is October 29. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of

obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Lab:** The lab is a required component of this course. Details on the lab are included on a separate syllabus. Many students consider laboratory sessions an opportunity to pull up their lecture grade. Please be aware that the comparative anatomy lab is challenging, and requires a great deal of work and study—whether it hurts or helps your grade will depend entirely upon the amount of effort you put forth.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for one's self.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Material to be covered:** These topics will be covered in the order listed below. Students are expected to read the indicated chapters as we cover each topic.

Introduction (Chapter 1); Evolution (Chapter 2); Phylogenies; Fossilization; Taxa (Chapters 2 and 3 and handout); Form and Function (Chapter 4); Development (Chapter 5); Integument (Chapter 6); Skull and Jaws (Chapter 7); Vertebrae (Chapter 8); Limbs (Chapter 9); Muscles (Chapter 10); Respiratory System (Chapter 11); Circulatory System (Chapter 12); Digestive System (Chapter 13); Urogenital System (Chapter 14); Endocrine System (Chapter 15); Nervous System and Brain (Chapter 16); Sensory Structures (Chapter 17).

**Important dates:**

First day of class	August 20 (Lab will also meet on this day!)
Labor day (no class)	September 1
Exam I	September 17
Exam II	October 13
Last day to drop	October 29
Exam III	November 7
Thanksgiving holiday	November 26-28
Last day of class	December 5
Final exam	December 11 (1:30 p.m.)— <i>Comprehensive!!!</i>

**Biology 3574—Comparative Anatomy Laboratory**  
**School of Mathematical and Natural Sciences**  
**Fall 2014, Wednesday 2:10-5:00**  
**Science Center, Room B31**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Website:** <http://www.uamont.edu/facultyweb/Huntj/>  
**Office Hours:** 9-10 M-F, 2-3 M, T, Th, F, or by appointment.

**Prerequisites:** BIOL 2153, BIOL 2161.

**Lab Manual:** (Required) Kardong, K.V., and E. J. Zalisko. 2012. *Comparative Vertebrate Anatomy: A Laboratory Dissection Guide* (7<sup>th</sup> Edition—ISBN 9780078023026). McGraw Hill, New York, 226+ pp. Available at the UAM Bookstore, \$148.00 (new).

**Course Objectives:** To provide a basic understanding of vertebrate anatomy, with a focus on the evolution of shared morphological characteristics.

**Grading:** This lab is a component of the Comparative Anatomy course. Grading for the course is on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). Points will be earned from 4 scheduled 50-point practical examinations, which will be added into your Comparative Anatomy grade. There is no “extra” credit.

**Attendance:** Your success in this course is directly dependent upon your attendance and participation in the lab. To this end, one percentage point will be removed from your class grade for each unexcused lab absence. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day*. It is important for you to note that you are responsible for material covered in every lab, even if you miss the lab with an excused absence. It is your responsibility to obtain the material you have missed.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined.

Comparative anatomy lab is a difficult lab that requires a great deal of study and memorization. Many students consider laboratory sessions an opportunity to pull up their lecture grade. However, whether this lab hurts or helps your lecture grade will depend entirely upon the amount of effort you put forth. The lab will be open at various times during the semester; please feel free to study and review in the lab during these times. You **MUST** attend all lab sessions, and you are expected to remain for the duration of the lab. Any lab in which a student skips out early, or spends lab time texting or surfing the web, will be treated as an absence. Lab time is limited—be sure and read the appropriate lab manual sections before you come to lab.

Each student will select a lab partner before the second lab. Lab sessions are somewhat unstructured, and each pair of students may work at its own pace. However, you **MAY NOT** ditch your lab partners—students caught doing so will be docked points. All students must participate in dissections, no matter how gross and disgusting they might seem. Soon, you'll get used to the smell, and manipulating cat guts will seem fun to you.

Lab dissections are messy by their nature. Please be aware that preservative chemicals smell bad and can ruin clothing—please dress appropriately. Shoes are required at all times, and sandals or open-toed shoes are probably not a good idea. You will want latex gloves (probably several pairs per lab), which **WILL NOT** be provided for you. If you do not use gloves, you will find that the smell of preservative materials and shark innards will permeate your skin, vastly reducing your enjoyment of pizza consumption and “romantic” activities.

This course involves the frequent use of chemicals. Although preservative chemicals are much safer today than in years past, short and long-term health hazards are associated with the use of all chemicals. These health risks are significantly higher for students with chemical allergies, students who are asthmatic, and students who are pregnant. It is the responsibility of the student to properly use safety equipment and follow all safety rules to minimize health risks.

It is your responsibility to clean up after your dissections. Students who leave messes for the instructor or their lab partners to clean up will be penalized through the only means possible—their grade. Your instructor will explain proper disposal of animal parts to you.

Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

Please do not hold conversations with classmates during lecture. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade.

The last date to drop this course with a W (and for most other courses at UAM) is October 29. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. Please refer to the course syllabus for a more detailed discussion of academic dishonesty.

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Lab schedule (with associated chapters of the lab manual):**

August 20	Introduction, protochordates (Chapters 1, 2)
August 27	External anatomy, integument (Chapter 4)
September 3	Agnathans, lamprey (Chapter 3)
September 10	FIRST PRACTICAL
September 17	Skulls (Chapter 5)
September 24	Skeletal systems (Chapter 5)
October 1	SECOND PRACTICAL
October 8	Muscular systems (Chapter 6)
October 15	Muscular systems (Chapter 6)
October 22	Digestive systems (Chapter 7)
October 29	THIRD PRACTICAL
November 5	Circulatory, respiratory systems (Chapter 8)
November 12	Urogenital systems (Chapter 9)
November 19	Nervous systems (Chapter 10)
November 26	THANKSGIVING BREAK
December 3	FOURTH PRACTICAL

## **SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES SYLLABUS**

**INSTRUCTOR NAME:** Dr. Edmond J. Bacon

**TELEPHONE:** Office 870- 460-1864 Home 870-367-0407 Cell 870-723-4671

**INSTRUCTOR EMAIL ADDRESS:** bacon@uamont.edu

**OFFICE NUMBER:** Room B-29 in Science Center

**OFFICE HOURS:** MW 9:00 – 10:00; 1:30 – 3:00; T 9:30 – 11:00; 1:30 – 3:00

**COURSE TITLE AND CREDIT HOURS:** Biology 358V Field Studies II, 2 hours credit

Required Text: Pflieger, W. L. 1997. Fishes of Missouri

**PREREQUISITES:** Biol. 2153 and 2161

### **COURSE OBJECTIVES:**

To acquaint the student with the ecology of freshwater fishes with special emphasis on identifications of common fishes in Arkansas.

### **STUDENT LEARNING/OUTCOMES:**

By the conclusion of this course the student should be able to identify, know the common names, and scientific names of common fishes in Arkansas.

**FEEDBACK SCHEDULE:** Information regarding instructor response and availability. *For example:* Most often, a student can expect a response to email within 24 hours Monday through Friday. No emails will be answered after 5 p.m. on Friday until the following Monday.

### **ATTENDANCE POLICY /PARTICIPATION REQUIREMENTS:**

It is a University policy that students are expected to attend classes for which they are enrolled. Arriving late to class or leaving early is unacceptable. Students who

are frequently absent from the class typically receive lower grades. Make up exams and quizzes will be given at the end of the semester for students with official documentations for absences. **Cell telephones and electronic devices must be turned off during the class. No head phones or electronic devices are allowed to be used during examinations. Students will not be given the exam until they comply with these regulations.**

**ASSESSMENTS:** The final grade will be based on two laboratory exams.

<u>GRADING SCALE</u>	<u>GRADE POINTS</u>
90-100 = A	Exam I = 100
80- 89 = B	Exam II = 100
70- 79 = C	
60- 69 = D	TOTAL POINTS = 200
00- 59 = F	

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;



- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
  3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a zero grade for the examination.

**COURSE OUTLINE/CALENDER:**

<u>TOPIC</u>	<u>CHAPTER</u>
Identification of Freshwater Fishes I <b>LABORATORY EXAM I</b>	Game Fishes <b>STUDY GUIDE</b>
Identification of Freshwater Fishes II <b>LABORATORY EXAM II</b>	Misc. Species <b>STUDY GUIDE II</b>

**SPECIAL DATES OF CONCERN:**

**09 Jan - last day to register or add a class**

**18 Mar – last day to drop a class**

**23–27 Mar – Spring Break**

**28 Apr – last day of class**

**29 Apr–05 May – Final Exam Period**

# SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES SYLLABUS

**INSTRUCTOR NAME:** Dr. Edmond J. Bacon

**OFFICE LOCATION:** Science Center Room B-29

**TELEPHONE:** Office 870- 460-1864 Home 870-367-0407 Cell 870-723-4671

**INSTRUCTOR EMAIL ADDRESS:** [bacon@uamont.edu](mailto:bacon@uamont.edu)

**OFFICE HOURS:** MWF 10:00 - 11:00; T 9:30 – 11:00

**COURSE TITLE AND CREDIT HOURS:** Biology 3584 Invertebrate Zoology, 4 credits

## **COURSE DESCRIPTION:**

Classification, phylogenetic relationships, morphology, function, and life histories of invertebrates, emphasizing freshwater and marine invertebrates.

**PREREQUISITES:** Biol. 1153 and 1161.

**REQUIRED TEXT:** Brusca, R. C. and G. J. Brusca. 2003. Invertebrates. 2<sup>nd</sup> Edition.

## **STUDENT LEARNINGS OUTCOMES:**

By the conclusion of this course you should understand the classification, morphology, function, identification, and life histories of common freshwater invertebrates in the region.

## **ATTENDANCE POLICY /PARTICIPATION REQUIREMENTS:**

It is a University policy that students are expected to attend classes for which they are enrolled. Arriving **late** to class or **leaving early** is unacceptable. Students who are frequently absent from the laboratory exercises consistently receive lower grades. Some field trips may extend beyond 4:30 p.m. Make up exams will be given at the end of the semester for students with official documentations for absences.

## **CELL PHONES AND ELECTRONIC DEVICES:**

All cell phones and electronic devices must be turned off during the class and laboratory. Computers including ipads are allowed to be used during lectures and laboratory exercises, but cannot be used during examinations.

## **COURSE OUTLINE/CALENDER FOR LECTURE:**

<b><u>DATE</u></b>	<b><u>TOPIC</u></b>	<b><u>CHAPTER</u></b>
21 Aug - 30 Sep	Phylum Arthropoda: Part I	15, 17 and 19
<b>01 – 04 OCT</b>	<b>EXAMINATION EXAM I</b>	<b>15, 17 AND 19</b>
07 - 21 Oct	Phylum Arthropoda: Part II	16
23 - 28 Oct	Phylum Annelida	14
<b>30 OCT</b>	<b>EXAMINATION II</b>	<b>14 AND 16</b>
01 - 15 Nov	Phylum Mollusca	20
18 Nov	Phylum Nematoda	12
20 Nov	Phylum Rotifera	12
<b>22 NOV</b>	<b>EXAMINATION III</b>	<b>12 AND 20</b>
25 Nov	Phylum Platyhelminthes	10
25 Nov	Lophophorates	21
02 - 06 Dec	The Protists	5
<b>09 - 13 DEC</b>	<b>EXAMINATION IV</b>	<b>5, 10, AND 21</b>

## **LABORATORY SCHEDULE:**

<b><u>DATE</u></b>	<b><u>TOPIC</u></b>
21 Aug - 27 Sep	PHYLUM ARTHROPODA: Hexapods
<b>30 SEP</b>	<b>LABORATORY EXAM I</b>
01 – 21 Oct	Phylum Arthropoda: Crustaceans
23 – 28 Oct	Phylum Rotifera: Rotifers
30 Oct	Phylum Gastrotrich: Gastrotrichs
30 Oct	Phylum Nematomorpha: Horsehair Worms
<b>01 NOV</b>	<b>LAB EXAMINATION II</b>
04 - 15 Nov	Phylum Annelida: Annelids
18 - 22 Nov	Phylum Mollusca: Molluscs
25 Nov – 02 Dec	The Protists
<b>03 - 06 DEC</b>	<b>LAB EXAMINATION III</b>

**ASSESSMENTS:** The final grade will be based on four lecture examinations, two laboratory examinations, laboratory reports, and a scientific paper.

GRADING SCALE

GRADE POINTS

90-100 = A	Lecture Exam I = 100	Lab Exam I = 100
80- 89 = B	Lecture Exam II = 100	Lab Exam II = 100
00- 79 = C	Lecture Exam III = 100	Lab Exam III= 100
60- 69 = D	Lecture Exam IV = 100	*Collection = 100
00- 59 = F		

\*Collection is optional

**SPECIAL DATES OF CONCERN:**

**23 Aug - last day to register or add a class**

**30 Oct - last day to drop with a W**

**06 Dec – last day of class**

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.

2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a zero grade for the examination.

**Biology 3763—Evolution**  
**Department of Mathematical and Natural Sciences**  
**Spring 2015, TTh 9:40-11:00**  
**Science Center B19**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Web page:** <http://www.uamont.edu/facultyweb/Huntj>.  
**Office Hours:** 10-11 MWF; 8:30-9:30 TTh; 2-3 MTThF, or by appointment.

**Text** (required): Hall, C. 2014. *The Tangled Bank: an Introduction to Evolution*, 2<sup>nd</sup> Edition, Roberts and Company Publishers, Greenwood Village, Colorado, 452 pp. ISBN: 9781936221448 (Available from the UAM bookstore, \$87.50 new; \$43.75 rental).

**Class Web Page.** The class web page may be found at: [www.uamont.edu/facultyweb/Huntj/Evolution.htm](http://www.uamont.edu/facultyweb/Huntj/Evolution.htm). On this page there are lists of terms to know and lecture outlines for each of the topics we will cover. These outlines are general in nature, and are not meant to replace detailed notes which you should take in class. Test scores will be posted on the class web page shortly after each exam. Your score will be listed by an anonymous code word selected by you.

**Course Objectives:** To provide an understanding of evolutionary theory and processes, including selection, adaptation, and speciation. The course also explores classification of organisms and scientific nomenclature.

**Grading:** Grading is on the standard 10-point scale. Points will be computed as a percentage of 525 points. There are no “bonus” points, and no “extra” credit. Points will consist of the following:

Three 100-point exams	300
10 unannounced quizzes	50
One 25-point homework assignment	25
Final exam (partially comprehensive)	150

Exams will consist of a mixture of essay, short answer, and objective-type questions, and may also require some drawing. Exams will occur on dates listed below; *these dates will not change*. Only the final exam will be comprehensive. The final exam will be on Friday, May 1, at 1:30 p.m. There will be at least one quiz per week; these quizzes will be unannounced and will consist of one to five questions from the lecture material from the previous day. Quizzes are designed to encourage daily review and study, as well as regular attendance and promptness, and therefore MAY NOT be made up. **Note:** the number of quizzes is approximate. There may be more than 10 quizzes; if this occurs you drop your lowest quiz grades. Slight changes in the grading scheme may occur at the discretion of the instructor.

**Attendance:** Attendance at all lectures, exams, and lab sessions is mandatory. Attendance will be recorded regularly. Most exam material will come from lectures, so that your success, or lack thereof, in this class is directly related to attendance. Those students who miss more than three class periods without a university-approved excuse will be docked one point from the final grade for each missed class thereafter. For example, a student who earns a 90 average for the class but has four unexcused absences will receive a grade of B for the class. It is the responsibility of the student to provide a university-approved excuse for *each class missed on the next class day*.

Missed exams may be made up only by students with an approved university excuse, by arrangement with the instructor. Approved university excuses do not include “hung over,” “overslept,” or “my car is busted.” Please be aware that any make-up exam may NOT be the same exam given during the normal class period. **Students are responsible for all material presented in class, even with an approved university excuse for missing a class.** It is the responsibility of the student to obtain missed material from classmates—the instructor will not provide notes for you.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment.

Please do not hold conversations with classmates during lecture. You may tape lectures if you so desire, but this should not substitute for the taking of detailed class notes. **DO NOT BRING CELL PHONES TO CLASS!** If your cell phone rings during my lecture, I will respond in the only manner available to me—by adjusting your grade. You may not text-message or keep your cell phone on your desk during class. **If I see you text-messaging during class, you will be asked to leave.** If this occurs twice, you will be assigned a grade of F for the course. No electronic devices other than tape recorders are allowed in class—this includes laptops and i-pods. You may not read outside material, study other classes, or work crossword puzzles during class. Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is March 18. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty: a) Copying from another student’s paper; b) Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor; c) Collaboration with another student during the examination; d) Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the



unreleased contents of coming examinations or the use of any such material; e) Substituting for another person during an examination or allowing such substitutions for oneself.

**Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course. You will not be allowed to have a cell phone of any sort on your desk during exams (or any other time during class).

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Subjects to be covered (with suggested reading assignments where appropriate):** Introduction, History of Evolutionary Theory (Chapters 1 and 2); Evidence for Evolution (Chapter 3); Genetics and Embryological Development (Chapter 5); Natural Selection (Chapter 6); Random Events in Populations (Chapter 6); Adaptation (Chapter 8); Classification (Chapter 4); What is a Species? (Chapter 10); Speciation (Chapters 10 and 11); Geographic Variation and Subspecies; Biogeography; The Origin of Life; The Fossil Record (Chapter 3); Evolution of Humans (Chapter 14); Rates of Evolution; Coevolution (Chapter 12); Extinction; Domestication; Nomenclature.

### **Important dates:**

January 8	First day of class.
February 3	Exam I.
February 26	Exam II.
March 18	Drop date.
March 23-27	SPRING BREAK (Woo-hoo!)
April 7	Exam III
April 28	Last day of class.
May 1	Final Exam, 1:30 p.m. Comprehensive.

Class Website: <http://www.uamont.edu/facultyweb/huntj/Biology1063.htm>

Dr. Hunt's Website: <http://www.uamont.edu/facultyweb/huntj/>

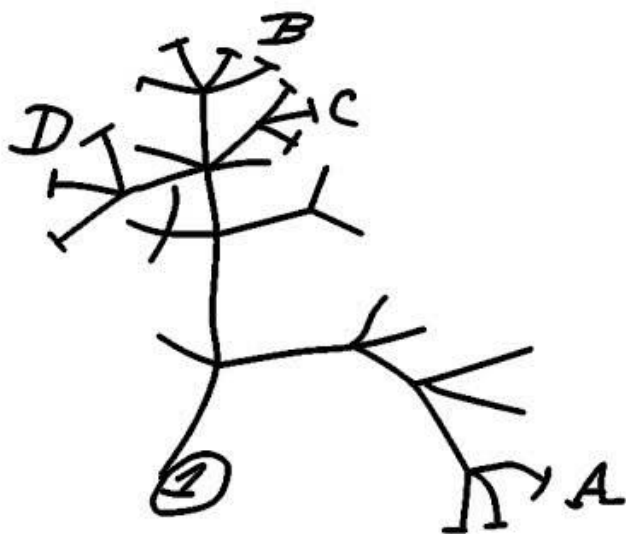
UAM Home Page: <http://www.uamont.edu/>

UAM Bookstore: <http://www.bkstr.com/uamontstore/home>

Dr. Hunt's Phone Number: 870-460-1466

Special Student Services: 870-460-1026

*I think*



**BIOL 3801**  
**Department of Mathematical and Natural Sciences**  
**Mammalian Anatomy**  
**Fall 2004, Lab 1:10-4:00 Wednesday**  
**Science Center, Room B31**

**Instructor:** Dr. John L. Hunt.

Office: B-11, Science Center.

Phone: 870-460-1466

E-mail: [huntj@uamont.edu](mailto:huntj@uamont.edu).

Office Hours: M, F, 1:00-4:00; T, Th, 9:00-11:00; or by appointment.

**Prerequisites:** BIOL 1153, BIOL 1161.

**Lab Manual:** (Required) Kardong, K.V., and E. J. Zalisko. 2002. Comparative Vertebrate Anatomy. 3<sup>rd</sup> Edition. McGraw Hill, New York, 214 pp. +.

**Required Dissecting Equipment:** Scissors, scalpel, forceps, blunt probe, sharp probe, rubber gloves.

**Course Objectives:** To provide a basic understanding of vertebrate anatomy, with a focus on the evolution of shared morphological characteristics.

**Grading:** Grading is on the standard 10-point scale (90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F). In the unlikely event that a small curve is applied, it will be done at the end of the course. There is no “extra” credit. Points will be earned from 4 scheduled 50-point practical examinations, and the final grade will be computed as a percentage of 200 points. There is no “extra” credit.

**Attendance:** Your success in this course is directly dependent upon your attendance and participation in the lab. All exams are in practical format, and therefore, make-ups WILL NOT be possible. It is important for you to note that you are responsible for material covered in every lab, even if you miss the lab with an excused absence. It is your responsibility to obtain the material you have missed.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined.

Comparative/mammalian anatomy lab is a difficult lab that requires a great deal of study and memorization. Many students consider laboratory sessions as an opportunity to pull up their lecture grade. However, whether this lab hurts or helps your lecture grade will depend entirely upon the amount of effort you put forth. The lab will be open at various times during the semester; please feel free to study and review in the lab during these times. You MUST attend all lab sessions, and you are expected to

remain for the duration of the lab. Lab time is limited—be sure and read the appropriate lab manual sections before you come to lab.

Each student will select a lab partner before the second lab. Lab sessions are somewhat unstructured, and each pair of students may work at its own pace. However, you **MAY NOT** ditch your lab partners—students caught doing so will be docked points. All students must participate in dissections, no matter how gross and disgusting they might seem. Soon, you'll get used to the smell, and manipulating cat guts will seem fun to you.

Lab dissections are messy by their nature. Please be aware that preservative chemicals smell bad and can ruin clothing—please dress appropriately. Shoes are required at all time, and sandals or open-toed shoes are probably not a good idea. You will want latex gloves (probably several pairs per lab), which **WILL NOT** be provided for you. If you do not use gloves, you will find that the smell of preservative materials and shark innards will permeate your skin, vastly reducing your enjoyment of pizza consumption, and “romantic” activities.

This course involves the frequent use of chemicals. Although preservative chemicals are much safer today than in years past, short and long-term health hazards are associated with the use of all chemicals. These health risks are significantly higher for students with chemical allergies, students who are asthmatic, and students who are pregnant. It is the responsibility of the student to properly use safety equipment and follow all safety rules to minimize health risks.

It is your responsibility to clean up after your dissections. Students who leave messes for the instructor or their lab partners to clean up will be penalized through the only means possible—their grade. Your instructor will explain proper disposal of animal parts to you.

Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on page 46 of the 2003-2005 UAM Catalog.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 65 of the 2003-2005 UAM Catalog. Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class.

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

**Lab schedule (with associated chapters of the lab manual):**

August 25	Introduction, Taxonomy (Chapter 1)
September 1	Protochordates (Chapter 2)
September 8	External anatomy, integument (Chapter 4)
September 15	Agnathans, lamprey (Chapter 3)
September 22	FIRST PRACTICAL
September 29	Skulls (Chapter 5)
October 6	Skeletal systems (Chapter 5)
October 13	Muscular systems (Chapter 6)
October 20	SECOND PRACTICAL
October 27	Digestive systems (Chapter 7)
November 3	Circulatory, respiratory systems (Chapter 8)
November 10	THIRD PRACTICAL
November 17	Urogenital systems (Chapter 9)
November 24	Nervous systems (Chapter 10)
December 1	Review
December 8	FOURTH PRACTICAL



University of Arkansas at Monticello  
School of Mathematical and Natural Science

## Waterfowl Ecology

BIOL 4594

Spring 2015

Lecture MWF 8:10-9:00 RM A3

Lab H 1:40-4:30 RM B31

**Instructor:** Dr. Christopher G. Sims

**Office:** B 4

**Office Phone:** 460-1664

**E-mail:** [simsc@uamont.edu](mailto:simsc@uamont.edu)

**Web Site:** <http://www.uamont.edu/facultyweb/Sims/>

**Office Hours:** MWF 1:30-3:00; TH 9:00-11:00. I will be in the office at other times as well. Changes in this schedule may occur at any time and will be posted outside my door or announced in class. If you need to see me it is strongly recommended that you e-mail and we can schedule an appointment.

**Course Title and Credits:** Waterfowl Ecology (BIOL 4594); 4 Credit Hours

**Course Description:** In this course we will study the environment and its components including energy flow, population and community structure, ecological succession, how evolution influences ecological structure.

**Prerequisites:** BIOL 3484

**Textbook:** Baldassarre G. A. and Bolen, E. G., *Waterfowl Ecology and Management*, 2<sup>nd</sup> ed. ISBN: 1-57524-260-5

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory and will be recorded regularly.

**You will be allowed 3 unexcused absences during the semester. After the third unexcused absence your grade will be reduced one percentage point for each unexcused absence thereafter.**

**Field trip attendance is mandatory in order to develop adequate identification skills. Failure to attend on field trip days will result in loss of 1 letter grade from your semester grade.**

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

**Cheating in any form will not be tolerated and will automatically result in failure of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication devise) during a test will be considered an attempt to cheat by the student.**

**\*\*\*\*\*Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor. Failure to follow this rule will result in the student being asked to leave class.**

**Ethics Rule:** Anyone known to be actively engaged in killing protected species of any kind (avian or other) will automatically receive an F in this course and will be reported immediately to the state and federal authorities. It is illegal to kill any species of animal that is not designated as a game species with a legal season or an introduced species that is not protected.

<b>Course Grade:</b>	<b>Lecture and Lab:</b>	
	4 Lecture Exams:	100 pts. each
	Lab Exam Waterfowl Identification:	100 pts.
	Waterfowl Morphology Test	100 pts.
	Taxonomy	100 pts.
	<u>Journal Article Summaries and Discussion</u>	<u>100 pts</u>
	Total:	800 pts.

**Point spread (grade based on a percentage of 800 possible points):**

A = 100-89.5 pts., B = 89.4-79.5 pts., C = 79.4-69.5 pts., D = 69.4-59.5 pts., F < 59.4

**\*\*\*\*\*NO EXTRA CREDIT** will be given under any circumstances!!!

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted on my website (see above). If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone or E-mail.

**Tentative Lecture Schedule (topics are subject to change):**

Introduction and Historical Overview  
Classification  
Courtship Behavior, Mating Systems, and Pair-Bond Formation

**Test #1**

Reproductive Ecology  
Nesting, Brood Rearing and Molt  
Feeding Ecology

**Test #2**

Winter Ecology  
Major Habitats  
Individual Species Accounts and Ecological Requirements

**Test #3**

Conservation and Management

**Final**

**Lab Schedule:**

**\*\*\*\*\*The Lab schedule is a tentative schedule and will change often with weather etc. Check your UAM e-mail often for announcements and changes.**

## Waterfowl Morphology

Field observation and ID (all weeks permitted by weather)

Field trips (2) to active waterfowl management area (private and/or government)

### **Important Dates:**

January 7 (Wed) First day of classes for sessions 1 and 8W1. Admission application deadline.

January 9 (Fri) Last day to register or add classes.

January 19 (Mon) Martin Luther King Holiday. Offices and classes closed.

February 27 (Fri) Deadline to apply for August and December graduation.

March 18 (Wed) Last day to drop a session 1 class or withdraw from the term (not applicable to other sessions). Grade(s) will be W.

March 23-27 (Mon-Fri) Spring Break.

April 6 (Mon) Preregistration for Summer and Fall 2015 begins.

April 17 (Fri) Preregistration for Summer and Fall 2015 ends.

April 28 (Tues) Last day of classes for sessions 1 and 8W2.

April 29 –May 5 (Wed-Tues) Final exam period.

May 8 (Fri) Commencement.

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu)

**Student conduct statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a **failing grade (F)** in the course.





University of Arkansas at Monticello

School of Mathematical and Natural Science

## Vertebrate Physiology

BIOL 4634

Spring 2015

Lecture MWF 11:10-12:00 RM B3

Lab T 1:40-4:30 RM B31

**Instructor:** Dr. Christopher G. Sims

**Office:** B 4

**Office Phone:** 460-1664

**E-mail:** [simsc@uamont.edu](mailto:simsc@uamont.edu)

**Web Site:** <http://www.uamont.edu/facultyweb/Sims/>

**Office Hours:** 1:30-3:00; TH 9:00-11:00. I will be in the office at other times as well. Changes in this schedule may occur at any time and will be posted outside my door or announced in class. If you need to see me it is strongly recommended that you e-mail and we can schedule an appointment.

**Course Title and Credits:** Vertebrate Physiology (BIOL 4634); 4 Credit Hours

**Course Description:** To convey knowledge of vertebrate physiology and physiological principles that shape the way the vertebrate body functions.

**Prerequisites:** BIOL 3363 and eight hours of chemistry or by instructor's permission

**Textbook:** Randall, D.; Burggren, W.; and French, K. 2002. Animal Physiology: Mechanisms and Adaptations. W. H. Freeman and Company, New York. 5<sup>th</sup> ed. ISBN: 0-7167-3863-5

**Attendance, Testing, and Cheating:** Attendance in this course is mandatory and will be recorded regularly.

**You will be allowed 3 unexcused absences during the semester. After the third unexcused absence your grade will be reduced one letter grade for each unexcused absence thereafter.**

Exam attendance is required and make-up exams will be given only under extreme circumstances. Make-up exams will be allowed only in cases of illness with a doctor's excuse, excused university functions, or family emergencies with a written excuse from a family member. If you are forced to miss an exam you must notify me **within 24 hours of the exam**. Failure to do so will result in a zero on that exam. If you know ahead of time that you will be absent please let me know and prior arrangements for testing can be made.

**Cheating in any form will not be tolerated and will automatically result in failure of the course. Cellular phones are included in the cheating policy and any appearance of a cellular phone (or other communication devise) during a test will be considered an attempt to cheat by the student.**

**\*\*\*\*\*Likewise electronic devices such as cellular phones etc. will not be allowed in lecture unless prior approval is given by the instructor. Failure to follow this rule will result in the student being asked to leave class.**

**Course Grade:**

Exam 1:	100 pts.
Exam 2:	100 pts.
Exam 3:	100 pts.
Final Exam:	100 pts.
<u>Lab (article summaries, lab summaries, notebooks etc.)</u>	<u>100 pts.</u>
Total for Course:	500 pts.

**Grade Scale (percentage):**

A = 100-89.5, B = 89.4-79.5, C = 79.4-69.5, D = 69.4-59.5, F ≤ 59.4

\*\*\*\*\***NO EXTRA CREDIT** will be given under any circumstances!!!

Each student will choose a code number/code name prior to the first test and this will be used to post grades. Grades will be posted on my website (see above). If you do not wish to have your grade posted please let the instructor know prior to the first test. Grades will **not** be provided over the phone or E-mail.

**Lecture Schedule:****Chapter #:**

Introduction	1
Enzyme Function	3
Neuronal Function	5
Communication Along and Between Neurons	6
Sensing the Environment	7
Muscles and Animal Movement	10
<b>Exam 1</b>	
Glands and Hormones	9
<b>Exam #2</b>	
Circulation	12
Gas Exchange and Acid-Base Balance	13
<b>Exam #3</b>	
Ionic and Osmotic Balance	14
Acquiring Energy: feeding, digestion, metabolism	15

**Final**

**Thursday, April 30, 1:30-3:30**

**Tests will be announced at least one week in advance.**

**Important Dates:**

January 7 (Wed) First day of classes for sessions 1 and 8W1. Admission application deadline.

January 9 (Fri) Last day to register or add classes.

January 19 (Mon) Martin Luther King Holiday. Offices and classes closed.

February 27 (Fri) Deadline to apply for August and December graduation.

March 18 (Wed) Last day to drop a session 1 class or withdraw from the term (not applicable to other sessions). Grade(s) will be W.

March 23-27 (Mon-Fri) Spring Break.

April 6 (Mon) Preregistration for Summer and Fall 2015 begins.

April 17 (Fri) Preregistration for Summer and Fall 2015 ends.

April 28 (Tues) Last day of classes for sessions 1 and 8W2.

April 29 –May 5 (Wed-Tues) Final exam period.

May 8 (Fri) Commencement.

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu)

**Student conduct statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a **failing grade (F)** in the course.

**Vertebrate Physiology Syllabus Addendum**

**Lab**

The actual lab exercises to be conducted have not been determined as yet. You will be notified each week as to the exercise to be conducted.

All lecture exams will be given during lab time to ensure enough time for completion.

## Grading

Lab Summaries:	20 pts. each (number to be determined)
Paper Summaries:	20 pts. each (2-4 of these this semester)
Paper discussions:	10 pt. participation (2-4 of these this semester)

### Lab grade calculation:

Lab is worth 100 pts. toward your total grade in the course (1/5 of the final grade).

To calculate your lab grade keep up with the total # of points you accrue during the semester.

Also keep up with the total possible points for the semester.

$(\text{total points} / \text{total possible points}) \times 100 = \text{your lab grade}$

I will drop your lowest lab grade (any 20pt. assignment), however failure to turn in or attempt an assignment will not be considered for the drop grade and will count as a 0.

**SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
COURSE SYLLABUS**

- COURSE** Mammalian Histology (Biology 4664). Prerequisites: Biol 1153,1161
- TEXT** **Required:** Barbara Young and J.W. Heath Wheater's Functional Histology 2006 (5<sup>h</sup> edition) Churchill and Livingston ISBN-13 9780808923312 Lab: Self prepared lab guide
- Recommended:** Histology Atlas (the most popular are listed below)
1. Color Atlas of Histology by L.P. Gartner and J.L. Hiatt Williams & Wilkins
  2. Color Atlas of Basic Histology by I. Berman Lange Medical Books
  3. Color Atlas of Histology by Erlandsen and Mangey Mosby
  4. DiFiore's Atlas of Histology and Functional Correlations by Eroschenko Williams & Williams
- INSTRUCTOR** Dr. Russell O. Nordeen Office Room B27 Science Center. Phone: 460-1564  
e-mail [nordeen@uamont.edu](mailto:nordeen@uamont.edu) Office hours M-F 10-I IAM W 1-5 PM Th 2-3 PM and by appointment.
- COURSE FORMAT** Lecture three hours per week, laboratory three hours per week. Lab activities will follow lecture content and will be closely integrated with lecture material. It is crucial that students read ahead in order to understand lab observations.
- OBJECTIVES** Study of cells and tissues with emphasis on identification of characteristic features important in understanding structure-function relationships.

**LECTURE/LAB CONTENT**

Introduction/ Slide preparation  
Microscopy and Staining  
Cell structure (Organelles)  
Epithelial Tissue  
Connective Tissue  
Muscle  
Nervous Tissue  
Circulatory System  
Integumentary System  
Respiratory System  
Digestive System  
Urinary System  
Male Reproductive System  
Female Reproductive System  
Endocrine System  
Special Sense Organs

**CHAPTER ASSIGNMENTS**

p. 426-431  
p. 426-431  
Chapters 1-2  
Chapters 5 Chapters 4 & I O  
Chapters 6  
Chapters 7 & 20  
Chapters 3, 8 & 11  
Chapter 9  
Chapter 12  
Chapters 13 - 15  
Chapter 16  
Chapter 18  
Chapter 19  
Chapter 17  
Chapter 21

**GRADING** There will be five lecture exams each counting 100 points including a final exam that will be comprehensive. In addition there will be four laboratory exams each worth 100 points. Quizzes will be given each lab and may be based on reading assigned for the lab or slides viewed during lab. Each quiz will be worth 10 points. The top 10 quizzes will be added together for a total possible of 100 quiz points. **There will be no make up quizzes.** Your lowest exam score (excluding the final exam score) be replaced by the quiz scores thus total points for the course = 900. **There are no make-up exams without an authorized university excuse; students must notify the instructor one week in advance and a memo of the reason for the authorized university excuse provided.** In this instance, it is up to the student to schedule a suitable make-up exam time. Your grade will be determined by adding exam scores and dividing by 900 to determine an average:

A = 90-100; B = 80-89; C = 70-79; D = 60-69; F = 0-59

Students are responsible for supplying their own Scantron forms for all exams. Scores on exams will be posted by a code number assigned on the first exam. If scores are not posted, the exams have not been graded. Exams will be viewed during lab. However, you are welcome to view your exam and discuss any question with the instructor during office hours or by appointment. The last day to view exams is Friday, December 8.

**ATTENDANCE** All students are expected to attend labs and are responsible for everything that takes place in the lab. Additionally, it is important that you attend lab on time so that you don't miss instructions presented at the beginning of lab or lab quizzes. If a student misses a quiz due to being late or leaving early that quiz score will be recorded as a 0.

Students may be officially dropped from the lab the third time they are not present (page 80 of UAM catalog).

**LABORATORY AND CLASSROOM POLICIES** No food, drinks or tobacco use in the laboratory or lecture room. Students found cheating on examinations or will be given a grade of "F" for the course and might be expelled from the University. The following action is prohibited under the Student Conduct Code. Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others. Cell phones should be turned off during laboratory and lecture or in case of emergency put on silent mode.

**STATEMENT ON DROP DATES** Students dropping a class on or before November 8th will receive the grade of "W". Students dropping a course after November 8th will receive the grade of "W" if passing and the grade of "F" if not passing. No withdrawals will be permitted during the last three days of class.

**OTHER** Students are encouraged to bring the textbook to lecture and lab. Students must purchase at least a one inch three ring binder for the lab guide. Students are encouraged to bring colored pencils to lab for drawing purposes.

#### IMPORTANT DATES

Wednesday, August 23

Tuesday, August 29

Monday, September 4

Friday, October 6

Monday, November 6

Wednesday, November 8

Friday, November 17

Wednesday, November 22-Friday, November 24

Tuesday, December 5

Friday, December 8

Wednesday, December 13 10:30 - 12:30 AM Science Center B3

First day of classes.

Last day to register or add classes. Labor Day Holiday.

Deadline to file for May graduation. Preregistration for spring begins

Last day to drop with W. Preregistration for spring ends.

Thanksgiving Holiday

Last day to withdraw from class. Last day of class.

Final exam

**STUDENTS WITH DISABILITIES**

It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120, phone 870-460-1026; TDD 870-460-1626; fax 870-460-1926.

UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **PHARMACOLOGY BIOL 4673-01**  
SPRING 2015 TuTh 8:10 a.m. SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use **ONLY** your official UAM campus email!]  
**OFFICE HOURS:** 9:10 - 10:00 am MWF; 9:40 - 10:30 am TuTh  
1:10 - 2:00 pm MW; 12:40 - 1:30 pm TuTh, or by appointment.  
**COURSE TITLE:** (BIOL 4673-01) **PHARMACOLOGY** 3 credit of hours lecture.

**DESCRIPTION:** Study of the response of living organisms to drugs.

**PREREQUISITES:** Junior or senior standing.

**REQUIRED TEXT:** *Pharmacology, An Introduction*; Hitner & Nagle, 6<sup>th</sup> Edition, McGraw-Hill, ISBN-978-0-07-352086-5. You must bring your text to class lectures.

**STUDENT LEARNING OBJECTIVES:** Know the different properties, sources, effects, administration, dosages, responses, and nomenclature of common drugs. Understand the action of drugs with receptors and the mechanism of the action of drugs.

**REQUIRED CALCULATOR:** Any **non-graphing** calculator is required for the exams. You may not borrow calculators or use the calculator function on a cell phone.

GRAPHING CALCULATORS ARE NOT ALLOWED.

**REQUIRED ATTENDANCE:** You will be expected to attend every class meeting and arrive on time. If an absence occurs; it is the student's responsibility to obtain the missed lecture material. *If you do not have time for class; do NOT expect my time later.*

**CELL PHONES:** **TURN OFF YOUR CELL PHONES.** You may not leave class to access your cell phone and return. Your career is more important than what/who is on the other end of your phone. However, you will be given enough rope to hang yourself. I will not ask anyone to turn off their cell phone. *If you do not have time for class because of your cell phone; do NOT expect my time later.* Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

**COURSE CONTENT AND EXAM SCHEDULE:**

<i>Exam I</i>	Intro, Geriatrics, Dosage, ANS (Symp. & Parasymp.)	Chap 1-7	Thurs. 2/05/15
<i>Exam II</i>	Relaxants, anesthetics, CNS, Sedatives, Antianxieties	Chap 8-12	Thurs. 2/26/15



*Exam III* Drugs of abuse, Antiepileptics, Antiparkinson  
*Exam IV* Anesthetics, Analgesics, Disinfectants  
*Final Exam* Comprehensive

Chap 13-17 Thurs. 4/02/15  
Chap 18-20,28,44 Tues. 4/28/15  
**Thurs. 04/30/15 at 8:00 am NOT 8:10 am**

**EVALUATION:** There will be four exams of 100 points each and a comprehensive final exam of 200 points for a total of 600 points. The test format is predominantly matching, but may also include calculations, short answer, and multiple choice. The percentage score from the comprehensive final will substitute for ONE missed exam. Second and subsequent missed exams will have a zero recorded as the grade. Exams may not be made up or given late for any reason. If an absence is planned for a University sponsored event, exams should be taken early.

**GRADING:**

A	90.0-100.0%
B	80.0-90.0%
C	70.0-80.0%
D	60.0-70.0%
F	≤ 60.0%

**ACADEMIC MISCONDUCT: Cheating will not be tolerated.** Penalties for violations are described on page 55 of the 2013-15 UAM catalog and include withdrawing the student from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

**Students with Disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 121; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: whitingm@uamont.edu

**Student Conduct Statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically. This includes cell phone use during class. Seats may be assigned to prevent problems.

**Biology 469V—Senior Research**  
**Department of Mathematical and Natural Sciences**  
**Summer 2015**

**Instructor:** Dr. John L. Hunt. **Office:** B-11, Science Center. **Phone:** 870-460-1466.  
**E-mail:** [huntj@uamont.edu](mailto:huntj@uamont.edu). **Web page:** <http://www.uamont.edu/facultyweb/Huntj>.  
**Office Hours:** 10-11 MWF; 8:30-9:30 TTh; 2-3 MTThF, or by appointment.

**Suggested text:** None. Some material will be provided by the instructor.

**Course Objectives and Topics to Be Covered:** To introduce the student to the techniques and concepts of basic biological research. Each student will select a research project and spend the semester working on it, including field and lab work, work on a research paper, and presentation of results at meetings as deemed appropriate by the instructor.

**Tests and grading:** Grades will be based on participation in and quality of research and writing assignments. Students will be expected to spend at least three hours per week working on the project for each hour of credit they receive. Each student will meet with the instructor at the beginning of the course and receive specific instructions about what is expected to earn the desired grade. The requirements for each student will vary based on the project selected; however, such requirements will be clearly established by agreement between student and instructor.

**Class policies.** The points in this class are not concentrated near the end—you need to do well early in the semester. The instructor is here to help you. Please feel free to ask questions at any time. You are encouraged to seek help outside of regular class hours if you are so inclined, either during office hours or by appointment.

Disorderly conduct is any behavior which disrupts the regular or normal functions of the University Community, including behavior which breaches the peace or violates the rights of others. This type of conduct is prohibited by the Student Conduct Code. The Code may be found on pages 39-45 of the 2013-2015 UAM Catalog.

The last date to drop this course with a W (and for most other courses at UAM) is March 18. A grade of I will only be given if a student has completed 75% of the work of the course, with a mathematical possibility of obtaining a passing grade, and will be given only for University-approved excuses, with the approval of the Dean of Math and Sciences.

**Academic dishonesty:** Cheating will not be tolerated. The Academic Code of the University of Arkansas-Monticello may be found on page 40 of the 2013-2015 UAM Catalog. Please note the following definitions of academic dishonesty:

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, or other class work. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;

- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
  3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

Please note that the instructor has wide latitude in taking corrective action in response to cheating; expect the harshest possible response in this class. In other words, if I catch you cheating even once, I will assign a grade of F for the course.

**Students with disabilities:** It is the policy of the University of Arkansas—Monticello to accommodate individuals with disabilities pursuant to federal law and the commitment of the University to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026, TDD 870-460-1626, fax 870-460-1926.

University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
Aquatic Biology lecture/lab Course Syllabus  
Spring 2012, MWF 10:10 -11:00 am, B3

**Instructor Name:** Karen Fawley, Ph.D

**Instructor Location of Office:** Museum of Natural History, Room 101

**Instructor Phone:** 870-460-1165

**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu)

**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>

**Office hours:** T, 11-12:30pm; W, 2-4pm; Th 11:30-12:30; 2-3:30pm

**Course Title and Credit Hours:** Biology 4724, Aquatic Biology, 4 credit hours

**Course Description:** To familiarize students with the physical, chemical, biological, and ecological aspects of freshwater aquatic environments. Human impacts and interactions with aquatic systems will also be emphasized. This course includes a lecture and lab component.

**Prerequisites:** Biology 1153 and Biology 1161; Six hours of chemistry

**Required Textbook:** *Freshwater Ecology: Concepts and Environmental Applications of Limnology*, Dodds and Whiles, Academic Press, 2<sup>nd</sup> edition, ISBN 978-0-12-374724-2

### Student Learning

**Outcomes:** Upon completion of this course, students should have a general understanding of the physical, chemical, biological, and ecological aspects of freshwater aquatic environments.

### Statement of Special Policies:

**Class Attendance:** Attendance will be taken during every lecture. In general, students who attend class regularly make better grades. As a courtesy to the students in the class and the instructor, please be on time.

**Classroom Policies:** **Use of tobacco products is not permitted on UAM grounds.**

**Cell phones, pagers, and all electronics will be turned off during class**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 4 of this syllabus will be applied to students guilty of cheating on exams.

### Course Content Outline/Calendar:

Date	Lecture Topic	Reading from: <i>Freshwater Ecology</i>	
W	Jan 11	Course Overview	
F	Jan 13	Introduction	Ch 1
M	Jan 16	MLK Jr. HOLIDAY-No class	
W	Jan 18	Properties of Water	Ch 2
F	Jan 20	Properties of Water / Movement of Light, Heat and Chemicals in Water	Ch 2/Ch 3
M	Jan 23	Movement of Light, Heat and Chemicals in Water	Ch 3
W	Jan 25	Hydrologic Cycle and Physiography of Groundwater	Ch 4
F	Jan 27	Hydrologic Cycle and Physiography of Groundwater	Ch 4
M	Jan 30	Hydrology and Physiography of Wetland Habitats	Ch 5
W	Feb 1	Hydrology and Physiography of Wetland Habitats	Ch 5
F	Feb 3	Lakes and Reservoirs: Physiography	Ch 7
M	Feb 6	Lakes and Reservoirs: Physiography	Ch 7
W	Feb 8	Physiography of Flowing Water	Ch 6
F	Feb 10	Physiography of Flowing Water	Ch 6
M	Feb 13	EXAM I (during lab time)	Ch 1-7
W	Feb 15	Types of Aquatic Organisms	Ch 8
F	Feb 17	Types of Aquatic Organisms	Ch 8
M	Feb 20	Microbes and Plants	Ch 9
W	Feb 22	Microbes and Plants	Ch 9
F	Feb 24	Microbes and Plants	Ch 9
M	Feb 27	Microbes and Plants	Ch 9
W	Feb 29	Multicellular Animals	Ch 10
F	Mar 2	Multicellular Animals	Ch 10
M	Mar 5	Multicellular Animals	Ch 10
W	Mar 7	Evolution and Biodiversity of Freshwaters	Ch 11
F	Mar 9	Evolution and Biodiversity of Freshwaters	Ch 11
M	Mar 12	EXAM II (during lab time)	Ch 8-11
W	Mar 14	Aquatic Chemistry/Nutrient Cycling	Ch 12
F	Mar 16	Class cancelled by instructor	
M-F	Mar 19-23	SPRING BREAK	
M	Mar 26	Carbon	Ch 13
W	Mar 28	Nitrogen, Sulfur, Phosphorus and Other Nutrients	Ch 14
F	Mar 30	Nitrogen, Sulfur, Phosphorus and Other Nutrients	Ch 14
M	Apr 2	Unusual or Extreme Habitats	Ch 15
W	Apr 4	Responses to Toxic Chemicals	Ch 16
F	Apr 6	Nutrient Use and Remineralization	Ch 17
M	Apr 9	Nutrient Use and Remineralization	Ch 17
W	Apr 11	Trophic State and Eutrophication	Ch 18
F	Apr 13	Trophic State and Eutrophication	Ch 18
M	Apr 16	EXAM III (during lab time)	Ch 12-18
W	Apr 18	Behavior and Interactions Among Microorganisms	Ch 19
F	Apr 20	Predation and Food Webs	Ch 20
M	Apr 23	Predation and Food Webs	Ch 20
W	Apr 25	Complex Community Interactions	Ch 22
F	Apr 27	Freshwater Ecosystems	Ch 24
M	Apr 30	Freshwater Ecosystems	Ch 24
Th	May 3	FINAL EXAM (EXAM IV), 1:30-3:30pm	Ch 19-20; 22; 24

## Course Content Outline/Calendar:

Date	Lab	Topic
M	Jan 23	Lab 1. Introduction/Sampling Equipment
M	Jan 30	Lab 2. Hydrology and Physiography of Wetland Habitats
M	Feb 6	Lab 3. Lake Morphometry
M	Feb 13	EXAM I
M	Feb 20	Lab 4. Aquatic Organism Lab, Part I
M	Feb 27	Lab 5. Aquatic Organism Lab, Part II
M	Mar 5	Lab 6. Aquatic Organism Lab, Part III
M	Mar 12	EXAM II
M-F	Mar 19-23	SPRING BREAK
M	Mar 26	Lab 7. Water Chemistry Lab, Part I
M	Apr 2	Lab 8. Water Chemistry Lab, Part II
M	Apr 9	Lab 9. Field Sampling, Part I
M	Apr 16	EXAM III
M	Apr 23	Lab 10. Field Sampling, Part II
M	Apr 30	Lab 11. Field Sampling, Part III

## Lab Quiz Schedule:

Date		
M	Jan 30	Quiz- Lab #1
M	Feb 6	Quiz- Lab #2
M	Feb 13	EXAM I
M	Feb 27	Quiz- Lab #4
M	Mar 5	Quiz- Lab #5
M	Mar 12	EXAM II
M-F	Mar 19-23	SPRING BREAK
M	Apr 2	Quiz- Lab #7
M	Apr 9	Quiz- Lab #8
M	Apr 16	EXAM III
M	Apr 23	Quiz-Lab #10

## Provisions for tests and evaluations:

Scores on exams will be posted on the instructor's web site, <http://www.uamont.edu/facultyweb/fawley>, by a code number unless a student requests not to have his/her scores posted.

**Rescheduling Exams:** If you are unable to take an exam at the scheduled time, please notify the instructor well before the day of the exam to reschedule at an earlier time.

**Make-up Exams:** No make-up exams will be given, but the student can replace one missed exam with the final exam grade. Students can make-up one exam only, if they have a valid medical or personal excuse. The student must get in contact with the professor before or the day of the scheduled exam. Any additional missed exams will be counted as a zero.

**Make-up Labs/Quizzes:** Due to time constraints, there will be no make-up labs or make-up quizzes. However, students can drop 1 lab and 1 quiz during the semester.

**Grading Policy:**

		<u>Grading scale</u>
Lab Quizzes	120 pts	90-100 A
In-Lab Evaluation	200 pts	80-89 B
Lecture/Lab Exams	<u>400 pts</u>	70-79 C
	720 pts	60-69 D
		Below 60 F

**Special dates of concern:**

Wednesday, January 11	First day of classes.
Tuesday, January 18	Last day to register of add classes.
Monday, January 16	Martin Luther King, Jr. Day
Friday, February 24	Deadline to file for Aug and Dec 2012 graduation
M-F (March 19-23)	Spring Break!
Monday, April 2	Preregistration for Fall and Summer 2012 begins
Wednesday, April 4	Last day to drop W.
Friday, April 13	Preregistration for Fall and Summer 2012 ends.
Thursday, April 26	Last day to withdraw from class.
Tuesday, May 1	Last day of classes.
W-T, May 2-8	Final exam period.
Friday, May 11	Commencement

**Students with disabilities:**

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For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

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1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a potential grade reduction to F (zero points) on the specific assignment or exam.



University of Arkansas at Monticello  
School of Mathematical and Natural Sciences  
Biology Seminar Course Syllabus  
Spring 2015, TBA, B18

**Instructor Name:** Karen Fawley, Ph.D; Marvin W. Fawley, Ph.D  
**Instructor Location of Office:** Museum of Natural History, Room 101  
**Instructor Phone:** 870-460-1165  
**Instructor E-mail Address:** [fawley@uamont.edu](mailto:fawley@uamont.edu); fawleym@uamont.edu  
**Instructor Website:** <http://www.uamont.edu/facultyweb/fawley>  
**Office hours:** Dr. K. Fawley- MW, 9-11am; Th, 1:30-3pm or by appointment  
Dr. M. Fawley- T 9-11 or by appointment.

**Course Title and Credit Hours:** Biology 4741, Biology Seminar, 1 credit hour

**Course Description:** A research course covering methods for writing papers and conducting public presentations on topics from the biological sciences.

**Prerequisites:** Biology Major with Senior standing

**Required Textbooks:** *An Orchard Invisible: A Natural History of Seeds*, J. Silvertown  
ISBN-10: 0226757749

*Writing Papers in the Biological Sciences*. V.E.  
McMillan, Counterpoint, 5<sup>th</sup> edition, ISBN-10: 1582435677.

**Student Learning Outcomes:** By the conclusion of the course you should be able to write a review or research paper in scientific format and present your topic to a scientific audience.

**Statement of Special Policies:**

**Class Attendance:** Attendance will be taken during every session. As a courtesy to the students in the class and the instructor, please be on time. For those sessions that require only submission of class materials, such as a reference list, submission via e-mail will be considered class attendance. **Any student who is habitually late or who misses 2 or more required classes without excuse will lose points.** You will be notified if you are about to lose points due to chronic tardiness.

**Classroom Policies:** **Use of tobacco products is not permitted on UAM grounds.**

**Cell phones and all electronics will be turned off during class.**

**Cheating/Plagiarism:** Cheating will not be tolerated. The Academic Dishonesty policy found on page 3 of this syllabus will be applied to all assignments. Cheating includes plagiarism; plagiarism can result in a grade of “F” (zero points) for an assignment.

**Course Content Outline/Calendar:**

Date	Assignment ( <b>Required sessions in bold</b> )
Jan 5-9	<b>Organizational meeting.</b>
Jan 12-16	<b>Assignment for mini-presentations.</b>
Jan 19-23	<b>Topics due; Literature search methods.</b>
Jan 26-30	<b>Discussion of PowerPoint presentation techniques/ Three references for mini-presentation due to instructor</b>
Feb 2-6	<b>Mini-presentations.</b>
Feb 9-13	<b>Mini-presentations.</b> Selection of topics for major presentation and paper
Feb 16-20	Literature search help, if needed. Preliminary Ref. list due.
Feb 23-27	Reference list due. Discussion of scientific writing style.
Mar 2-6	Abstract for paper due.
Mar 9-13	First draft of paper due.
Mar 16-20	Go through PowerPoint presentation with instructors. (Individual appointments)
Mar 23-27	Spring Break!
Mar 30-Apr 3	<b>Trial run of presentations.</b> (Class may run late)
Apr 6-10	<b>Trial run of presentations.</b> (Class may run late)
Thursday, Apr 16*	<b>Presentations</b>
Tuesday, Apr 21*	<b>Presentations;</b> Final paper due
Thursday, Apr 23*	<b>Presentations;</b>

\***Presentations** are scheduled for Tuesday and Thursday afternoons during activity hour (12:40-1:30pm).

**Grading Policy:** Grades for each project: Mini-presentation (50 pts); Main presentation (100 pts); Paper (100 pts); Discussion (50 pts).

Grading scale (%)

90-100, A; 80-89, B; 70-79, C; 60-69, D; Below 59, F.

**Special dates of concern:**

Wednesday, January 7	First day of classes.
Monday, January 19	Martin Luther King, Jr. Day
Tuesday, January 9	Last day to register of add classes.
Friday, February 27	Deadline to file for Aug and Dec 2015 graduation
M-F (March 23-27)	Spring Break!
Wednesday, March 18	Last day to drop W.
Monday, April 6	Preregistration for Fall and Summer 2015 begins
Friday, April 17	Preregistration for Fall and Summer 2015 ends.
Tuesday, April 28	Last day of classes.
W-T, Apr 29-May 5	Final exam period.
Friday, May 8	Commencement

### **Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

#### For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

### **Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

### **Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.

3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will a potential grade reduction to F (zero points) on the specific assignment.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES**  
**GENERAL CHEMISTRY I COURSE SYLLABUS**

Fall 2015, 9:10 – 10:00 a.m. MWF or 10:10 – 11:00 a.m. MWF

**Instructor Name:** J. Morris Bramlett

**Instructor Office:** Science Center, A-7

**Instructor Phone:** 870-460-1116 or 870-460-1016

**Instructor Email Address:** bramlett@uamont.edu

**Office Hours:** 8:10 – 9:00 MWF, 1:10 – 2:00 MWF; 1:30-2:30 TTH; any other time by appointment

**Course Title and Credit Hours:** CHEM 1103, General Chemistry I, 3 Credit Hours  
A.C.T.S Equivalent Course # CHEM 1404 when combined with UAM CHEM 1121, General Chem I Lab

**Corequisites:** CHEM 1121, ENGL 1013 and MATH 1043

**Course Description:** The study of measurement systems, significant figures, atomic and molecular structure, gas laws, thermochemistry, solutions, states of matter, chemical bonding, chemical reactions, and stoichiometry.

**Student Learning Outcomes:** At the end of the course, the successful student will be able to explain, describe, discuss, recognize, and apply knowledge of the following: Chemical reactions, Gases and the kinetic-molecular theory, Nuclear chemistry, Quantum theory and atomic structure, Electron configuration and chemical periodicity, Stoichiometry, Valence bond theory and molecular orbital theory, Inorganic Nomenclature, and Thermochemistry.

**Required textbooks, workbooks, supplementary materials:**

General Chemistry: Essential Concepts, 7<sup>th</sup> Edition by Chang, published by McGraw Hill

ISBN: 9780073402758 (hard copy) or ISBN: 9780077623340 (digital)

For additional textbook information, you may go to the online bookstore:

<http://www.bkstr.com/uamontstore/shop/textbooks-and-course-materials>

**Technical Support Information:**

Blackboard Assistance:

Contact Office of Instructional Technology; phone 870-460-1663; open Monday-Friday, 8 a.m. – 4:30 p.m.

Online Help Desk: <http://www.uamont.edu/pages/resources/academic-computing/>

Email Assistance:

Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.

Library Services: The computer section in the Library is open during regular Library hours. Go to the Taylor Library website for hours of operation: <http://www.uamont.edu/pages/library/>

**UAM Attendance Policy:**

Students are expected to attend all required class sessions during the semester. The University does not allow for unexcused absences. Each faculty member will determine his or her individual policies regarding excused

absences, except in the case of a University sponsored event. Students involved in University sponsored events should be considered excused unless the proper notifications were not delivered to the instructor according to Policy XV on page 71 of the UAM Faculty Handbook.

Regardless of the reasons for a student missing, a faculty member may determine that the student cannot complete the course requirements or demonstrate the expected student learning outcomes within the timeframe of the course. The faculty member may recommend that the student withdraw, award the student a failing grade (at end of term) or, if warranted, assign the student an Incomplete.

### **Course-specific Attendance Policy**

Chemistry is a difficult subject. Even a single absence can lead to poor understanding of material and lead to a lower course grade. Homework will be taken up for a grade on a daily basis. There will be several quizzes given during the semester. Homework and quizzes missed due to unexcused absences may not be turned in late or made up.

### **Academic Alert:**

The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior or are having difficulty adjusting to campus life, University faculty, staff or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

### **Academic Resources:**

#### **GENERAL EDUCATION TUTORIAL LAB**

Harris Hall, (870) 460-1454

Any student who desires to be successful in his/her general education classes can receive assistance through tutoring services available on the 2nd floor of Harris Hall. Please watch for emails from Laura Hughes detailing this semester's tutoring availability.

### **Students with Disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities. It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu).

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative; phone 870 364-6414; fax 870 364-5707.

### **Feedback Schedule:**

Email is likely the best way to contact the instructor. Most often, a student can expect a response to email within 6 hours during business hours Monday through Friday. After hours emails may not be answered until the following morning. Emails after 5 p.m. on Friday may not be answered until the following Monday.

**Assessments:** There will be four regular exams (100 points each) and a comprehensive final exam (100 points). There will be 8-10 quizzes given during the term, with the best seven being counted as a percentage of a 100

points possible. All quizzes and exams will be taken in class and proctored. Homework will be taken up daily and scored as a percentage of 50 possible points.

**Explanation of Grading Policy:**

Assignment	Points Possible
Test 1	100
Test 2	100
Test 3	100
Test 4	100
Final Exam	100
Homework	50
<u>Quizzes</u>	<u>100</u>
Total	650 possible

**Grading Scale:**

A= 88—100 %	>569 points
B= 77 — 87 %	498 - 568 points
C= 66 — 76 %	426 - 497 points
D= 55 — 65 %	355 - 425 points
F= below 55 %	below 355 points

**Student Conduct Statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic Dishonesty:**

- Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - Copying from another student’s paper;
  - Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - Collaboration with another student during the examination;
  - Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - Substituting for another person during an examination or allowing such substitutions for oneself.
- Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
- Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
- Plagiarism: Plagiarism is defined as adopting and reproducing as one’s own, to appropriate to one’s use, and to incorporate in one’s own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a score of zero on exam or assignment for the first offense. A second offense will result in removal of the course

with a grade of F.

**Course Outline/Calendar:**

Chapter #	Topic	Chapter #	Topic
1	Introduction	6	Energy Relationships in Chemical Reactions
2	Atoms, Molecules, & Ions	7	Electronic Structure of Atoms
3	Stoichiometry	8	The Periodic Table
4	Reactions in Aqueous Solutions	9	Chemical Bonding I: Covalent Bond
5	Gases	21	Nuclear Chemistry (if time permits)

**Special Dates of Concern:**

Aug	19	Wednesday	First day of class
Aug	21	Friday	Last day to change schedule
Sept	7	Monday	Labor Day (no classes)
Oct	28	Wednesday	Last day to withdraw from session class or withdraw for term with W
Nov	5	Monday	Preregistration for Spring 2016 begins
Nov	25	Wednesday	No classes
Nov	26-27	Thur-Fri	Thanksgiving Holidays
Dec	4	Friday	Last day of classes
Dec	7-11	Mon-Fri	Final exam period

**Final Exam:** Monday, December 7, 10:30 – 12:30. Please note that this is not based on class time. All sections of CHEM 1103 take their final exam at a dedicated time.



**University of Arkansas at Monticello**  
**School of Mathematics and Natural Sciences**  
**GENERAL CHEMISTRY I LABORATORY**  
**Fall 2015**

- Instructor:** Susan Hatfield  
**Office:** Science Center C-15  
**Office Hours:** MW 11:30 am – 1:00 pm; TH 8:30 – 9:30 pm  
Other times by appointment.
- Laboratory:** Science Center C-4  
**Office Phone:** (870) 460-  
**Lab Phone:** (870) 460-1666  
**Email:** hatfield@uamont.edu
- Course:** General Chemistry I Lab CHEM 1121 – 1 Credit Hour  
(A.C.T.S. Equivalent Course # CHEM 1404 when combined with CHEM 1103 General Chemistry I)
- Corequisite:** CHEM 1103 (CHEM 1404) General Chemistry I Lecture
- Required Text:** Signature Lab Series in Chemistry (CHEM 1121 and CHEM 1131)  
ISBN: 0-534-48193-0  
For additional textbook information, you may go to the online bookstore:  
<http://www.bkstr.com/uamontstore/home>  
**Do Not Purchase A Used Manual**
- Required Materials:** Scientific calculator (standard, without graph and memory features)  
Safety goggles/glasses and closed-toe shoes are required to perform experiments.  
Aprons/lab coats are optional.
- Format:** Three hours of laboratory once a week.  
T 1:40-4:30 pm  
W 1:10-4:00 pm  
H 9:40 am-12:30 pm
- Course Description:** Experimentation and theory in the areas of measurement systems, chemical analysis, chemical reactions, stoichiometry, thermochemistry, and molecular structure.
- Student Learning Outcomes:**  
By the conclusion of the course, you should be able to explain, describe, discuss, recognize, and/or apply knowledge of the following:
- |   |  |
|---|--|
| Chemical reactions                              | Stoichiometry                                    |
| Gases and the kinetic-molecular theory          | Valence bond theory and molecular orbital theory |
| Nuclear chemistry                               | Inorganic Nomenclature                           |
| Quantum theory and atomic structure             | Thermochemistry                                  |
| Electron configuration and chemical periodicity |  |

**Grading:**

Two 100 point lab exams will be given. The multiple choice exams will cover material from the lab modules, pre and post lab assignments, and laboratory work. A SCANTRON will be required for each exam and must be furnished by the student. Calculators may be used for each exam, however, no cell phones or other electronic devices are allowed during exams. **Students will not be allowed to make up exams without prior permission of the lab instructor.** Each lab experiment counts 100 points. A report sheet and post lab assignment will be turned in for each lab experiment and are due at the end of the lab period. The lowest lab grade will be dropped. The overall grade is based on 50% for lab experiments and 50% for exams. The final grade will be based on the following scale:

**A= 88-100% B= 77-87% C= 65-76% D= 50-64% F= Below 50%**

#### **Attendance:**

Attendance is required and a missed experiment must be made up on the designated make up day. **Students will be allowed to make up no more than one experiment.** If the student is unable to make up the lab on the scheduled make up day or misses more than one lab, the student will be given a grade of zero for that lab assignment. Students arriving late to class may not be allowed to perform the experiment at the lab instructor's discretion. The student must sign the roll sheet to receive credit for each experiment. Failure to do so may result in a grade of zero for the experiment.

#### **Withdrawals:**

Students who wish to withdraw from the course are responsible for filing the necessary papers with the Registrar's office. Students who fail to file a drop card will receive an F for the course.

#### **Academic Dishonesty:**

Cheating (such as copying from or collaborating with another student and use of prepared notes/materials on exams or experiments without specific approval of the instructor), helping others cheat or other improper conduct such as collusion, duplicity and plagiarism will not be tolerated. Confirmed cases of cheating will result in a zero on a given exam or experiment for the first offense and a grade of F for the course on the second. The incident will also be reported to the Vice Chancellor for Academic Affairs.

#### **Disorderly Conduct:**

Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others is prohibited under the Student Conduct Code of the UAM Student Handbook.

#### **Safety:**

The lab experiments are designed to pose minimal hazardous risks if proper safety procedures are followed. However, this course involves frequent use of chemicals and flames and certain health hazards can be associated with their use. **These health risks are significantly higher for students with chemical allergies, students who have asthma, and students who are pregnant.** Thus, extreme caution and proper safety procedures must be adhered to.

The student must sign a safety agreement and will be held responsible for following the recommended safety practices and precautions. Repeated violations to the safety agreement rules will result in point deductions of the experiment. A **no tolerance** policy will be enforced in this course. That is, any action made by the student that is purposefully or willfully done as to create a hazardous situation will not be tolerated. Such an offense will result in the removal of the student from the laboratory and a grade of zero for the experiment with no possibility for a make-up or to drop it as the lowest lab grade.

The students are expected to practice safe lab procedures and to *clean up the working lab area and equipment* before leaving the lab. Failure to clean up your lab area and equipment will result in loss of points (50%). Students are required to wear clothing that covers the skin from the neck to below the knees (shirts must have sleeves) or lab coat. Closed toe shoes and appropriate safety eyewear must be worn at all times during lab procedures. **Failure to do so will result in expulsion from that laboratory experience.** Students are responsible for purchasing appropriate eye protection and wearing eye protection during lab. Appropriate eye protection will be:

1. Chemical vapor resistant safety goggles (required for contact lenses)
  2. OSHA approved safety glasses with side shields
- No 'loaners' are available.

### **Important Dates:**

#### **Fall 2015**

August 19 (Wed) - First day of classes

August 21 (Fri) - Last day to register or add classes.

September 7 (Mon) - Labor Day Holiday. Offices and classes closed.

October 28 (Wed) – Last day to drop a regular fall class. Grade will be W.

November 2-13 - Preregistration for Spring 2015 begins.

November 25 (Wed) - Classes closed. University offices open.

November 26-27 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.

December 4 (Fri) - Last day of classes.

December 7-11 (Mon-Fri) - Final exam period.

### **Students with Disabilities:**

It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course.

Any student with a disability requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone (870) 460-1026; TDD (870) 460-1626; Fax (870) 460-1926.

### **Technical Support Information:**

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<http://uamont.edu/pages/resources/academic-computing/>

Email Assistance: Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 am – 4:30 pm.

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**Academic Alert:** The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior, or are having difficulty adjusting to campus life, University faculty, staff, or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

### **Academic Resources:**

**General Education Tutorial Lab**

Harris Hall, (870) 460-1454

Any student who desires to be successful in his/her general education classes can receive assistance through tutoring services available on the 2<sup>nd</sup> floor of Harris Hall. Please watch for emails from Laura Hughes detailing this semester's tutoring availability.

## FALL 2015 SCHEDULE

<u>Week of</u>	<u>Activity</u>	<u>Module #</u>	<u>Page</u>
Aug 24	Check In, Lab Safety	380	1
Aug 31	Lab Techniques and Measurements	485, 511	9,21
Sep 7	Density of Liquids and Solids	383	37
Sep 14	Naming Inorganic Compounds	459	49
Sep 21	Reactivities of Metals	414	73
Sep 28	Percent Water in a Hydrate	387	101
Oct 5	Empirical Formula of an Oxide	388	81
<b>Oct 12</b>	<b>Lab Exam #1</b>	-----	-----
Oct 19	Chemical Reactions and Equations	422	57
Oct 26	Molar Volume of Carbon Dioxide	407	109
Nov 2	Heat of Neutralization	368	117
Nov 9	Make Up Lab and Check Out	-----	-----
<b>Nov 16</b>	<b>Lab Exam #2</b>	-----	-----

\*\*\*\*\*ALL LOCKS MUST BE RETURNED AT CHECK OUT TIME OR A **\$20.00 NON REFUNDABLE CHARGE** WILL BE MADE TO YOUR ACCOUNT. ONLY LOCKS ISSUED BY LAB INSTRUCTOR MAY BE USED. ALL OTHERS WILL BE REMOVED AND A **\$100.00 FINE** WILL BE MADE TO YOUR ACCOUNT\*\*\*\*\*

UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATH AND NATURAL SCIENCES  
COURSE SYLLABUS  
General Chemistry II  
Spring 2014, MWF 9:10; 10:10 a.m.

**Instructor Name:** Dr. Andrew Williams

**Instructor Office:** Science Center C-9

**Instructor Phone:** 870-460-1465

**Instructor Email Address:** [williamsa@uamont.edu](mailto:williamsa@uamont.edu)

**Office Hours:** MWF 9:10-10:00 or by appointment

**Course Title and Credit Hours:** CHEM 1113, General Chemistry II, 3 credit hours

**ACTS CHEM 1424 General Chemistry II**

**Course Description:** The study of kinetics, equilibrium, thermodynamics, electrochemistry, oxidation-reduction, acid-base chemistry, nuclear chemistry and selected descriptive chemistry. An ACS standardized exam will be given as the final exam.

**Prerequisites:** CHEM 1103 (ACTS Chem 1414) and CHEM 1121 (ACTS Chem 1414)

**Corequisite:** Chem 1131 (ACTS Chem 1424)

**Required Text and Materials:** *General Chemistry, The Essential Concepts*, Chang and Overby, McGraw Hill, 7<sup>th</sup> Edition ISBN: 978-0-07-337563-2  
Scientific Calculator (such as a TI-30 or TI-36)

**Student Learning Outcomes:**

By the end of the course the successful student should be able to explain, describe, discuss, recognize, perform related calculations and apply knowledge of the following:

- Molecular Geometry
- Intermolecular Forces
- Properties of Solutions
- Thermodynamics
- Chemical Kinetics
- Mechanisms of Chemical Reactions
- Acid/Base Theory
- Equilibrium of chemical reactions, including solubility
- Equilibrium of acid/base reactions, including titration
- Oxidation-Reduction
- Electrochemistry
- Nuclear Chemistry

**Specific Course Policies:**

**Attendance:** Regular attendance is expected. You are responsible for any missed class notes, homework assignments made before the next class period. Quizzes and Exams may be made up if the absence is University approved and correct procedures are followed; otherwise, missed quizzes will be considered as zero and can be one of the drop quizzes. If more quizzes are missed than the allowable number dropped, the extra missed quizzes will be counted as a zero. An unexcused

missed exam will be counted as the lowest exam for the term, and replaced by the percentage scored on the final exam. Only one exam can be replaced with the final.

**Electronic Equipment:** Cell phones, music players, and other accessories are to be turned off and put away during class. They may not be used as calculator. Do not have the cell phone on desk during class. Anyone caught using electronic devices during class will be asked to leave immediately.

**Academic Honesty:** Cheating, helping others cheat, disruptive behavior or other improper conduct will not be tolerated, and could lead to dismissal from the course with a failing grade. The minimum penalty for cheating will be a score of zero on the assignment or exam, which cannot be dropped as the low score for the semester. The second cheating offense results in removal from the course.

### **Content Outline:**

#### Chapter 10 Chemical Bonding II: Molecular Geometry and Hybridization of Atomic Orbitals

- Molecular Geometry
- Dipole Moments
- Valence Bond Theory
- Hybridization of Atomic Orbitals
- Hybridization in Molecules Containing Double and Triple Bonds
- Molecular Orbital Theory

#### Chapter 12 Intermolecular Forces and Liquids and Solids

- Kinetic Molecular Theory of Liquids and Solids
- Intermolecular Forces
- Properties of Liquids
- Crystal Structure
- Bonding in Solids
- Phase Changes
- Phase Diagrams

#### Chapter 13 Physical Properties of Solutions

- Types of Solutions
- A Molecular View of the Solution Process
- Concentration Units
- Effect of Temperature on Solubility
- Effect of Pressure on Solubility of Gases
- Colligative Properties

#### Chapter 14 Chemical Kinetics

- The Rate of Reaction
- The Rate Laws
- Relation Between Reactant Concentrations and Time
- Activation Energy and Temperature Dependence of Rate Constants
- Reaction Mechanisms
- Catalysis

#### Chapter 15 Chemical Equilibrium

- The Concept of Equilibrium
- Ways of Expressing Equilibrium Constants
- What Does the Equilibrium Constant Tell Us?
- Factors that Affect Chemical Equilibrium

#### Chapter 16 Acids and Bases

- Bronsted Acids and Bases
- Acid-Base Properties of Water
- pH-A Measure of Acidity

- Strengths of Acids and Bases
- Weak Acids and Acid Ionization Constants
- Weak Bases and Base Ionization Constants
- The Relationship Between Conjugate Acid-Base Ionization Constants
- Molecular Structure and the Strength of Acids
- Acid-Base Properties of Salts
- Acidic, Basic, and Amphoteric Oxides
- Lewis Acids and Bases

Chapter 17 Acid-Base Equilibria and Solubility Equilibria

- Homogeneous Versus Heterogeneous Solution Equilibria
- Buffer Solutions
- A Closer Look at Acid-Base Titrations
- Acid Base Indicators
- Solubility Equilibria
- The Common Ion Effect and Solubility
- Complex Ion Equilibria and Solubility
- Application of Solubility Product Principle to Qualitative Analysis

Chapter 18 Thermodynamics

- The Laws of Thermodynamics
- Spontaneous Processes
- Entropy
- Second Law of Thermodynamics
- Gibbs Free Energy
- Free Energy and Chemical Equilibrium
- Thermodynamics in Living Systems

Chapter 19 Redox Reactions and Electrochemistry

- Redox Reactions
- Galvanic Cells
- Standard Reduction Potentials
- Thermodynamics of Redox Reactions
- Effect of Concentration on Cell EMF
- Batteries
- Corrosion
- Electrolysis
- Electrometallurgy

Special Topics in Chemistry (as time permits)

- Nuclear Chemistry
- Organic Chemistry
- Coordination Chemistry

**Special Projects and Assignments:** None

**Provisions for Exams and Evaluations:** Exams will be given during class time and will be announced approximately one week prior to the exam. If you have a University excused absence, and proper procedures are followed, you will be allowed to make-up the exam. Calculators will be required for quizzes and exams. If you use a graphing calculator, it will be cleared. If you do not want your calculator cleared, please bring a different calculator.



**Grading:** Four tests of equal value (100 pts each) will be given. The fifth exam is a comprehensive final exam written by the American Chemical Society. This exam is comprehensive and includes questions from Chem I. If the final exam score is higher than the lowest regular exam score, the regular exam score will be replaced with the percentage scored on the final exam. This also applies to a missed exam; however, only one exam score can be replaced. Quizzes will be given weekly at the beginning of class over previously covered material. Only the top ten quizzes will be graded, any quizzes over ten will result in the lowest being dropped. Weekly homework will be worth 50 total points. No homework scores will be dropped. Any challenges to the graded tests must be brought to my attention within one week of receiving the graded tests.

Point Values	
Test 1	100 points
Test 2	100 points
Test 3	100 points
Test 4	100 points
Final Exam	100 points
Quizzes	100 points
Homework	50 points

Grading Scale	
88 – 100	A
76 – 87	B
64 – 75	C
50 – 63	D
0-49	F

**Special Dates of Concern:**

January 7 (Wednesday)	First Day of Classes
January 9 (Friday)	Last Day to Add Classes
January 19 (Monday)	Martin Luther King Holiday. All offices and classes closed.
March 18 (Wednesday)	Last day to drop with W in regular classes
March 23-27 (Monday-Friday)	Spring Break for faculty and students.
April 6 (Monday):	Preregistration for summer and fall begins.
April 17 (Friday)	Preregistration for summer and fall ends
April 28 (Tuesday)	Last day of classes
April 29 - May 5 (Wednesday-Tuesday)	Final exams
May 8 (Friday)	Commencement

**April 30 (Thursday) Final Examination      All sections of Chem 1023, 1103, & 1113      10:30 - 12:30**

**Students with disabilities:**

It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926; email: whitngm@uamont.edu.

For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

Academic dishonesty:

13. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
14. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
15. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
16. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved as a first offense will be minimum of a grade of zero for the assignment, quiz or exam, and that grade is not a droppable grade in the grade calculation. Second offenses will result in automatic expulsion from the course.

**University of Arkansas at Monticello**  
**School of Mathematics and Natural Sciences**  
**GENERAL CHEMISTRY II LABORATORY**  
**Spring 2015**

**INSTRUCTOR:** Kelley Sayyar  
Office: Science Center C-10  
Office Phone: 460-1365  
Lab Room: Science Center C-4  
Lab Phone: 460-1666  
E-Mail: sayyark@uamont.edu  
Office Hours: MWF 10:00am-12:00pm; T 9:00-9:30am and 11:30am-12:00pm (or by appt.)

**COURSE:** **General Chemistry II Lab CHEM 1131** (ACTS-CHEM 1424) **1 Credit Hour**  
Pre-requisites: CHEM 1103 and CHEM 1121 (ACTS-CHEM 1414) (General Chemistry I lecture and lab)

Co-requisite: CHEM 1113 (CHEM1424) General Chemistry II lecture  
Required Text: Signature Lab Series in Chemistry (CHEM 1121 and 1131)  
ISBN: 0-534-48193-0

**Do Not Purchase A Used Lab Manual**

Objectives: This course is designed to give the student practical laboratory experiences that demonstrate many of the laws and theories taught in General Chemistry II.

Format: Three hours of laboratory once a week.  
W 2:10-5:00 p  
H 8:10-11:00 a  
H 1:40-4:30 p

**GRADING:**

Two 100 point lab exams will be given. The multiple choice exams will cover material from the lab modules, pre and post lab assignments and laboratory work. A SCANTRON will be needed for each exam and must be furnished by the student. Calculators may be used for each exam, however, no cell phones or other electronic devices are allowed during exams. **Students will not be allowed to make up exams without prior permission of the lab instructor.** Each lab experiment counts 100 points. A data sheet, pre-lab and post-lab assignments will be turned in for most lab experiments and are due at the end of the lab period unless otherwise stated. The lowest lab experiment grade will be dropped. The overall grade is based on 50% for lab experiments and 50% for exams. The final grade will be based on the following scale:

**A= 88-100% B= 77-87% C= 65-76% D= 50-64% F= Below 50%**

**ATTENDANCE:**

Attendance is required and a missed experiment must be made up on the designated make up day. **Students will be allowed to make up no more than one experiment.** If the student is unable to make up the lab on the scheduled make up day or misses more than one lab, the student will be given a grade of zero for that lab assignment. Students arriving late to class may not be allowed to perform the experiment at the lab instructor's discretion. The student must sign the roll sheet to receive credit for each experiment. Failure to do so may result in a grade of zero for the experiment.

### **WITHDRAWALS:**

Students who wish to withdraw from the course are responsible for filing the necessary papers with the Registrar's office. Student's who fail to file a "drop" card will receive an "F" for the course.

### **ACADEMIC DISHONESTY:**

Cheating (such as copying from or collaborating with another student and use of prepared notes/materials on exams or experiments without specific approval of the instructor), helping others cheat or other improper conduct such as collusion, duplicity and plagiarism will not be tolerated. Confirmed cases of cheating will result in a zero on a given exam or experiment for the first offense and a grade of F for the course on the second. The incident will also be reported to the Vice Chancellor for Academic Affairs.

### **DISORDERLY CONDUCT:**

Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others is prohibited under the Student Conduct Code of the UAM Student Handbook.

### **A WORD OF CAUTION:**

The lab experiments are designed to pose minimal hazardous risks if proper safety procedures are followed. However, this course involves frequent use of chemicals and flames and certain health hazards can be associated with their use. **These health risks are significantly higher for students with chemical allergies, students who have asthma, and students who are pregnant.** Thus, extreme caution and proper safety procedures must be adhered to. The student must sign a safety agreement and will be responsible for following the recommended safety practices and precautions. Repeated violations to the safety agreement rules will result in point deductions from the experiment. A "**no tolerance**" policy will be enforced in this course. That is, any action made by the student that is purposefully or willfully done as to create a hazardous situation will not be tolerated. Such an offense will result in the removal of the student from the laboratory and a grade of zero for the experiment with no possibility for a make-up or to drop it as the lowest lab grade.

### **STUDENTS WITH DISABILITIES:**

It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course.

Any student with a disability requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 121, phone 870 460-1026 TDD 870 460-1626 Fax 870 460-1926.

### **IMPORTANT DATES:**

January 7 (Wednesday): First day of classes

January 9 (Friday): Last day to register or add spring classes.

January 19 (Monday): Martin Luther King Holiday. All offices and classes closed.

February 27 (Friday): Deadline to apply for August and December graduation.

March 18 (Wednesday): Last day to drop a regular spring class. Grade will be W.

March 23-27 (Monday-Friday): Spring Break for faculty and students.

April 6 (Monday): Preregistration for summer and fall 2015 begins.

April 17 (Friday): Preregistration for summer and fall 2015 ends.

April 28 (Tuesday): Last day of classes.

April 29-May 5 (Wednesday-Tuesday): Final exam period.

**GENERAL CHEMISTRY II LAB  
CHEM 1131 (CHEM 1424)  
Spring 2015 SCHEDULE**

<u>Date (Thursdays)</u>	<u>Activity</u>	<u>Module #</u>	<u>Page #</u>
Jan 08	Check- In; Molecular Bonding	Handout	-----
Jan 15	Group I Cations	364	191
Jan 22	Group II Cations (Known)	365	207
Jan 29	Group II Cations (Unknown)	365	207
Feb 05	Anions (Known)	367	223
Feb 12	Anions (Unknown)	367	223
Feb 19	Freezing Pt. Depression in t-Butyl Alcohol	344	243
<b>Feb 26</b>	<b>Lab Exam # 1</b>	-----	-----
Mar 05	Introducing Equilibrium	392	295
Mar 12	pH, Acids and Bases	397	259
Mar 19	Determining Molar Concentration of a NaOH Solution	394	271
Mar 26	Spring Break (No Labs W or H)	-----	-----
Apr 02	Organic Nomenclature	Handout	-----
Apr 09	Make Up Lab and Check Out	-----	-----
<b>Apr 16</b>	<b>Lab Exam # 2</b>	-----	-----
Apr 23	No Labs (W or H)	-----	-----

\*\*\*\*\*ALL LOCKS MUST BE RETURNED AT CHECK OUT TIME OR A \$20.00 NON-REFUNDABLE CHARGE WILL BE MADE TO YOUR ACCOUNT. ONLY LOCKS ISSUED BY LAB INSTRUCTOR MAY BE USED. ALL OTHERS WILL BE REMOVED AND A \$100.00 FINE WILL BE MADE TO YOUR ACCOUNT\*\*\*\*\*

**GENERAL CHEMISTRY II LAB  
CHEM 1131 (CHEM 1424)  
Spring 2015 SCHEDULE**

<u>Date (Wednesdays)</u>	<u>Activity</u>	<u>Module #</u>	<u>Page #</u>
Jan 07	Check- In; Molecular Bonding	Handout	-----
Jan 14	Group I Cations	364	191
Jan 21	Group II Cations (Known)	365	207
Jan 28	Group II Cations (Unknown)	365	207
Feb 04	Anions (Known)	367	223
Feb 11	Anions (Unknown)	367	223
Feb 18	Freezing Pt. Depression in t-Butyl Alcohol	344	243
<b>Feb 25</b>	<b>Lab Exam # 1</b>	-----	-----
Mar 04	Introducing Equilibrium	392	295
Mar 11	pH, Acids and Bases	397	259
Mar 18	Determining Molar Concentration of a NaOH Solution	394	271
Mar 25	Spring Break (No Labs W or H)	-----	-----
Apr 01	Organic Nomenclature	Handout	-----
Apr 08	Make Up Lab and Check Out	-----	-----
<b>Apr 15</b>	<b>Lab Exam # 2</b>	-----	-----
Apr 22	No Labs (W or H)	-----	-----

\*\*\*\*\*ALL LOCKS MUST BE RETURNED AT CHECK OUT TIME OR A **\$20.00 NON-REFUNDABLE** CHARGE WILL BE MADE TO YOUR ACCOUNT. ONLY LOCKS ISSUED BY LAB INSTRUCTOR MAY BE USED. ALL OTHERS WILL BE REMOVED AND A **\$100.00 FINE** WILL BE MADE TO YOUR ACCOUNT\*\*\*\*\*

**CHEM 3314**

**Quantitative Analysis**

Text: *Quantitative Chemical Analysis*, 8th Ed., 2010 by Daniel Harris

Prerequisites: CHEM 1113 and CHEM 1131, MATH 1043 or MATH 1175

**INSTRUCTOR:** Dr. Jinming Huang, SC C-14, 460-1866, huang@uamont.edu

Office Hours: MWF 11 – 12, 1:30 —2:30; TTh 2 – 3, or by appointment

Format: Lecture 2 hours/week and lab 6 hours/week.

**Course Objective:**

The objectives of the lecture portion of this course are to provide the student with detailed understanding of the nature of chemical equilibrium and calculations involved in it and to show how equilibrium may be applied to analytical measurements. In addition, the student is introduced to error analysis in measurements. The objectives of the laboratory portion are to introduce the student to several common wet analytical procedures, to refine the student's laboratory technique, and to provide the student with an understanding of the degree of precision required in chemical analysis.

**Course Content:**

The lecture portion of this course covers equilibrium and analytical procedures. The topics covered in lecture include:

- The analytical process and measurements
- Statistics and treatment of experimental errors
- Chemical Equilibrium, Activity, and the Systematic Treatment of Equilibrium
- Solubility Equilibria, Precipitation Titrations, and Gravimetric Analysis
- Acid-Base Equilibria and Acid-Base Titrations
- Complex Formation Equilibria and Titrations (EDTA titrations)
- Electrochemistry and Oxidation-Reduction titrations

The laboratory portion includes a variety of analyses including:

- Two acid-base titrations
- Two complex ion titrations
- One precipitation titration
- Two gravimetric analyses
- Three oxidation-reduction titrations

These experiments illustrate different techniques, indicators and reactions.

Grade Scale

86 - 100% = A

76 - 85% = B

66 - 75% = C

55 - 65% = D

< 55% = F

**GRADING:**

The overall grade in this course consists of 50% for lecture and 50% for lab. The lecture portion includes three hour- exams which count 45% of the overall grade, with the 3<sup>rd</sup> hour exam being given at the time for final. Make-up exams will not be given on individual exams but will rather be given only once during the semester and will be comprehensive. Only one exam may be made up under any conditions. In addition, homework is required and graded providing the other 5% of the overall grade. The laboratory portion is graded entirely on the accuracy of the analysis of unknown samples. There are 10 unknown samples which each count 5% of the

overall grade for the overall 50% of the course grade based on the laboratory portion. The actual grade on each unknown is based on how close of the student's result from the actual value.

### **ATTENDANCE:**

Regular attendance is required. Roll will be taken daily, and irregular attendance may be reported to the university administration for possible action involving financial aid. The student is responsible for all assignments, announcements, etc. made during class.

### **ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a score of zero for the first offense and lead to dismissal from the course with a failing grade for the second offense. The use of graphing and programmable calculators are permitted, however, if your calculator contains information that you do not want erased, (even from another class) you should bring a different calculator on test days

### **DISRUPTIVE BEHAVIOR:**

Any behavior that disrupts the regular or normal functions of the university community is prohibited under the Student Conduct Code, including behavior which breaches the peace or violates the rights of others. Cell phones are disruptive to classroom environment and must be placed on silent if brought to class. Cell phones are not allowed under any circumstances during exams.

### **STUDENTS WITH DISABILITIES:**

It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, room 120, phone 870-460-1026; TDD 870-460-1626; fax 870-460-1926.



**SOME IMPORTANT DATES TO REMEMBER:**

Wednesday	Aug 20.....	First day of Class
Friday	Aug 22.....	Last day to add classes
Monday	Sep 1.....	Labor Day Holiday
Wednesday	Oct 29.....	Last day to withdraw with a W
Monday	Nov 3.....	Preregistration for spring begins
Friday	Nov 14.....	Preregistration for spring ends
Wednesday	Nov 26.....	Class closed
Thursday-Friday	Nov 27 – 28...	Thanksgiving Holiday
Friday	Dec 5.....	Last day of Class
<b>FINAL EXAM</b>	<b>Tuesday,</b>	<b>Dec 9, 1:30 - 3:30</b>

UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **ORGANIC CHEMISTRY I** CHEM 3404-01  
Fall 2015; MWF 10:10 am – 11:00 am; SC C-26

- INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use your official UAM campus email!]  
**OFFICE HOURS:** MWF 9:10-10:00 & 1:10-2:00;  
TuTh 8:10-9:00 & 12:40-1:30.  
**COURSE TITLE:** (CHEM 3404-01) **ORGANIC CHEMISTRY I**; 3 credit hours of lecture,  
1 credit hour of lab.  
**PREREQUISITES:** CHEM 1113 and 1131, (ACTS Equivalent # CHEM 1424) General Chemistry II lecture  
and lab.  
**DESCRIPTION:** A study of carbon compounds, including an introduction to organic nomenclature,  
reactions, reaction mechanisms, organic synthesis, and structural and stereochemical problems.  
**STUDENT LEARNING OUTCOMES:** By the conclusion of the course you should be able to:
- 1.) Understand the structure and reactivity of the major functional groups.
  - 2.) Supplement organic theory with practical laboratory skills.
  - 3.) Demonstrate improved study skills and test taking skills.
  - 4.) Demonstrate a mastery of the material, not a superficial recognition of the material.

**REQUIRED TEXTS:** You may go to the online bookstore:  
<http://www.bkstr.com/uamontstore/shop/textbooks-and-course-materials>

- 1.) *Organic Chemistry*; J.G. Smith, 4<sup>th</sup> Edition, McGraw-Hill; ISBN 978-0-07-340277-2. **You must bring your text to all class lectures!**
- 2.) *Student Study Guide/Solutions Manual*; J.G. Smith and E.S. Burk, 4th Edition, McGraw-Hill; ISBN 978-0-07-747982-4 is an **optional, but highly recommended**, supplement to the text.
- 3.) *Experiments in Organic Chemistry*; R. Hill and J. Barbaro; 3<sup>rd</sup> Edition, Contemporary Publishing Company; ISBN: 0-89892-311-5. **You must bring your lab manual to all laboratories!**
- 4.) Student Lab Notebook; Hayden McNeil Publishing. ISBN: 978-1-930882-50-8. **You must bring your lab notebook to all laboratories!**
- 5.) A non-graphing calculator capable of (log) and (ln) functions is required for all class **laboratories and exams**. You may not borrow calculators or use a cell phone. **GRAPHING CALCULATORS ARE NOT ALLOWED.**

**TECHNICAL SUPPORT INFORMATION:**

**Blackboard Assistance:** Contact Office of Instructional Technology; phone 870-460-1663; open Monday-Friday, 8 a.m. – 4:30 p.m.

Online Help Desk: <http://www.uamont.edu/pages/resources/academic-computing/>

**Email Assistance:** Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.

**Library Services:** The computer section in the Library is open during regular Library hours. Go to the Taylor Library website for hours of operation: <http://www.uamont.edu/pages/library/>

**ATTENDANCE POLICY:** You will be expected to attend every class meeting and arrive on time. The

university does not allow for unexcused absences. To reward punctuality and attendance, a quiz may be given at the start of the class period. You must arrive on time to participate in the quiz; quiz points will cumulatively count as an exam. Absences involving University sponsored events are considered excused unless the proper notifications were not delivered to the instructor according to Policy XV on page 71 of the UAM Faculty Handbook. If an absence is planned for a University sponsored event, exams should be taken early if possible. If an absence occurs; it is the student's responsibility to obtain the missed lecture material. *If you do not have time for class; do NOT expect my time later.*

**COURSE SPECIFIC POLICY CONCERNING CELL PHONES:** Your career is more important than what/who is on the other end of your phone. If you access your cell phone during class time you will simply be asked to leave for the remainder of the day and 10 quiz points (not percentage points) will be forfeited.

**ACADEMIC ALERT:** The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior or are having difficulty adjusting to campus life, University faculty, staff or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities. It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu).  
For assistance on a College of Technology campus contact:  
McGehee: Office of Special Student Services representative; phone 870 222-5360; fax 870 222-1105.  
Crossett: Office of Special Student Services representative; phone 870 364-6414; fax 870 364-5707.

**FEEDBACK SCHEDULE:** Please use you UAM email account for **ALL** correspondences. A student can expect a response to email within 24 hours Monday through Friday. It is very unlikely that an email will be answered between Friday afternoon and Monday morning.

**ASSESSMENTS:** Lecture points include 3 exams of 100 points each, a comprehensive FINAL exam of 200 points, a quiz average of 100 percent (points) yielding a total of 600 lecture points. The test format will include multiple choice, short answer, reactions and syntheses. The percentage score from the comprehensive final will substitute for ONE missed exam. Second and subsequent missed exams will have a zero recorded as the grade. Exams may not be made up or given late for any reason. If an absence is planned for a University sponsored event, exams should be taken early. **Lecture** contributes **600** points and **Laboratory** contributes **200** points for a **total** of **800** points. Assessment of the laboratory points are discussed in the lab syllabus.

<b>GRADE ASSIGNMENT:</b>	A	85.0-100.0%
	B	75.0-84.9%
	C	65.0-74.9%
	D	55.0-64.9%
	F	< 55.0%

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically. This includes cell phone use during class. Seats may be assigned to prevent problems.

**ACADEMIC DISHONESTY: Cheating will not be tolerated!**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be withdrawal from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam or quiz constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams constitutes cheating and will result in withdrawal/failure for the class.

**COURSE CONTENT AND TENTATIVE EXAM SCHEDULE:**

<i>Exam I</i>	Bonding; Acids/bases; Alkanes; Cycloalkanes	Chap 1-4	Mon. 9/28/15
<i>Exam II</i>	Stereochemistry, Substitution; Elimination	Chap 5-8	Mon. 10/26/15
<i>Exam III</i>	Alcohols; Alkenes; Alkynes; Redox	Chap 9-12	Fri. 12/04/15
<i>Final Exam</i>	<b>Comprehensive Exam Chap 1-12</b>	<b>Thursday 12/10/15 at 1:30 pm</b>	

**COLLABORATION:** Collaboration is an important aspect of science. I encourage you to associate in small study groups to discuss the homework and lecture. You will benefit from the interaction with your peers whether you are giving or receiving help.

UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **ORGANIC CHEMISTRY II LAB** CHEM 3414-51  
SPRING 2015 Th 1:40-4:30 pm SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use **ONLY** your official UAM campus email!]  
**OFFICE HOURS:** 9:10 - 10:00 am MWF; 9:40 - 10:30 am TuTh  
1:10 - 2:00 pm MW; 12:40 - 1:30 pm TuTh, or by appointment.  
**COURSE TITLE:** (CHEM 3414-51) **ORGANIC CHEMISTRY II LABORATORY;**  
1 credit hour of lab consolidated with 3 credit hours of lecture.  
**DESCRIPTION:** A continuation of Organic Chemistry I (3404). A study of organic nomenclature, reactions, reaction mechanisms, organic spectroscopy, with a greater emphasis on organic synthesis. An ACS standardized exam will be given as the final exam. 3 hours lecture and 3 hours of lab.  
**PREREQUISITES:** CHEM 3404 (Organic Chemistry I)

**REQUIRED TEXTS:** 1.) *Experiments in Organic Chemistry*; R. Hill and J. Barbaro; 3<sup>rd</sup> Edition, Contemporary Publishing Company. ISBN: 0-89892-311-5. You must bring your lab manual to all laboratories.  
2.) Student Lab Notebook; Hayden McNeil Publishing. ISBN: 978-1-930882-50-8. You must bring your lab notebook to all laboratories.

**STUDENT LEARNING OBJECTIVES:**

- 1.) Understand the structure and chemistry of the major functional groups.
- 2.) Supplement organic theory with practical laboratory skills.
- 3.) Continue to develop study skills and test taking skills.
- 4.) Develop a mastery of the material, not just a superficial recognition of the material.

**REQUIRED CALCULATOR:** Any non-graphing calculator capable of (log) and (ln) functions is required for all class **laboratories**. You may not borrow calculators or use a cell phone. **GRAPHING CALCULATORS ARE NOT ALLOWED.**

**REQUIRED ATTENDANCE:** You will be expected to attend every lab meeting and arrive on time. You must attend the pre-lab to participate in the experiment. A **make-up / CLEAN-UP** laboratory will be available for **ONE** absence at the end of the semester. Second and subsequent missed laboratories will have a **zero** recorded as the grade.

**CELL PHONES:** You should **NOT** access your cell phone during class time. Your career is more important than what/who is on the other end of your phone. However, you will be given enough rope to hang yourself. I will not ask anyone to turn off their cell phone. *If you do not have time for class because of your cell phone; do NOT expect my time later.*

**ACADEMIC MISCONDUCT: Cheating will not be tolerated.** Penalties for violations are described on page 55 of the 2013-15 UAM catalog and include withdrawing the student from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

## COURSE CONTENT AND LABORATORY SCHEDULE:

1/08	Check in, Safety, Notebooks & Lab Reports
1/15	Ex1-Williamson Ether Synthesis S <sub>N</sub> 2 (E17)
1/22	Ex2 Dehydration of an Alcohol E1 (E5A)
1/29	Ex3 Diels Alder (E7)
2/05	Ex4- Electrophilic Aromatic Substitution (E9A)
2/12	Ex5- Prep of Acetanilide (E20B)
2/19	<b>Mid Term Exam (Exp 1-5)</b>
2/26	Ex6 Oxidation of Alcohol (E11)
3/05	Ex7 Sodium Borohydride Reduction (E25)
3/12	Ex8 Prep of Aspirin (E19)
3/19	Ex9 Fischer Esterification (E18A)
4/02	Ex10 Prep of Dibenzalacetone (E12)
4/09	check-out; <b>LAB CLEAN-UP! (make-up)</b>
4/23	<b>Final Exam (Exp 6-10)</b>

**EVALUATION:** Laboratory points include 10 experiments and 2 exams to yield **200** points. A **make-up / CLEAN-UP** laboratory will be available for **ONE** absence at the end of the semester. Second and subsequent missed laboratories will have a **zero** recorded as the grade. **Lecture** contributes **600** points and **Laboratory** contributes **200** points for a **total** of **800** points (1/4<sup>th</sup> of the combined lecture/lab).

10 experiments @ 10 points: (5 points DATA report, 5 points notebook)	100 points
Mid Term exam	50 points
Final exam	50 points
Total	200 points

**GRADING:**

A	85.0-100.0%
B	75.0-84.9%
C	65.0-74.9%
D	55.0-64.9%
F	< 55.0%

**Students with Disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: whitingm@uamont.edu

**Student Conduct Statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically. This includes cell phone use during class. Seats may be assigned to prevent problems.

**COLLABORATION:** Collaboration is an important aspect of science. I encourage you to interact during lab. Whether you are giving or receiving help among your study group, you will benefit from the interaction with your peers.

## ORGANIC LABORATORY NOTEBOOK:

- 1.) The lab notebook must be the carbonless copy type specified and sold in the bookstore.
- 2.) The table of contents can be completed on the inside cover when the notebook is finished.
- 3.) Never remove original pages from your notebook. The carbonless copies will be removed and stapled to the back of the DATA report sheets.
- 4.) Always use waterproof, blue or black, ink.
- 5.) The lab notebook is to be written as a continuous journal of experiments conducted in lab. Never skip pages. Put a large X on the page and date any skipped pages.
- 6.) Never erase, use white-out, or obliterate an erroneous entry. Place a single line through the erroneous entry.
- 7.) Be thorough. Drawings, tables, all calculations, and detailed descriptions are expected. These should be well labeled. If graphs, calculation, photo, etc. are added, they should be **taped** on the original with nothing hanging outside the notebook.
- 8.) Always sign and record the date on every page anytime something is written in the notebook.
- 9.) Complete as much of the notebook as possible during lab.
- 10.) **THE NOTEBOOK MUST BE SIGNED / DATED BY THE INSTRUCTOR PRIOR TO LEAVING LAB!**

## GENERAL FORMAT FOR PREPARING ORGANIC CHEMISTRY LAB NOTEBOOK: MUST BE IN THIS ORDER!

Fill in the NAME and DATE in the space provided at the top.

- I. TITLE: (be specific)
- II. BALANCED REACTION: (write N/A if Not Applicable)
- III. MECHANISM: (write N/A if Not Applicable)
- IV. TABLE OF COMPOUNDS: (not all items are necessary for each experiment)  

Compound	structure	MW	mass/volume	density	moles	mp	bp
----------	-----------	----	-------------	---------	-------	----	----
- V. SAFETY INFORMATION:
- VI. PROCEDURE: (you may cut and paste the procedure provided)
- VII. APPARATUS: (simple sketch of the apparatus)
- VII. DATA/CALCULATIONS/OBSERVATIONS:
- IX. RESULTS AND DISCUSSION:
- X. CONCLUSIONS:

## ORGANIC LABORATORY SAFETY AND ETIQUETTE

VIOLATIONS WILL RESULT IN A DEDUCTION OF TECHNIQUE POINTS OR DISMISSAL FROM THE LAB FOR THE REMAINDER OF THE DAY.

- 1.) Contact lenses are **NOT** permitted under any circumstances. You will be dismissed if you are wearing contact lenses.
- 2.) Safety glasses/goggles must be worn **AT ALL TIMES**. The **FIRST** thing you do in lab is to put on your safety glasses. The **LAST** thing you do in lab is **wash your hands then remove your safety glasses**, and exit the lab. You will be dismissed if you are not wearing your safety glasses. **NO EXCEPTIONS!!**
- 3.) Absolutely **NO EXPOSED SKIN** from your chest to the floor. You will be dismissed if you are wearing shorts, flip-flops, open toed shoes, sandals, bare-midriiffs, etc. **NO EXCEPTIONS!!**
- 4.) Long hair must be restrained to prevent accidental contact with chemicals or equipment.
- 5.) Food, drinks, smokeless tobacco, smoking, radios, **CELL PHONES**, or horseplay will **NOT** be tolerated in lab. You will be **DISMISSED** if you participate in any of the above-mentioned activities. Backpacks and other materials must not be on the lab benches or isles.
- 6.) Never remove the stock chemicals from the fume hood or from the balance area.
- 7.) Broken glass and melting point capillaries must be put in the broken glass container.
- 8.) Solid waste and paper towels, etc. may be disposed in the trashcans.
- 9.) Water soluble solvents such as acetone, ethanol, methanol, aqueous acids and bases can be diluted and disposed in the sink with lots of running water. Organic solvents such as toluene **MUST** be disposed in the waste bottles provided.
- 10.) Extreme care must be exercised when handling **THERMOMETERS**. If you break a mercury thermometer through carelessness, you will be **DISMISSED** and earn a zero for the lab.
- 11.) Know the location of the eyewash, safety shower, fire extinguisher, and fire blanket.
- 12.) In case of a fire, do not panic. Let it burn, smother with a wet towel, or use a fire extinguisher if it is a large fire. Do **NOT** use water on an organic fire. If clothing is on fire, use the fire blanket or the safety shower, do not use the fire extinguisher.
- 13.) If exposed to chemicals, wash the affected area immediately with soap and water. Do not touch your face, eyes, nose, etc. while in lab. Wash your hands before leaving lab.
- 14.) Your notebook should be prepared prior to the start of the pre-lab lecture.
- 15.) You may **NOT START OVER**. If you spoil your experiment, or don't produce a product, you will earn a zero for the experiment portion of your grade.
- 16.) Before you leave the lab, your work area must be **CLEAN**. You must return **ALL COMMUNITY EQUIPMENT** to the appropriate community equipment drawers.



UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **ORGANIC CHEMISTRY II** CHEM 3414-01  
SPRING 2015 MWF 10:10 a.m. SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use **ONLY** your official UAM campus email!]  
**OFFICE HOURS:** 9:10 - 10:00 am MWF; 9:40 - 10:30 am TuTh  
1:10 - 2:00 pm MW; 12:40 - 1:30 pm TuTh, or by appointment.  
**COURSE TITLE:** (CHEM 3414-01) **ORGANIC CHEMISTRY II**; 3 credit of hours lecture,  
1 credit hour of lab.

**DESCRIPTION:** A continuation of Organic Chemistry I (3404). A study of organic nomenclature, reactions, reaction mechanisms, organic spectroscopy, with a greater emphasis on organic synthesis. An ACS standardized exam will be given as the final exam. 3 hours lecture and 3 hours of lab.

**PREREQUISITES:** CHEM 3404 (Organic Chemistry I)

**REQUIRED TEXTS:** 1.) *Organic Chemistry*; J.G. Smith, 4<sup>th</sup> Edition, McGraw-Hill; ISBN 978-0-07-340277-2. **You must bring your text to all class lectures.**  
2.) *Student Study Guide/Solutions Manual*; J.G. Smith and E.S. Burk, 4th Edition, McGraw-Hill; ISBN 978-0-07-747982-4 is an optional, but highly recommended, supplement to the text.  
3.) *Experiments in Organic Chemistry*; R. Hill and J. Barbaro; 3<sup>rd</sup> Edition, Contemporary Publishing Company; ISBN: 0-89892-311-5. **You must bring your lab manual to all laboratories.**  
4.) Student Lab Notebook; Hayden McNeil Publishing. ISBN: 978-1-930882-50-8. **You must bring your lab notebook to all laboratories.**

**STUDENT LEARNING OBJECTIVES:** 1.) Understand the structure and chemistry of the major functional groups.  
2.) Supplement organic theory with practical laboratory skills.  
3.) Continue to develop study skills and test taking skills.  
4.) Develop a mastery of the material, not just a superficial recognition of the material.

**REQUIRED CALCULATOR:** Any non-graphing calculator capable of (log) and (ln) functions is required for all class **laboratories**. You may not borrow calculators or use a cell phone. **GRAPHING CALCULATORS ARE NOT ALLOWED.**

**REQUIRED ATTENDANCE:** You will be expected to attend every class meeting and arrive on time. Quizzes may not be made up or given late. You must arrive on time to participate in the quiz. Absences due to University sponsored events are excused. If an absence occurs; it is the student's responsibility to obtain the missed lecture material. *If you do not have time for class; do NOT expect my time later.*

**CELL PHONES:** You should NOT access your cell phone during class time. Your career is more important than what/who is on the other end of your phone. However, you will be given enough rope to hang yourself. I will not ask anyone to turn off their cell phone. *If you do not have time for class because of your cell phone; do NOT expect my time later.*

**ACADEMIC MISCONDUCT:** **Cheating will not be tolerated.** Penalties for violations are described on page 55 of the 2013-15 UAM catalog and include withdrawing the student from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

**COURSE CONTENT AND TENTATIVE EXAM SCHEDULE:**

<i>Exam I</i>	MS, IR, NMR, Radicals	Chap 13-16	Fri. 2/13/15
<i>Exam II</i>	Diens, Aromatics, EAS, Acids, Derivatives	Chap 17-19, 22	Fri. 3/20/15
<i>Exam III</i>	Carbonyls, $\alpha$ -Subst/Condensations, Amines	Chap 20-1, 23-5	Mon. 4/27/15
<i>Final Exam</i>	ACS Comprehensive Exam	<b>Tuesday 05/05/15 at 1:30 pm</b>	

**EVALUATION:** Lecture points include 3 exams of 100 points each, a comprehensive final exam of 200 points, and a quiz average of 100 percent yielding a total of 600 lecture points. The test format will include multiple choice, short answer, reactions and syntheses. The percentage score from the comprehensive final will substitute for ONE missed exam. Second and subsequent missed exams will have a zero recorded as the grade. Exams or quizzes may not be made up or given late for any reason. If an absence is planned for a University sponsored event, exams should be taken early. **Lecture** contributes **600** points and **Laboratory** contributes **200** points for a **total** of **800** points.

**GRADING:**

A	85.0-100.0%
B	75.0-84.9%
C	65.0-74.9%
D	55.0-64.9%
F	< 55.0%

**Students with Disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: whitingm@uamont.edu

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**University of Arkansas at Monticello  
School of Mathematics and Sciences**

**(Face to Face) Course Syllabus  
Spring 2015, MWF 11:10-12:00**

**INSTRUCTOR:** Jinming Huang, SC C-14, 460-1866, huang@uamont.edu

**COURSE TITLE and CREDIT HOURS:** CHEM 3444, Instrumental Analysis, 4 hrs

**PREREQUISITES:** CHEM 3314 and PHYS 2203 or 2213

**TEXT:** Lecture, *Quantitative Chemical Analysis*, 8th Ed., 2010 by Daniel Harris  
Lab, none

**OFFICE HOURS:** MWF 9 - 10, TH 10-11, or by appointment

**FORMAT:** Lecture 3 hours/week and lab 3 hours/week.

**COURSE OBJECTIVES:** The objectives of the lecture portion of this course are to provide the student with detailed understanding of the nature of various instrumental methods of chemical analysis and to explore the calculations involved with these methods. The objectives of the laboratory portion of this course are to provide the student to gain experience in the use of many of the instruments and techniques discussed in lecture.

**COURSE CONTENT:**

The topics covered in lecture portion include:

- 1) Electroanalytical techniques;
- 2) Spectroscopy techniques including ultraviolet and visible spectroscopy (UV-Vis), atomic absorption spectroscopy, infrared spectroscopy (IR), nuclear magnetic resonance spectroscopy (NMR), and mass spectroscopy;
- 3) Chromatographic techniques, including gas chromatography (GC), high pressure liquid chromatography (HPLC), and capillary electrophoresis if time permit.

The topics covered in laboratory portion include:

- 1) Acid-base titration experiments on the pH meter,
- 2) Precipitation and redox titrations using potentiometry,
- 3) The using of ion selective electrodes,
- 4) UV-Visible spectroscopy experiments,
- 5) Infrared Spectroscopy experiment,
- 6) Atomic absorption experiment,
- 7) Gas chromatography experiment,
- 8) HPLC experiment

If all of the equipments are available

<u>Grade Scale</u>
86 - 100% = A
76 - 85% = B
65 - 75% = C
55 - 64% = D
< 55% = F

**GRADING:** The grade in this course consists of 60% on exams, 25% on lab, 10% on homework, and 5% on attendance. The lecture portion includes three hour exams with the 3<sup>rd</sup> hour exam be given as the final. Approved graphing calculators are allowed on exams. However, they will be taken up before the

student begins the exam. They will have the memory cleared and then be turned to the student. Make-up exams will not be given on individual exams but will rather be given only once during the semester and will be comprehensive. Only one exam may be made up under any conditions. Homework is required and graded. The lab grade is based on lab report submitted on each experiment. These are graded on the report itself, the results, and some subjective portion on lab performance.

**ATTENDANCE:** Regular attendance is required. Roll will be taken daily, and irregular attendance may be reported to the university administration for possible action involving financial aid. The student is responsible for all assignments, announcements, etc. made during class. Full attendance will get 5% toward the overall grade. Tardy 15 minutes will be account as absence.

**ADDITIONAL READINGS:** No specific additional readings will be assigned. However, the use of other texts for clarification is encouraged. Some experiments will involve handout material.

**ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a score of zero for the first offensive and lead to dismissal from the course with a failing grade for the second offensive. The use of graphing and programmable calculators are permitted, however, if your calculator contains information that you do not want erased, (even from another class) you should bring a different calculator on test days

**DISRUPTIVE BEHAVIOR:** Any behavior that disrupts the regular or normal functions of the university community is prohibited under the Student Conduct Code, including behavior which breaches the peace or violates the rights of others. Cell phones are disruptive to classroom environment and must be placed on silent if brought to class. Cell phones are not allowed under any circumstances during exams.

## **STUDENTS WITH DISABILITIES**

It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, room 120, phone 870-460-1026; TDD 870-460-1626; fax 870-460-1926; email:whitingm@uamont.edu

### **SOME IMPORTANT DATES TO REMEMBER:**

January 7 (Wednesday):	First day of classes.
January 9 (Friday):	Last day to register or add classes.
January 19 (Monday):	Martin Luther King Holiday.
March 18 (Wednesday):	Last day to drop with W.
March 23-27 (M - F):	Spring break.
April 6-17(M - F):	Preregistration for summer and fall.
April 28 (Tuesday):	Last day of classes.
<u>April 30 (Thursday):</u>	<b><u>Final exam, 1:30 -3:30</u></b>

UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **BIOCHEMISTRY I** CHEM 4633-01  
Fall 2015; MWF 8:10 am – 9:00 am; SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use your official UAM campus email!]  
**OFFICE HOURS:** MWF 9:10-10:00 & 1:10-2:00;  
TuTh 8:10-9:00 & 12:40-1:30.

**COURSE TITLE:** (CHEM 4633-01) **BIOCHEMISTRY I**; 3 credit hours lecture.

**PREREQUISITES:** CHEM 3414 Organic Chemistry II Lecture and Lab

**DESCRIPTION:** Introduction to the chemical aspects of living systems: organization and production of cellular macromolecules, production and utilization of energy by the cell, major metabolic pathways and biochemical control mechanisms.

**STUDENT LEARNING OUTCOMES:** By the conclusion of the course you should be able to:

- 1.) Understand the molecular basis of life.
- 2.) Integrate Biology, Chemistry, Physics and Math for a comprehensive view of science.
- 3.) Demonstrate improved study skills and test taking skills.
- 4.) Demonstrate a mastery of the material, not a superficial recognition of the material.

**REQUIRED TEXTS:** You may go to the online bookstore:

<http://www.bkstr.com/uamontstore/shop/textbooks-and-course-materials>

1.) **BIOCHEMISTRY**; Garrett and Grisham, 5<sup>th</sup> Edition, Brooks/Cole Publishers; ISBN 13-978-1-133-10629-6. **You must bring your text to class lectures.**

2.) A non-graphing calculator capable of (log) and (ln) functions is required. **You must bring your calculator to class lectures and exams.** You may not borrow calculators or use a cell phone.

GRAPHING CALCULATORS ARE NOT ALLOWED.

**TECHNICAL SUPPORT INFORMATION:**

**Blackboard Assistance:** Contact Office of Instructional Technology; phone 870-460-1663; open Monday-Friday, 8 a.m. – 4:30 p.m.

Online Help Desk: <http://www.uamont.edu/pages/resources/academic-computing/>

**Email Assistance:** Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.

**Library Services:** The computer section in the Library is open during regular Library hours. Go to the Taylor Library website for hours of operation: <http://www.uamont.edu/pages/library/>

**ATTENDANCE POLICY:** You will be expected to attend every class meeting and arrive on time. The university does not allow for unexcused absences. To reward punctuality and attendance, a quiz may be given at the start of the class period. You must arrive on time to participate in the quiz; quiz points will cumulatively count as an exam. Absences involving University sponsored events are considered excused unless the proper notifications were not delivered to the instructor according to Policy XV on page 71 of the UAM Faculty Handbook. If an absence is planned for a University sponsored event, exams should be taken early if possible. If an absence occurs; it is the student's responsibility to obtain the missed lecture material. *If you do not have time for class; do NOT expect my time later.*

**COURSE SPECIFIC POLICY CONCERNING CELL PHONES:** Your career is more important than what/who is on the other end of your phone. If you access your cell phone during class time you will simply be asked to leave for the remainder of the day and 10 quiz points (not percentage points) will be forfeited.

**ACADEMIC ALERT:** The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior or are having difficulty adjusting to campus life, University faculty, staff or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities. It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu).  
For assistance on a College of Technology campus contact:  
McGehee: Office of Special Student Services representative; phone 870 222-5360; fax 870 222-1105.  
Crossett: Office of Special Student Services representative; phone 870 364-6414; fax 870 364-5707.

**FEEDBACK SCHEDULE:** Please use you UAM email account for **ALL** correspondences. A student can expect a response to email within 24 hours Monday through Friday. It is very unlikely that an email will be answered between Friday afternoon and Monday morning.

**ASSESSMENTS:** Points include 3 exams of 100 points each, a comprehensive FINAL exam of 200 points, a quiz average of 100 percent (points) yielding a total of 600 points. The test format will include structures, calculations, multiple choice, short answer, and discussion. The percentage score from the comprehensive final will substitute for ONE missed exam. Second and subsequent missed exams will have a zero recorded as the grade. Exams may not be made up or given late for any reason. If an absence is planned for a University sponsored event, exams should be taken early.

<b>GRADE ASSIGNMENT:</b>	A	85.0-100.0%
	B	75.0-84.9%
	C	65.0-74.9%
	D	55.0-64.9%
	F	< 55.0%

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically. This includes cell phone use during class. Seats may be assigned to prevent problems.

**ACADEMIC DISHONESTY: Cheating will not be tolerated!**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be withdrawal from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam or quiz constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams constitutes cheating and will result in withdrawal/failure for the class.

**COURSE CONTENT AND EXAM SCHEDULE:**

<i>Exam I</i>	Biology, Buffers, Thermodynamic, Amino acids	Chap 1-4	Mon. 9/28/15
<i>Exam II</i>	1 <sup>o</sup> , 2 <sup>o</sup> , 3 <sup>o</sup> , 4 <sup>o</sup> Structure of proteins, Carbohydrates	Chap 5-8	Mon. 10/26/15
<i>Exam III</i>	Lipids, Membranes, Nucleic Acids and Structure	Chap 9-12	Fri. 12/04/15
<b>Final Exam</b>	<b>Comprehensive Exam Chap 1-12</b>	<b>Wednesday 12/09/15 at 1:30 pm</b>	

**COLLABORATION:** Collaboration is an important aspect of science. I encourage you to associate in small study groups to discuss the homework and lecture. You will benefit from the interaction with your peers whether you are giving or receiving help.



UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **BIOCHEMISTRY II** CHEM 4643-01  
SPRING 2015 MWF 8:10 a.m. SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor; Associate Professor of Chemistry  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use **ONLY** your official UAM campus email!]  
**OFFICE HOURS:** 9:10 - 10:00 am MWF; 9:40 - 10:30 am TuTh  
1:10 - 2:00 pm MW; 12:40 - 1:30 pm TuTh, or by appointment.  
**COURSE TITLE:** (CHEM 4633-01) **BIOCHEMISTRY I**; 3 credit hours lecture  
**DESCRIPTION:** Continuation of studies of chemical aspects of living systems: organization and production of cellular macromolecules, production and utilization of energy by the cell, major metabolic pathways and biochemical control mechanisms. An ACS standardized exam will be given as the final exam.  
**PREREQUISITES:** CHEM 4633 Biochemistry I

**REQUIRED TEXT:** *BIOCHEMISTRY*; Garrett and Grisham, 5<sup>th</sup> Edition, Brooks/Cole Publishers; ISBN 13-978-1-133-10629-6. You **MUST** bring your text to class lectures.

**STUDENT LEARNING OBJECTIVES:** 1.) Understand the molecular basis of life.  
2.) Integrate Biology, Chemistry, Physics and Math for a comprehensive view of science.  
3.) Continue to develop study skills and test taking skills.  
4.) Develop a mastery of the material, not just a superficial recognition of the material.

**REQUIRED CALCULATOR:** Any non-graphing calculator capable of (log) and (ln) functions is required for exams. You may not borrow calculators or use a cell phone. **GRAPHING CALCULATORS ARE NOT ALLOWED.**

**REQUIRED ATTENDANCE:** You will be expected to attend every class meeting and arrive on time. Absences due to University sponsored events are excused. If an absence occurs; it is the student's responsibility to obtain the missed lecture material. *If you do not have time for class; do NOT expect my time later.*

**CELL PHONES:** You should NOT access your cell phone during class time. Your career is more important than what/who is on the other end of your phone. However, you will be given enough rope to hang yourself. I will not ask anyone to turn off their cell phone. *If you do not have time for class because of your cell phone; do NOT expect my time later.*

**ACADEMIC MISCONDUCT: Cheating will not be tolerated.** Penalties for violations are described on page 55 of the 2013-15 UAM catalog and include withdrawing the student from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

**COURSE CONTENT AND TENTATIVE EXAM SCHEDULE:**

<i>Exam I</i>	metabolism, glycolysis, TCA, ETC	Chap 18, 19, 20, 17	Fri. 2/06/15
<i>Exam II</i>	enzymes, kinetics, mechanisms, regulation	Chap 13, 14, 15	Fri. 3/06/15
<i>Exam III</i>	replication; transcription, translation	Chap 12, 28, 29, 30	Fri. 4/03/15
<i>Exam IV</i>	vitamins, glycogen, lipids, amino acids	Chap 22, 23, 24	Mon. 4/27/15
<i>Final Exam</i>	ACS Comprehensive Exam	<b>Monday 05/04/15 at 1:30 pm</b>	

**EVALUATION:** Points include 4 exams of 100 points each, a comprehensive FINAL exam of 200 points, and a quiz average of 200 points yielding a total of 800 lecture points. The test format will include structures, calculations, multiple choice, short answer, and discussion. The percentage score from the comprehensive final will substitute for ONE missed exam. Second and subsequent missed exams will have a zero recorded as the grade. Exams may not be made up or given late for any reason. If an absence is planned for a University sponsored event, exams or quizzes should be taken early.

<b>GRADING:</b>	A	85.0-100.0%
	B	75.0-84.9%
	C	65.0-74.9%
	D	55.0-64.9%
	F	< 55.0%

**Students with Disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: whitingm@uamont.edu

**Student Conduct Statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically. This includes cell phone use during class. Seats may be assigned to prevent problems.

UNIVERSITY OF ARKANSAS AT MONTICELLO  
School of Mathematics and Natural Sciences  
Syllabus **BIOCHEMISTRY LAB** CHEM 4731-01  
SPRING 2015 F 1:10 p.m. SC C-26

**INSTRUCTOR:** Dr. M. Jeffrey Taylor  
**OFFICE:** SC-C-22  
**PHONE:** (870)-460-1766 (leave a voice mail)  
**E-MAIL:** [taylorj@uamont.edu](mailto:taylorj@uamont.edu) [use **ONLY** your official UAM campus email!]  
**OFFICE HOURS:** 9:10 - 10:00 am MWF; 9:40 - 10:30 am TuTh  
1:10 - 2:00 pm MW; 12:40 - 1:30 pm TuTh, or by appointment.

**COURSE TITLE:** (CHEM 4731-01) **BIOCHEMISTRY LAB** 1 credit hour of lab.

**DESCRIPTION:** A laboratory course in modern biochemical techniques investigating proteins, nucleic acids, carbohydrates, lipids, buffers, and enzymes.

**PREREQUISITES:** CHEM 4633 Biochemistry I.

**REQUIRED TEXTS:** No text is required since laboratory procedures will be provided in the form of handouts with additional instruction during the pre-lab discussion.

**STUDENT LEARNING OBJECTIVES:** To introduce the student to biochemical laboratory techniques, equipment and instrumentation. To further develop those skills by employing the use of computer spreadsheets to prepare and present data for analysis. To further develop a mastery of lecture concepts through application in the laboratory.

**REQUIRED CALCULATOR:** Any non-graphing calculator capable of (log) and (ln) functions is required for ALL class **laboratories** and **exams**. You may not borrow calculators or use the calculator function on a cell phone. **GRAPHING CALCULATORS ARE NOT ALLOWED.**

**REQUIRED ATTENDANCE:** You will be expected to attend **EVERY** class meeting and arrive on time.

**CELL PHONES:** You should NOT access your cell phone during class time. Your career is more important than what/who is on the other end of your phone. However, you will be given enough rope to hang yourself. I will not ask anyone to turn off their cell phone. *If you do not have time for class because of your cell phone; do NOT expect my time later.*

**ACADEMIC MISCONDUCT: Cheating will not be tolerated.** Penalties for violations are described on page 55 of the 2013-15 UAM catalog and include withdrawing the student from the class or awarding the student a failing grade for the course. Accessing a cell phone during an exam constitutes cheating, and a score of zero will be recorded. Accessing a cell phone while reviewing confidential materials or exams will result in withdrawal/failure for the class.

**EVALUATION:** There will be five experimental sections worth 150 points (30 points each) and a comprehensive final exam (Apr. 24 at 1:10 pm) for 50 points for a total of 200 points. Each section will be graded according to the experiment with an emphasis on the original, sequential-entry lab notebook, professionally prepared lab reports, and a very subjective portion on lab technique and scientific maturity.

**TENTATIVE EXPERIMENTS:**

1. Ethanolic fermentation; Fractional distillation; Analysis by GC.
2. Preparation of buffers; Standardized solutions; Titrations.
3. Determination of  $pK_a$  of a weak acid; Spreadsheet analysis.
4. Saponification of Lipids; Analysis of soap.
5. Spectrophotometry; Protein Concentration.

<b>GRADING:</b>	A	90.0-100.0%
	B	80.0-89.9%
	C	70.0-79.9%
	D	60.0-69.9%
	F	< 60.0%

**TENTATIVE COURSE CONTENT AND LABORATORY SCHEDULE:**

1/09	Check in, Safety, Notebooks & Lab Reports
1/16	Ethanolic Fermentation / Fractional Distillation
1/23	Buffers / Titrations
1/30	Ethanolic Fermentation / Fractional Distillation Continued
2/06	Buffers / Titrations Continued
2/13	$pK_a$ of a weak acid
2/20	$pK_a$ of a weak acid Continued
2/27	Spreadsheet Analysis / Computer Lab
3/06	Spreadsheet Analysis / Computer Lab Continued
3/13	Saponification of Lipids
3/20	Saponification of Lipids Continued
4/03	Spectrophotometry
4/10	Spectrophotometry Continued
4/17	Check-out; <b>LAB CLEAN-UP!</b>
4/24	<b>Final Exam</b>

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**University of Arkansas at Monticello**  
**School of Mathematics and Sciences**  
**Elements of Physical Chemistry**  
**(Face to Face) Course Syllabus**  
**Spring 2015, TTh 8:10-9:30**

**INSTRUCTOR:** Dr. Jinming Huang, Science Center C-14, 870- 460-1866, huang@uamont.edu

**Course title and Credit Hours:** CHEM 3424, Elements of Physical Chemistry, 4 credit hours

**Office Hours:** MWF 9-10, TH 10-11, or by appointment

**Prerequisites:** Math 2255, 12 hours Chemistry.

**Co-requisites:** None

**Text:** Lecture: Elements of Physical Chemistry, by Atkins and De Paula, 6th Ed, W.H.Freeman,  
ISBN: 1-4292-1813-4

Reference: Applied Mathematics for Physical Chemistry, by James Barrante, 3<sup>rd</sup> Ed

Lab: None

**Format:** Lecture 3 hours/week and lab 3 hours/week

**Course Description:** Fundamental concepts of physical chemistry primarily for Biochemistry Option Chemistry majors and pre-professional students. Concepts will be presented utilizing basic calculus with application to life processes and biochemistry.

**Course Objectives:** The objective of this course is to provide the student with an introduction to the fundamentals of Physical Chemistry. This is a one semester physical chemistry course especially applied to students in biology or health science majors. The course covers thermodynamics and kinetics. The objective of the laboratory is to acquaint the student with some basic physical chemical measurements and to give the student some experience with the concepts from lecture.

**Course Content:** The topics covered include: the first law and the second law of thermodynamics, physical equilibria of pure substances, properties of mixtures, chemical equilibrium, chemical kinetics, molecular interactions, macromolecules and aggregates. Quantum theory and spectroscopy will also be covered if time allowed. The laboratory portion includes a variety of experiments including any or all of the following: various kinetics experiments, viscosity, heat effects in various changes, chemical equilibrium studies, as well as spectroscopic techniques.

**Grading Practices and Procedures:** The grade in this course consists of 68% on exams, 20% on labs, 8% on homework, and 4% on attendance. The lecture portion includes four hour exams, with the 4<sup>th</sup> hour exam being given at the time for final. Make-up exam will not be given on individual exams but will rather be given only once during the semester and will be comprehensive. Only one exam may be made up under any conditions. Approved graphing calculators are allowed on exams. However, they will be taken up before the student begins the exam. They will have the memory cleared and then be turned to the student. The exams consist principally of problems with a few derivations, calculations, and discussion questions. The grading in the lab is based on reports which are submitted on each experiment. These are graded on the report itself, the results, and some subjective portion on lab performance. The report should be turned in within **one week** after the experiment is completed as scheduled. Late report will be penalized **10 points per day**. Any missed lab report will be given

a grade of zero for that experiment. **Homework assignments** are graded on how many assignments practiced and **must be turned in before due date, any late turn in homework will not be accepted.**

The overall course grade is assigned on the basis of 100-88: A, 87-78: B, 77-67: C, 66-55: D, and below 55: F.

**Attendance:** Regular attendance is required. Roll will be taken daily, and irregular attendance may be reported to the university administration for possible action involving financial aid. Full attendance will get 4% toward the overall grade. Tardy 15 minutes will be account as absence. The student is responsible for all assignments, announcements, etc. made during class.

**Additional Readings:** A suggested list of references will be provided. However, no specific outside readings will be assigned. The use of other texts for clarification is encouraged. All experiments will involve some handout material.

### **Academic Dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a score of zero for the first offensive and lead to dismissal from the course with a failing grade for the second offensive. The use of graphing and programmable calculators are permitted, however, if your calculator contains information that you do not want erased, (even from another class) you should bring a different calculator on test days

**DISRUPTIVE BEHAVIOR:** Any behavior that disrupts the regular or normal functions of the university community is prohibited under the Student Conduct Code, including behavior which breaches the peace or violates the rights of others. Cell phones are disruptive to classroom environment and must be placed on silent if brought to class. Cell phones are not allowed under any circumstances during exams.

**SOME IMPORTANT DATES TO REMEMBER:**

January 7 (Wednesday):	First day of classes.
January 9 (Friday):	Last day to register or add classes.
January 19 (Monday):	Martin Luther King Holiday.
March 18 (Wednesday):	Last day to drop with W.
March 23-27 (M - F):	Spring break.
April 6-17(M - F):	Preregistration for summer and fall.
April 28 (Tuesday):	Last day of classes.
<u>April 30 (Thursday):</u>	<b>Final exam, 8-10 AM</b>

**STUDENTS WITH DISABILITIES**

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**School of Mathematics and Sciences**  
**Physical Chemistry-Quantum and Kinetics**  
(Face to Face) Course Syllabus  
Spring 2014, MWF 9:10-10:00

**INSTRUCTOR:** Dr. Jinming Huang, Science Center C-14, 870- 460-1866, huang@uamont.edu

**Office Hours:** M~F 10-11, TWF2-3, or by appointment

**Course title and Credit Hours:** CHEM 4714, Physical Chemistry - Kinetics and Quantum Mechanics, 4 credit hours

**Prerequisites:** 12 hours Chemistry, MATH 3495, PHYS 2313 and PHYS 2323

**Co-requisite:** Math 3543

**Text:** Lecture: Physical Chemistry by Atkins and De Paula, 9th Ed.

Reference: Applied Mathematics for Physical Chemistry, by James Barrante, 3<sup>rd</sup> Ed

Lab: None

**Format:** Lecture 3 hours/week and lab 3 hours/week

**Course Objectives:** The objective of this course is to provide the student with a thorough introduction to the fundamentals of Physical Chemistry. This is one course of a two part group required for this purpose. This course concentrates on kinetics and quantum mechanics. The objective of the laboratory is to acquaint the student with some basic physical chemical measurements and to give the student some experience with the concepts from lecture.

**Course Content:** As stated above, this course involves the areas of kinetics and quantum mechanics. The topics covered include: molecules in motion; the rates of chemical reactions; reaction dynamics; catalysis; quantum theory; atomic structure; molecular structure; and other topics if time allows.

The laboratory portion includes a variety of experiments including any or all of the following: various kinetics experiments; electrical conductance; viscosity; and spectroscopic techniques.

**Grading Practices and Procedures:** The grade in this course consists of 68% on exams, 20% on lab, 8% on homework, and 4% on attendance. The lecture portion includes four hour exams which count 68% of the overall grade. Approved graphing calculators are allowed on exams. However, they will be taken up before the student begins the exam. They will have the memory cleared and then be turned to the student. Make-up exams will not be given on individual exams but will rather be given only once during the semester and will be comprehensive. Only one exam may be made up under any conditions. The exams consist principally of problems with a few derivations and occasional discussion questions. The grading in the lab is based on reports which are submitted on each experiment. These are graded on the report itself, the results, and some subjective portion on lab performance. The report should be turned in within **one week** after the experiment is completed as scheduled. Late report will be penalized **10 points per day**. Any missed lab report will be given a grade of zero for that experiment. **Homework assignments** are graded on how many assignments practiced and **must be turned in before due date, any late turn in homework will not be accepted**. The overall course grade is assigned on the basis of 100-85 A, 84-70 B, 69-60 C, 59-50 D, and below 50 F.



**Attendance:** Regular attendance is required. Roll will be taken daily, and irregular attendance may be reported to the university administration for possible action involving financial aid. Full attendance will get 4% toward the overall grade. Tardy 15 minutes will be account as absence. The student is responsible for all assignments, announcements, etc. made during class.

**Additional Readings:** A suggested list of references will be provided. However, no specific outside readings will be assigned. The use of other texts for clarification is encouraged. All experiments will involve some handout material.

### **Academic Dishonesty:**

1. **Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. **Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
3. **Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. **Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a score of zero for the first offensive and lead to dismissal from the course with a failing grade for the second offensive. The use of graphing and programmable calculators are permitted, however, if your calculator contains information that you do not want erased, (even from another class) you should bring a different calculator on test days

**DISRUPTIVE BEHAVIOR:** Any behavior that disrupts the regular or normal functions of the university community is prohibited under the Student Conduct Code, including behavior which breaches the peace or violates the rights of others. Cell phones are disruptive to classroom environment and must be placed on silent if brought to class. Cell phones are not allowed under any circumstances during exams.

### **STUDENTS WITH DISABILITIES**

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**Important Dates:**

January 8 (Wednesday):	First day of classes.
January 10 (Wednesday):	Last day to register or add classes.
January 20 (Monday):	Martin Luther King Holiday.
March 24-28 (M - F):	Spring break.
April 7-18(M - F):	Preregistration for summer and fall.
April 2 (Wednesday):	Last day to drop with W.
April 30 (Tuesday):	Last day of classes.
<u>May 5 (Monday):</u>	<b>Final exam, 8-10 AM</b>

**School of Mathematics and Sciences**  
**Physical Chemistry - Thermodynamics**  
(Face to Face) Course Syllabus  
Spring 2015, MWF 10:10-11

**Instructor:** Dr. Jinming Huang, SC C-14, 460-1866, huang@uamont.edu

**Course Title and Credit Hours:** CHEM 4704, Physical Chemistry – Thermodynamics, 4 hrs

**Prerequisites:** 12 hours Chemistry, PHYS 2313 and 2323   **Co-requisite:** Math 3525

**Text:** Lecture: Physical Chemistry by Atkins and De Paula, 10th Ed.

Reference: Applied Mathematics for Physical Chemistry, by James Barranté, 3<sup>rd</sup> Ed

Lab: None

**Office Hours:** MWF 9 – 10, TH 10-11, or by appointment

**Format:** Lecture 3 hours/week and lab 3 hours/week

**Course Objectives:** The objective of this course is to provide the student with a thorough introduction to the fundamentals of Physical Chemistry. This is one course of a two part group required for this purpose. This course concentrates on thermodynamics. The objective of the laboratory is to acquaint the student with some basic physical chemical measurements and to give the student some experience with the concepts from lecture.

**Course Content:** As stated above, this course involves the areas of thermodynamics. The topics covered include: the properties of gases, the first law of thermodynamics, the second and third law of thermodynamics, physical transformations of pure substances, simple mixtures, and chemical equilibrium. The laboratory portion includes a variety of experiments including any or all of the following: various gas properties; heat effects in various changes; phase equilibrium studies; and chemical equilibrium studies.

**Grading Practices and Procedures:** The grade in this course consists of 60% on exams, 25% on lab, 10% on homework, and 5% on attendance. The lecture portion includes three hour exams with the 3<sup>rd</sup> hour exam being given at the time for final. Approved graphing calculators are allowed on exams. However, they will be taken up before the student begins the exam. They will have the memory cleared and then be turned to the student. Make-up exams will not be given on individual exams but will rather be given only once during the semester and will be comprehensive. Only one exam may be made up under any conditions. The exams consist principally of problems with a few derivations and occasional discussion questions. The grading in the lab is based on reports which are submitted on each experiment. These are graded on the report itself, the results, and some subjective portion on lab performance. The overall course grade is assigned on the basis of 100-86 A, 85-76 B, 75-65 C, 64-55 D, and below 55 F.

**Attendance:** Regular attendance is required. Roll will be taken daily, and irregular attendance may be reported to the university administration for possible action involving financial aid. Full attendance will get 5% toward the overall grade. Tardy 15 minutes will be account as absence. The student is responsible for all assignments, announcements, etc. made during class.

**Additional Readings:** No specific outside readings will be assigned. The use of other texts for clarification is encouraged. All experiments will involve some handout material.

## **Academic Dishonesty:**

- 1 Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
17. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
18. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
19. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be given a score of zero for the first offensive and lead to dismissal from the course with a failing grade for the second offensive. The use of graphing and programmable calculators are permitted, however, if your calculator contains information that you do not want erased, (even from another class) you should bring a different calculator on test days

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## **SOME IMPORTANT DATES TO REMEMBER:**

January 7 (Wednesday):	First day of classes.
January 9 (Friday):	Last day to register or add classes.
January 19 (Monday):	Martin Luther King Holiday.
March 18 (Wednesday):	Last day to drop with W.
March 23-27 (M - F):	Spring break.
April 6-17(M - F):	Preregistration for summer and fall.
April 28 (Tuesday):	Last day of classes.
<u>May 5 (Tuesday):</u>	<u>Final exam, 1:30-3:30 PM</u>

**CHEM 4623****Advanced Inorganic Chemistry**

Text: *Inorganic Chemistry* (5th Ed.) Shriver & Atkins

Prerequisites: 12 hours of chemistry.

Recommended Materials: TI-30 or 36 scientific calculator.

**INSTRUCTOR:** Andrew Williams

Office: C-9, Science Center

Office Hours: M-F 8:00-9:00 or by appointment.

Contact Information Phone: 460-1465 FAX: 460-1316 E-mail: Williamsa@uamont.edu

**ACADEMIC HONESTY:**

Cheating, helping others cheat, disruptive behavior (including cell phones or pagers), or other improper conduct will not be tolerated and could lead to dismissal from the course with a failing grade. Storing of materials in a graphing calculator for use on exams is not permitted. All graphing calculators will be cleared on exam day, so if there is material you don't want deleted permanently, bring another calculator to use on the exams. All cell phones are to be turned off and put away in class. The minimum penalty for cheating will be a zero score on the assignment or exam, which cannot be dropped as the low score for the semester. The second cheating offense will result in a failing grade in the course.

**SOME IMPORTANT DATES TO REMEMBER:**

August 20 (Wednesday): First day of classes.

August 20-22 (Wednesday through Friday): Late registration. A \$25 late registration fee will be assessed.

August 20-22 (Wednesday through Friday): Students may make schedule changes.

August 22 (Friday): Last day to register or add fall classes.

September 1 (Monday): Labor Day Holiday. All offices and classes closed.

October 3 (Friday): Deadline to apply for May graduation.

October 29 (Wednesday): Last day to drop a regular fall class (not applicable to fast-track classes). Grade will be W.

November 3 (Monday): Preregistration for spring begins.

November 7 (Friday): INBRE Conference in Fayetteville, class meets in Fayetteville.

November 14 (Friday): Preregistration for spring ends.

November 26 (Wednesday): Classes closed. University offices open.

November 27-28 (Thursday-Friday): Thanksgiving Holiday. All offices and classes closed.

December 5 (Friday): Last day of classes.

December 8-12 (Monday-Friday): Final exams.

**FINAL EXAM Friday, Dec 12<sup>th</sup>, 8:00-10:00.**

**COURSE:** Format: 150 Minutes of lecture per week.

**Goals:** Overview of nuclear chemistry, theories of chemical bonding, acid-base definitions, molecular symmetry, coordination compounds, organometallic chemistry, and selected descriptive chemistry. We will also cover current topics in inorganic chemistry including solid state, materials, nanotechnology, catalysis, and biological inorganic chemistry, depending on time.

**ATTENDANCE:** Regular attendance is expected. Total absences greater than 6 hours may result in being dropped from the course with a grade of W or F as appropriate. The student is responsible for ALL material covered in class, whether present or not. University functions requiring absences, such as athletics, debate, band, etc... are excused absences and quizzes and exams may be made up **if prior arrangements are made in advance.**

## Material Covered:

### Chap. #Topic

1. Atomic Structure
2. Molecular Structure and bonding
3. The structure of simple solids
4. Acids and bases
5. Oxidation and reduction
6. Molecular symmetry
7. Coordination compounds

### Chap. # Topic

8. Physical Techniques
20. d-Metal complexes: electronic structure and properties
- 21-22. Coordination and d-metal organometallic chemistry
24. Solid-state and materials chemistry
25. Nanomaterials, nanoscience, and nanotechnology
26. Catalysis

### **GRADING:**

Four one-hour exams and a comprehensive final exam of equal weight will be given (100 pts each). If no exams are missed, the lowest test score (of exams 1 - 4) will be dropped and replaced with the percentage scored on the final exam, if the final exam percentage is higher than the lowest exam. A missed exam will be counted as the drop exam and replaced with the percentage scored on the final exam, unless prior arrangements can be made and a make-up exam given. Make-up exams are given only in extreme emergencies. Only one exam can be replaced with the final exam score. Quizzes will be given regularly, with the 10 highest being calculated into your grade. A quiz average will be calculated out of 100 points possible. No make-up quizzes will be given, except for those missed for a pre-scheduled university function. A short presentation over applied inorganic chemistry will be discussed.

### **GRADE SCALE**

**A = > 90%**

**B = 80 - 89%**

**C = 70 - 79%**

**D = 60 - 69%**

**F = < 60%**

**READING AND REFERENCE MATERIALS:** Textbook reading of the topics indicated above is expected as those chapters are being covered in class. Additional copied material may be distributed in. Also, materials for further study are available in the library, in the study area found in the hallway of the C-wing of the Science Center, or my office.

### **STUDENTS WITH DISABILITIES**

It is the policy of the University of AR at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; Fax 870 460-1926.

### **PRACTICE HOMEWORK PROBLEMS**

*These problems are assigned as practice problems, and will be helpful to you in preparing for exams. They will not be taken up at any time, nor will any grade be given for completion of these problems. Students who do these problems usually do far better than those who do not. These problems will be given at the beginning of each section.*

CHEM 3454

ORGANIC ANALYSIS

164501

**Description:** Systematic separation and identification of organic compounds with emphasis on molecular structure. Use and theory of spectrometric methods and other physical techniques.

**Prerequisites:** CHEM 3414 (Organic Chem II and Lab)

**Required Text:** *Spectrometric Identification of Organic Compounds* (5th Ed.), Silverstein, Bassler, & Morrill.

**Suggested Text:** *The Organic Chem Lab Survival Manual* (3rd Ed.) Zubrick.

**Instructor:** Morris Bramlett, C-24 Science Center, 460-1465, BRAMLETT@UAMONT.EDU  
Office hours: 8:00 - 9:00 MWF, 10:00 - 11:00 M-F, available most afternoons.

**Course Goals:** To teach structure determination of organic compounds using mass, NMR, IR, and ultraviolet spectrometry; and to teach related techniques such as purification methods, qualitative tests, use of computer aids, data collection and reporting, and laboratory safety.

**Grading:**

Three 1 hour exams	@ 100 pts each = 300 pts
Take home portion of the final exam	= 100 pts
In class portion of the final exam	= 100 pts
Homeworks and Quizzes combined	= 100 pts
Laboratory	= 600 pts

No exam scores will be dropped. The lowest quiz score will be dropped. No make-ups will be allowed on quizzes. Homework assignments are expected on the date due. Late papers will be penalized 20% per day. Grades will be assigned according to the following scale:

88 - 100 %	= A
77 - 87 %	= B
66 - 76 %	= C
55 - 65 %	= D
below 55 %	= F

**Attendance:** Regular attendance is expected. In the event of an absence, you are responsible for all notes and or homework assignments assigned during the missed class period.

**Academic Honesty:** Cheating, helping others cheat, disruptive behavior, or other improper conduct will result in dismissal from the course, possibly with a failing grade.

**Lab Safety:** Standard laboratory safety will always be enforced. Goggles should be worn at all times that anyone is working. Food, drink, or tobacco will not be tolerated in the lab. Do only the designed experiments. Treat all unknowns as if they are flammable, poisonous, and carcinogenic.

**Disabled Student:** UAM is committed to providing equal education opportunities for all students. A student with a disability requiring accommodations should discuss his/her needs with the instructor and the Office of Special Student Services (Harris Hall room 124, 460-1045) during the first few weeks of the semester.

**Important Dates:**

Spring Break	March 18 -22
Last W drop day	April 5
Last withdraw day	April 25
Last day of class	April 30
Final Exam	Thursday, May 2, 8:00 - 10:00 a.m.

**Course Outline:**

- I. General overview
  - A. Introduction of instruments
  - B. Physical properties
  - C. Methodology in gathering preliminary information
- II. Mass spectrometry
  - A. Instrumentation and theory
  - B. The mass spectrum
  - C. Molecular ions
  - D. Molecular formula determination
  - E. Fragmentation
  - F. Rearrangements
  - G. MS of classes of organic compounds
- III. Infrared Spectrometry
  - A. Theory and instrumentation
  - B. Sample preparation techniques
  - C. Spectrum interpretation
  - D. Characteristic functional groups
- IV. Proton Magnetic Resonance Spectrometry
  - A. Theory and instrumentation
  - B. Sample preparation
  - C. Interpretation of spectra
  - D. Chemical shift
  - E. Spin coupling
  - F. Presence of heteroatoms and functional groups
  - G. Presence of other NMR active nuclei
- V. Carbon-13 NMR Spectrometry
  - A. Introduction
  - B. Interpretation of spectra
  - C. Chemical shifts
  - D. Spin coupling
  - E. Peak assignment aids
  - F. Quantitative analysis
- VI. New Techniques in NMR
  - A. 2-D NMR
  - B. Connectivity
  - C. Special techniques
- VII. Ultraviolet Spectrometry
  - A. Theory and instrumentation
  - B. Sample preparation
  - C. Interpretation of spectrum
  - D. Characteristic absorptions



**Reading and Reference Materials:** This course requires the use of several different chemical techniques that are highly specialized and may require outside reading. Some informative texts are:

Beynon, J. H. (John Herbert). Mass Spectrometry and its Applications to Organic Chemistry. Amsterdam, New York, Elsevier Pub. Co. 1960.

Bhacca, Norman S. Applications of NMR Spectroscopy in Organic Chemistry; Illustrations from the Steroid Field. 1964.

Brown, D. W. (David W.). Organic Spectroscopy. Chichester [Eng.]; New York: J. Wiley. 1988.

Budzikiewicz, Herbert. Mass Spectrometry of Organic Compounds. San Francisco, Holden-Day. 1967.

Cheronis, Nicholas Dimitrius. Identification of Organic Compounds; a Student's Text Using Semimicro Techniques. 1963.

Cheronis, Nicholas Dimitrius, 1896-1962. Semimicro Qualitative Organic Analysis; the Systematic Identification of Organic Compounds. 1965.

Nakanishi, Koji, 1925. Infrared absorption Spectroscopy, Practical. San Francisco, Holden-Day. 1962.

Pretsch, E. Tables of Spectral Data for Structure Determination of Organic Compounds. 2nd Ed. (English Translation). Berlin; New York: Springer/Verlag. 1983.

Scott, Alastair I. Interpretation of the Ultraviolet Spectra of Natural Products. 1964.

Shapiro, Robert Howard. Spectral Exercises in Structural Determination of Organic Compounds. New York, Holt, Rinehart & Winston. 1969.

Siggia, Sidney. Quantitative Organic Analysis via Functional Groups. 4th ed. New York: Wiley. 1979.

Sorrell, Thomas N. Interpreting Spectra of Organic Molecules. Mill Valley, Calif.: University Science Books. 1988.

Weiss, Frederick T. Determination of Organic Compounds: Methods and Procedures. New York, Wiley-Interscience. 1970.

Williams, Dudley H. Spectroscopic Methods in Organic Chemistry. 5th ed. London; New York: McGraw-Hill. 1995.

**Prerequisites:** Eleven hours of 3000-4000 level chemistry and instructor permission

**Textbook:** Instructor prepared handouts/lab manual

<b>Instructors:</b>	Jinming Huang (JH)	SC-C14	460-1866	Huang@uamont.edu
	Andrew Williams (AW)	SC-C9	460-1465	WilliamsA@uamont.edu
	Morris Bramlett (MB)	SC-A7	460-1116	Bramlett@uamont.edu
	Jeff Taylor (JT)	SC-C22	460-1766	TaylorJ@uamont.edu

**Course:**

**Format:** 2 hours lecture for one-half term, 3 hours lab activity per week arranged (2 credit hours)

**Goals:** To introduce a variety of specialized skills and laboratory methods often not covered in the traditional chemistry curriculum. To provide students a better understanding of synthesis, analysis, and structure determination. To introduce students to chemical literature search and retrieval using electronic databases. To provide students experience in safely using chemicals and operating instrumentation used in the chemical workplace. To provide chemistry majors and minors with skills that will be needed in a graduate program or in the chemical industry.

**Material Covered: (Tentative)**

Exercise #	Topic
AW Jan7	Seminar discussion and Chemical Literature
AW Jan 12	Chemical literature and electronic databases
AW Jan 14	Introduction to Glassblowing
AW Jan 21	Introduction to Glassblowing
JH Jan 26	UV-Vis Spectroscopy
JH Jan 28	UV-Vis Spectroscopy
JH Feb 2	UV-Vis Spectroscopy
JH Feb 4	UV-Vis Spectroscopy
JT Feb 8	Molecular Modeling/NMR
JT Feb 10	Molecular Modeling/NMR
JT Feb 16	Molecular Modeling/NMR
JT Feb 18	Molecular Modeling/NMR
MB Feb 23	Selected Topic (This year Food Analysis)
MB Feb 25	Selected Topic
MB Mar 2	Selected Topic
MB Mar 4	Selected Topic
MB Mar 9	Selected Topic
All Mar 11-Apr 17	Arranged Lab Exercises and Seminar
All Apr 20	Oral Presentations
All Apr 22	Oral Presentations
All Apr 27	Oral Presentations

**Grading:** Each unit will be worth 20% of the overall grade, with the oral presentation being the 5<sup>th</sup> unit, also worth 20% of the grade. **A minimum grade of 50% is needed in each unit in order to pass the course.** Grading will be based on quizzes, tests, content and quality of written reports and assignments given on each exercise, and on the oral presentation required at the end of the semester. The oral presentation will be graded on content, quality of audiovisuals, and clarity of presentation as per rubric. All chemistry faculty members, and possibly other science center faculty, will participate in the grading of the oral presentation.

<b>Grading Scale:</b>	90- 100	A
	80 - 89	B
	70 - 79	C
	60 - 69	D
	0 - 59	F

**Attendance:** Regular attendance is expected. Although some of the laboratory time will be arranged at the convenience of the student and the faculty member, it is necessary to attend the 1-hour lecture per week in which the current exercise is being covered. With this in mind, 4 or more absences will result in failure of the course.

**Special Dates of Concern:**

January 7 (Wednesday)	First Day of Classes
January 9 (Friday)	Last Day to Add Classes
January 19 (Monday)	Martin Luther King Holiday. All offices and classes closed.
March 18 (Wednesday)	Last day to drop with W in regular classes
March 23-27 (Monday-Friday)	Spring Break for faculty and students.
April 6 (Monday):	Preregistration for summer and fall begins.
April 17 (Friday)	Preregistration for summer and fall ends
April 28 (Tuesday)	Last day of classes
April 29 - May 5 (Wednesday-Tuesday)	Final exams
May 8 (Friday)	Commencement

**Disruptive Behavior:** The following action is prohibited under the Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

**Students with Disabilities:** It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services in Harris Hall, Room 120; telephone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926.

**University of Arkansas at Monticello**  
**School of Mathematics and Natural Sciences**  
**ELEMENTS OF ASTRONOMY LABORATORY**  
**Fall 2015**

**INSTRUCTOR:** Kelley Sayyar  
**Office:** Science Center C-10  
**Office Hours:** MWF 10-11:00 am and 2-3:00 pm; T 2:30-3:30 pm (or by appointment)  
**Office Phone:** (870)460-1365  
**E-Mail:** [sayyark@uamont.edu](mailto:sayyark@uamont.edu)

**COURSE:** **Elements of Astronomy Lab ESCI 1041 (ACTS-PHSC 1204)**

**Pre-requisite:** None

**Co-requisite:** ESCI 1033 (PHSC 1204) Elements of Astronomy Lecture

**Required Text:** Instructor generated handouts

**Credit Hour:** 1

**Format:** 2 hours of lab once per week.

Thursday 2:40-4:30pm

**Objectives:** The overall goal of this course is to introduce the vast subject of astronomy at an introductory level to investigate the tools and methods used by astronomers to study celestial objects such as the Sun, Moon, stars, and planets and their motions and patterns of cycles.

**COURSE PROCEDURES AND EXPECTATIONS:**

**GRADING:**

Three 200 point multiple choice exams will be given. The exams will cover material from the handout material and laboratory activities. A SCANTRON will be required for each exam and must be furnished by the student. When appropriate a calculator may be used, however, no cell phones or electronic devices, etc. are allowed during exams. **Students will not be allowed to make up exams without prior permission of the instructor.** Students absent due to University related activities will only be allowed to make up exams with prior permission one week in advance of the missed exam.

A total of 100 attendance/participation points will be possible from lab meetings during the semester. Students must sign a roll sheet and actively participate in the lab activity in order to receive the attendance points.

A research paper will be assigned from various topics in astronomy by the third lab meeting. Students must give an oral presentation of the research in addition to a written paper to receive full credit for the assignment. The research paper and presentation will be worth 100 points as specified in a detailed rubric. Outside class time is necessary to complete this assignment and students are expected to spend sufficient time (at least twenty hours) during the semester to thoroughly research the topic, write the paper and prepare for the oral presentation.

The final grade will be based on the following scale:

**A = 800 -716 pts ( 100 - 89.5%)**

**B = 715 - 636 pts (89.4 - 79.5%)**

**C = 635 - 556 pts (79.4 - 69.5%)**

**D = 555 - 476 pts (69.4 - 59.5%)**

**F = 475 - 0 pts (59.4 - 0%)**

**ATTENDANCE:**

Attendance is required and students will sign a roll sheet each class period. Signing for another student is not permitted. The student is responsible for ALL material covered in class, whether present or not. University functions requiring absences, such as athletics, debate, band, etc... are excused absences **if prior arrangements are made in advance**

**OUTSIDE CLASS PREPARATION:**

Students are expected to spend sufficient time (at least 5-10 hours per week) outside the classroom in preparation for this course including reading and reviewing instructor generated handouts and studying for exams. As noted above, outside class time is necessary to complete the research paper assignment and students are expected to spend sufficient time (at least twenty hours) during the semester to thoroughly research the topic, write the paper and prepare for the oral presentation.

**WITHDRAWALS:**

Students who wish to withdraw from the course are responsible for filing the necessary papers with the Registrar's office. Students who fail to file a drop card will receive an F for the course.

**ACADEMIC HONESTY:**

Cheating (such as copying from or collaborating with another student and use of prepared notes/materials on exams or experiments/activities without specific approval of the instructor), helping others cheat or other improper conduct such as collusion, duplicity and plagiarism will not be tolerated. Confirmed cases of cheating/improper conduct will result in a zero on a given exam or research paper for the first offense and a grade of F for the course on the second. The incident will also be reported to the Vice Chancellor for Academic Affairs.

**DISORDERLY CONDUCT:**

Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others is prohibited under the Student Conduct Code of the UAM Student Handbook.

**STUDENTS WITH DISABILITIES:**

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**ELEMENTS OF ASTRONOMY LABORATORY SCHEDULE**  
**ESCI 1041 (PHSC 1204)**  
**Fall 2015**

<b>Dates:</b>	<b>Activity</b>
Aug 20	Syllabus, Research Topics, Scientific Notation and Unit Conversions
Aug 27	Constellations and Star Planisphere, Planetarium visit
Sept 03	Celestial Sphere and Coordinate System
<b>Sept 10</b>	<b>Lab Exam #1</b>
Sept 17	Moon Phases and Features
Sept 24	Spectroscopy in Astronomy
Oct 01	Sun Spots
<b>Oct 08</b>	<b>Lab Exam #2</b>
Oct 15	Hertzsprung-Russell Diagram
Oct 22	No Lab
Oct 29	Comets
Nov 05	Scale Model of the Solar System
<b>Nov 12</b>	<b>Lab Exam #3</b>
Nov 19	Research Presentations ( <b>All Research Papers Due</b> )
Nov 26	Thanksgiving Holiday
Dec 03	Research Presentations Continued

## **IMPORTANT DATES:**

### **Fall 2015**

August 19 (Wed) - First day of classes

August 21 (Fri) - Last day to register or add classes.

September 07 (Mon) - Labor Day Holiday. Offices and classes closed.

October 28 (Wed) – Last day to drop a regular fall class. Grade will be W.

November 02-13 - Preregistration for Spring 2015 begins.

November 25(Wed) - Classes closed. University offices open.

November 26-27 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.

December 04 (Fri) - Last day of classes.

December 07-11 (Mon-Fri) - Final exam period.

**University of Arkansas at Monticello**  
**School of Mathematics and Natural Sciences**  
**ELEMENTS OF ASTRONOMY LECTURE**  
**Fall 2015**

**INSTRUCTOR:** Kelley Sayyar  
Office: Science Center C-10  
Office Hours: MWF 10-11:00am and 2-3:00pm; T 2:30-3:30 pm (or by appointment)  
Office Phone: (870)460-1365  
E-Mail: [sayyark@uamont.edu](mailto:sayyark@uamont.edu)

**COURSE:** **Elements of Astronomy ESCI 1033** (ACTS-PHSC 1204)  
Pre-requisite: None  
Required Text: ASTRO 2 (2<sup>nd</sup> Edition) Michael A. Seeds and Dana Backman  
Credit Hours: 3  
Format: 50 minutes of lecture three days per week.  
MWF 11:10am-12:00pm

**Objectives:** The overall goal of this course is to introduce the vast subject of astronomy at an introductory level and gain astronomical knowledge of the workings of the stars, galaxies and planets as well as humanity's place in the universe.

**GRADING:**

Eleven (11) quizzes worth 25 points each will be given during the semester. The eight (8) best quiz scores will be counted for a possible total of 200 points. The quizzes will be given during the first 5-10 minutes of class time on the scheduled dates. **Students must take the quizzes during lecture and no make-ups will be allowed for missed quizzes.** Four (4) 200 point multiple choice exams will be given. The exams will cover material from the text, lectures and power point material. A SCANTRON will be required for each exam and must be furnished by the student. Please note that no cell phones or electronic devices, etc. are allowed on any quiz or exam. **Students will not be allowed to make up exams without prior permission of the instructor.** Students absent due to University related activities will only be allowed to make up exams with prior permission one week in advance of the missed exam. The final grade will be based on the following scale:

A= 89.5-100% (895-1000 pts)  
B = 79.5-89.4 % (795-894 pts)  
C = 69.5-79.4 % (695-794 pts)  
D = 59.5-69.4 % (595-694 pts)  
F = 0-59.4 % (0-594 pts)

**ATTENDANCE:** Attendance is expected and students will be required to sign a roll sheet each class period. Signing for another student is not permitted. The student is responsible for ALL material covered in class, whether present or not. University functions requiring absences, such as athletics, debate, band, etc. are excused absences **if prior arrangements are made in advance.**



**READING MATERIALS:** Textbook reading of the chapters indicated is expected before those sections are to be covered in class. Sufficient time (at least 15-20 hours per week) should be spent preparing for this course reading/reviewing textbook material and supplemental handouts and studying for exams.

## **SCHEDULE OF TOPICS:**

Aug. 19 Syllabus

### **UNIT 1: Exploring the Sky**

Aug. 21 Chapter 1-Here and Now

Aug. 24 **Quiz #1;** Chapter 2-User's Guide to the Sky (sections 2.1, 2.2)

Aug. 26 Chapter 2 (sections 2.3, 2.4, 2.5)

Aug. 28 **Quiz #2;** Chapter 3-The Origin of Modern Astronomy (sections 3.1, 3.2)

Aug. 31 Chapter 3 (sections 3.3, 3.4, 3.5)

Sept. 02 **Quiz #3;** Chapter 4-Astronomical Telescopes and Instruments (sections 4.1-4.2)

Sept. 04 Chapter 4 (sections 4.3-4.5)

Sept. 07 Labor Day Holiday

**Sept. 09 Exam #1**

### **UNIT 2: The Stars**

Sept. 11 Chapter 5- Sun Light and Sun Atoms(sections 5.1-5.3)

Sept. 14 Chapter 5 (sections 5.4-5.6)

Sept. 16 **Quiz #4;** Chapter 9-The Family of Stars (sections 9.1, 9.2)

Sept. 18 Chapter 9 (sections 9.3, 9.4)

Sept. 21 Chapter 9 (sections 9.5, 9.6)

Sept. 23 **Quiz #5;** Chapter 10-Structure and Formation of Stars (sections 10.1, 10.2)

Sept. 25 Chapter 10 (sections 10.3, 10.4)

Sept. 28 **Quiz #6;** Chapter 11-The Deaths of Stars (sections 11.1-11.2)

Sept. 30 Chapter 11 (sections 11.3-11.4)

Oct. 02 Chapter 11 (sections 11.5-11.6)

**Oct. 05 Exam #2**

### **UNIT 3: The Universe of Galaxies**

Oct. 07 Chapter 12-The Milky Way Galaxy (section 12.1)

Oct. 09 Chapter 12 (section 12.1)

Oct. 12 Chapter 12 (section 12.2)

Oct. 14 Chapter 12 (sections 12.3, 12.4)

Oct. 16 **Quiz #7;** Chapter 13-Galaxies: Normal and Active (sections 13.1, 13.2)

Oct. 19 Chapter 13 (section 13.3)

Oct. 21 Chapter 13 (section 13.4)

Oct. 23 **Quiz #8;** Chapter 14-Modern Cosmology (section 14.1)

Oct. 26 Chapter 14 (section 14.2)

Oct. 28 Chapter 14 (section 14.3)

Oct. 30 Chapter 14 (section 14.4)

**Nov. 02 Exam #3**

### **Unit 4: The Solar System and Life**

Nov. 04 Chapter 6-The Terrestrial Planets (sections 6.1, 6.2)

Nov. 06 Chapter 6 (sections 6.3, 6.4)

Nov. 09 Chapter 6 (sections 6.5, 6.6)

Nov. 11 **Quiz #9;** Chapter 7-The Outer Solar System (sections 7.1, 7.2)

Nov. 13 Chapter 7 (sections 7.3, 7.4)

Nov. 16 Chapter 7 (sections 7.5, 7.6)

Nov. 18 **Quiz #10;** Chapter 8-Origin of the Solar System and Extrasolar Planets (sections 8.1-8.3)

Nov. 20 Chapter 8 (section 8.4)

Nov. 23 Chapter 8 (sections 8.4, 8.5)

Nov. 25-27 Thanksgiving Holiday

Nov. 30 **Quiz #11;** Chapter 15-Life on Other Worlds (sections 15.1, 15.2)

Dec. 02 Chapter 15 (sections 15.2, 15.3)

**Dec. 04 Final Exam**

**WITHDRAWALS:**

Students who wish to withdraw from the course are responsible for filing the necessary papers with the Registrar's office. Students who fail to file a Adrop@ card will receive an AF@ for the course.

**ACADEMIC HONESTY:**

Cheating (such as copying from or collaborating with another student and use of prepared notes/materials on exams or quizzes without specific approval of the instructor), helping others cheat or other improper conduct such as collusion, duplicity and plagiarism will not be tolerated. Confirmed cases of cheating will result in a zero on a given exam or quiz for the first offense and a grade of F for the course on the second. The incident will also be reported to the Vice Chancellor for Academic Affairs

**DISORDERLY CONDUCT:**

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**STUDENTS WITH DISABILITIES:**

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Any student with a disability requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120, phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926.

**IMPORTANT DATES:****Fall 2015**

August 19 (Wed) - First day of classes

August 21 (Fri) - Last day to register or add classes.

September 07 (Mon) - Labor Day Holiday. Offices and classes closed.

October 28 (Wed) – Last day to drop a regular fall class. Grade will be W.

November 02-13 - Preregistration for Spring 2015 begins.

November 25(Wed) - Classes closed. University offices open.

November 26-27 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.

December 04 (Fri) - Last day of classes.

December 07-11 (Mon-Fri) - Final exam period.

**University of Arkansas at Monticello**  
**School of Mathematical and Natural Sciences**  
**Elements of Geology Lab Syllabus**  
**Fall 2015**

I. INSTRUCTOR: Mrs. Kelley Sayyar

E-mail: [sayyark@uamont.edu](mailto:sayyark@uamont.edu)

Office: Room C-10 Science Center

Office Phone: (870) 460-1365

Office Hours: MWF 10-11:00 a, 2-3:00 p; TH 9:30-10:30 am; T 2:30-3:30 pm or by appointment

II. COURSE: ESCI 1051(ACTS GEOL 1114) – Elements of Geology Lab, 1 credit hour

*NOTE: This course fulfills specific general education requirements. For more information, see the catalog.*

Section 01-Tues/Thur 1:40-2:30 p; Section 02- Mon/Wed 1:10-2:00 p; Section 03- Mon/Wed 12:10-1:00 p

PRE/CO-REQUISITE: ESCI 1063(ACTS GEOL 1114)

III. COURSE DESCRIPTION: Identification of minerals and rocks, Introduction to maps, methodology of absolute and relative dating, Introduction to structural geology

IV. TEXT: Instructor generated handouts.

V. STUDENT LEARNING OUTCOMES: By the time the student completes this course s/he should be able to:

1. name and recognize representatives from each of the mineral families.
2. name and recognize the basic igneous, sedimentary and metamorphic rocks.
3. locate earthquakes on maps and interpret earthquake data.
4. interpret the nature of changes in the Earth's past.

VI. CONTENT OUTLINE: See pages 3 or 4 for specific topics and dates.

1. Identification of minerals.
2. Identification of igneous, sedimentary and metamorphic rocks.
3. Earthquakes and Earth structures
4. Geologic time

VII. TESTING AND GRADING PRACTICES:

1. There will be four, non-comprehensive tests given during the semester. Two at 100 points each and two at 200 points each for a total of 600 points.
2. The fourth exam will be the final.
3. **Students will not be allowed to make up exams without prior permission of the instructor.** Students absent due to University related activities will only be allowed to make up exams with prior permission one week in advance of the missed exam.
4. There will be 100 points possible from lab work/participation.
5. Grades will be determined based on the following scale:  
700 - 627 = A ( 100 - 89.5%)  
626 - 557 = B ( 89.4 - 79.5%)  
556 - 487 = C ( 79.4 - 69.5%)  
486 - 417 = D ( 69.4 - 59.5%)  
416 - 0 = F ( 59.4 - 0%)
6. You will be assigned a code number for the purpose of posting grades. You have the right not to have your grades posted. Please tell me if you wish not to have your grades posted.

VIII. CLASSROOM POLICIES:

1. Attendance is expected. Students missing lecture notes or assignments because of absences (excused or unexcused) are still responsible for the material. All students are required to have a UAM email account.

2. Students are expected to spend sufficient time (at least 5-10 hours per week) outside the classroom in preparation for this course including reading/reviewing instructor generated handouts and studying for exams.
3. Students are asked to refrain from engaging in distractive behavior (using electronic devices such as cell phones, chatting with classmates, sleeping, etc.) during class time. Those students that disregard this request will be asked to leave the room, and will receive no credit for the class period.
4. The following action is prohibited under the UAM Student Conduct Code: **Disorderly Conduct**: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

**IX. ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper.
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor.
  - c. Collaboration with another student during the examination.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
3. Plagiarism: To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students involved will be that the instructor will assign a grade or F for the examination or assignment involved. (See page 40 of the UAM catalog 2013-2015 for further academic code violations)

- X. POLICIES ON STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 120, phone 870-460-1026; TDD 870-460-1626; or FAX 870-460-1926.

**Special Dates:**

October 28 (Wednesday): Last day to drop a regular fall class. Grade will be W.

November 02-13: Preregistration for spring.

November 25-27 (Wed-Fri): Thanksgiving Holiday

December 04 (Friday): Last day of classes.

December 07-11 (Mon-Fri): Final exam period.

**ELEMENTS OF GEOLOGY LAB SCHEDULE**  
**FALL SEMESTER 2015**  
**Monday-Wednesday**

Week 1	Aug 19	Course policies – Introduction to Minerals
Week 2	Aug 24	Minerals
	Aug 26	Minerals
Week 3	Aug 31	Minerals
	Sep 02	Review Minerals
Week 4	Sep 07	No Lab (Labor Day)
	Sep 09	Test over Minerals
Week 5	Sep 14	Rock Cycle - Igneous Rocks
	Sep 16	Sedimentary Rocks
Week 6	Sep 21	Metamorphic Rocks
	Sep 23	Review Rocks
Week 7	Sep 28	Test over Rocks
	Sep 30	Earthquakes
Week 8	Oct 05	Earthquakes
	Oct 07	Earthquakes
Week 9	Oct 12	Earthquakes
	Oct 14	Geological Structures
Week 10	Oct 19	Geological Structures
	Oct 21	No Lab
Week 11	Oct 26	Geological Structures
	Oct 28	Geological Structures
Week 12	Nov 02	Review for Test
	Nov 04	Test over Earthquakes and Geo Structures
Week 13	Nov 09	Ordering of Geological Events
	Nov 11	Ordering of Geological Events
Week 14	Nov 16	Relative Age Dating
	Nov 18	Relative Age Dating
Week 15	Nov 23	Absolute Age Dating
	Nov 25	No Lab (Thanksgiving Holiday)
Week 16	Nov 30	Absolute Age Dating
	Dec 02	Test over Geological Events and Ages

**ELEMENTS OF GEOLOGY LAB SCHEDULE**  
**FALL SEMESTER 2015**  
**Tuesday-Thursday**

Week 1	Aug 20	Course policies – Introduction to Minerals
Week 2	Aug 25	Minerals
	Aug 27	Minerals
Week 3	Sep 01	Minerals
	Sep 03	Review Minerals
Week 4	Sep 08	No Lab (Labor Day-Sep 07)
	Sep 10	Test over Minerals
Week 5	Sep 15	Rock Cycle - Igneous Rocks
	Sep 17	Sedimentary Rocks
Week 6	Sep 22	Metamorphic Rocks
	Sep 24	Review Rocks
Week 7	Sep 29	Test over Rocks
	Oct 01	Earthquakes
Week 8	Oct 06	Earthquakes
	Oct 08	Earthquakes
Week 9	Oct 13	Earthquakes
	Oct 15	Geological Structures
Week 10	Oct 20	Geological Structures
	Oct 22	No Lab
Week 11	Oct 27	Geological Structures
	Oct 29	Geological Structures
Week 12	Nov 03	Review for Test
	Nov 05	Test over Earthquakes and Geo Structures
Week 13	Nov 10	Ordering of Geological Events
	Nov 12	Ordering of Geological Events
Week 14	Nov 17	Relative Age Dating
	Nov 19	Relative Age Dating
Week 15	Nov 24	Absolute Age Dating
	Nov 26	No Lab (Thanksgiving Holiday)
Week 16	Dec 01	Absolute Age Dating
	Dec 03	Test over Geological Events and Ages

**University of Arkansas at Monticello**  
**School of Mathematical and Natural Sciences**  
**Elements of Geology Syllabus**  
**Fall 2015**

- I. INSTRUCTOR: Mrs. Kelley Sayyar  
E-mail: [sayyark@uamont.edu](mailto:sayyark@uamont.edu)  
Office: Room C-10 Science Center  
Office Phone: (870) 460-1365  
Office Hours: MWF 10-11:00 am, 2-3:00 pm; TH 9:30-10:30 am; T 2:30-3:30 pm or by appointment
- II. COURSE: ESCI 1063(ACTS – GEOL 1114) – Elements of Geology, 3 credit hours  
*NOTE: This course fulfills specific general education requirements. For more information, see the catalog.*  
Section 01- Tuesday/Thursday 8:10-9:30 am; Section 02- Tuesday/Thursday 11:10 am- 12:30 pm  
CO-REQUISITE: ENGL 1013
- III. COURSE DESCRIPTION: Materials of the Earth's crust and the processes and agents that affect them; plate tectonics, earthquakes, volcanoes, and Earth history.
- IV. REQUIRED TEXT: Foundations of Earth Science, 5<sup>th</sup>, 6<sup>th</sup> or 7<sup>th</sup> ed. (ISBN: 0321811798) - Lutgens & Tarbuck  
Textbook website: [http://wps.prenhall.com/esm\\_lutgens\\_foundations\\_4](http://wps.prenhall.com/esm_lutgens_foundations_4)
- V. STUDENT LEARNING OUTCOMES: By the time the student completes this course he/she should be able to:
1. understand the methodology of science.
  2. describe how geology, as an earth science discipline, relates to the other natural sciences.
  3. have an understanding of the time scale used in reference to geological processes.
  4. list and discuss the natural resources (rocks, energy, water) that come from the Earth.
  5. describe the Earth's relationship to the Universe.
  6. demonstrate an understanding of the unifying nature of the Plate Tectonic theory.
  7. describe the cycles through which earth materials move.
  8. understand and to be able to explain the occurrence of natural disasters which come in the form of earthquakes, landslides, volcanic eruptions, and floods.
  9. recognize the landforms of the Earth's crust, and be able to speculate as to the processes that formed them and how they evolve.
- VI. CONTENT OUTLINE: See page 4 for more details.
1. Introduction and Earth materials
    - A. The nature of science – Intro Chp.
    - B. The science of geology – Intro Chp.
    - C. Earth Dynamics – Intro Chp.
    - D. The scientific process – Intro Chp.
    - E. Minerals – Chp. 1
    - F. Rocks – Chp. 2
  2. Plate Tectonics
    - A. History and evidence – Chp. 5
    - B. Unifying theory – Chp. 5
  3. Earth's internal processes
    - A. Earthquakes – Chp. 6
    - B. Geologic structures – Chp. 6
    - C. Igneous activity – Chp. 7
  4. Geologic History
    - A. Historical notes – Chp. 8, 15, 16
    - B. Clues to the past – Chp. 8
    - C. Relative and absolute age dating – Chp. 8
    - D. The geologic time scale – Chp. 8
    - E. Arkansas through time – Chp. 8

## VII. TESTING AND GRADING PRACTICES:

1. There will be four (4) 200 point, non-comprehensive tests given during the semester. All of the tests will consist of 50 multiple choice questions worth 4 points each for a total of 200 points each. If you miss a test, there will be one comprehensive makeup at the end of the semester. You will need a SCANTRON and a No. 2 pencil for each test. The use of cell phones or other electronic devices is not allowed during exams.
2. The 4<sup>th</sup> test will be the final. It will be given on the date scheduled by UAM during the finals schedule. **You must take the final on the date scheduled for the class section for which you are enrolled. No exceptions.** Do not make early travel plans.
3. You will also have the option to take the comprehensive makeup to replace one of the grades on the four regularly scheduled tests.
4. There will be approximately 25 in-classroom assignments during the semester. Twenty (20) of these will count toward your final grade. They will be worth four (4) points each (80 points total). You must be present in class to complete these assignments. **No make-ups for missed in-classroom assignments will be given.**
5. Seven online quizzes from the textbook website worth (ten)10 points each will be assigned during the semester for a total of 70 points and 50 additional points will come from various outside assignments (120 points total). See pages 5-6 for the quizzes/outside assignments and due dates. **No late assignments will be accepted.**
6. Grades will be determined based on the following scale:
  - 1000 - 895 = A ( 100 - 89.5%)
  - 894 - 795 = B ( 89.4 - 79.5%)
  - 794 - 695 = C ( 79.4 - 69.5%)
  - 694 - 595 = D ( 69.4 - 59.5%)
  - 594 - 0 = F ( 59.4 - 0%)
7. You will be assigned a code number for the purpose of posting grades. You have the right not to have your grades posted. Please tell me if you wish not to have your grades posted.

## VIII. CLASSROOM POLICIES:

1. Attendance is expected. Students missing lecture notes or assignments because of absences (excused or unexcused) are still responsible for the material. All students are required to have a UAM E-mail account. For issues with E-mail contact the Office of Information Technology: phone (870) 460-1036; M-F 8:00 am- 4:30 pm.
2. Students are expected to spend sufficient time (at least 15-20 hours per week) outside of the classroom in preparation for this course including reading/reviewing textbook material and supplemental handouts; studying for exams and completing outside class assignments.
3. Students are asked to refrain from engaging in distractive behavior (using electronic devices such as cell phones, chatting with classmates, sleeping, etc.) during class time. Those students that disregard this request will be asked to leave the room, and will receive no credit for the class period. If you arrive late, wait until one of the breaks before entering the room. If you need to leave early, please do so during one of the breaks.
4. The following action is prohibited under the UAM Student Conduct Code: **Disorderly Conduct:** Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

## IX. ACADEMIC DISHONESTY:

20. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper.
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor.



c. Collaboration with another student during the examination.

21. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
22. Plagiarism: To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students involved will be that the instructor will assign a grade of "0" for the examination or assignment involved. (See page 40 of the UAM catalog 2013-2015 for further academic code violations)

- X. POLICY ON STUDENTS WITH DISABILITIES: It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 121, phone 870-460-1026; TDD 870-460-1626; or FAX 870-460-1926.

Special Dates:

October 28 (Wednesday): Last day to drop a regular fall class. Grade will be W.

November 02-13: Preregistration for spring.

November 25-27 (Wed-Fri): Thanksgiving Holiday

December 04 (Friday): Last day of classes.

December 07-11 (Mon-Fri): Final exam period.

**ELEMENTS OF GEOLOGY SCHEDULE  
FALL SEMESTER 2015**

Week 1	Aug 20	Course policies and Introductory Chapter
Week 2	Aug 25	Introductory Chapter
	Aug 27	Introductory Chapter
Week 3	Sep 01	Introductory Chapter
	Sep 03	Chapter 1 - Minerals
Week 4	Sep 08	Chapter 1 - Minerals
	Sep 10	Chapter 1 - Minerals
Week 5	Sep 15	Chapter 1 - Minerals
	<b>Sep 17</b>	<b>Test #1</b>
Week 6	Sep 22	Chapter 2 - Rocks
	Sep 24	Chapter 2 - Rocks
Week 7	Sep 29	Chapter 2 - Rocks
	Oct 01	Chapter 2 - Rocks
Week 8	Oct 06	Chapter 5 - Plate Tectonics
	Oct 08	Chapter 5 - Plate Tectonics
Week 9	Oct 13	Chapter 5 - Plate Tectonics
	<b>Oct 15</b>	<b>Test # 2</b>
Week 10	Oct 20	Chapter 6 - Earthquakes
	Oct 22	Chapter 6 - Earthquakes
Week 11	Oct 27	Chapter 6 - Earthquakes
	Oct 29	Chapter 6 - Earthquakes
Week 12	Nov 03	Chapter 7 - Volcanoes
	Nov 05	Chapter 7 - Volcanoes
Week 13	Nov 10	Chapter 7 - Volcanoes
	<b>Nov 12</b>	<b>Test # 3</b>
Week 14	Nov 17	Chapters 15 & 16
	Nov 19	Chapter 8 – Earth History
Week 15	Nov 24	Chapter 8 – Earth History
	Nov 26	Thanksgiving ( <b>no class</b> )
Week 16	Dec 01	Chapter 8 – Earth History
	Dec 03	Chapter 8 – Earth History
Week 17	<b>Dec 07</b>	<b>Final and Make-up Test – Sec. 01 @ 8:00-10:00am</b>
	<b>Dec 11</b>	<b>Final and Make-up Test – Sec. 02 @ 1:30-3:30 pm</b>

Assignment Schedule  
Elements of Geology Fall 2015

Date Assigned	Assignments	Date Due
August 20	Send me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> an e-mail using your UAM e-mail account. In the subject line enter your first and last name. In the message area list the science classes you have taken in high school and college. 10 pts	August 26
August 27	Answer the Questions for Review for the Introductory Chapter distributed in class. E-mail <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> the answers. In the subject line enter “Introductory Review Questions”. 10 pts	September 02
September 03	Write one paragraph each (at least 100 words per paragraph, spell- and grammar-checked) on: 1) The Nature of Science 2) What is meant by a Scientific Theory Refer to the What is Science information distributed in class. E-mail <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> both paragraphs in the same e-mail. In the subject line enter “Science Assignment”. 10 pts	September 09
September 10	Go to Chapter 1 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313028-,00.htm">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313028-,00.htm</a> Click on the “ <b>Multiple Choice</b> ” link on the left side of the page and do the 10 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts <b>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</b>	September 16
September 24	Got to Chapter 2 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313088-,00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313088-,00.html</a> Click on the “ <b>Multiple Choice</b> ” link on the left side of the page and do the 12 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts <b>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</b>	September 30
October 01	Write one paragraph each (at least 100 words per paragraph, spell- and grammar-checked) on: 1) List and explain the evidence presented by Wegener to support his continental drift hypothesis 2) Discuss the two major objections to the continental drift hypothesis. Use Chapter 5 –Plate Tectonics from your textbook as a reference. E-mail <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> both paragraphs in the same e-mail. In the subject line enter “Continental Drift Assignment”. 10 pts	October 07
October 08	Got to Chapter 5 in the textbook website at	October 14

Date Assigned	Assignments	Date Due
	<p><a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313279-.00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313279-.00.html</a></p> <p>Click on the “<b>Multiple Choice</b>” link on the left side of the page and do the 15 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts</p> <p>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</p>	
October 22	<p>Got to Chapter 6 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313343-.00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313343-.00.html</a></p> <p>Click on the “<b>Critical Thinking</b>” link on the left side of the page and do the 10 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a>. 10 pts</p> <p>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</p>	October 28
October 29	<p>Go on-line to the following website link at <a href="http://www.sciencecourseware.com/virtualearthquake/">http://www.sciencecourseware.com/virtualearthquake/</a></p> <p>Do <b>NOT</b> do the NEW and revised version. Go to the bottom of the web page and click on the Execute button. Select one of the earthquake locations and complete the exercise. Print out the certificate of completion and turn that into me in class or e-mail it to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts</p>	November 04
November 05	<p>Got to Chapter 7 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313406-.00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313406-.00.html</a></p> <p>Click on the “<b>Multiple Choice</b>” link on the left side of the page and do the 15 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts</p> <p>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</p>	November 11
November 19	<p>Got to Chapter 8 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313467-.00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313467-.00.html</a></p> <p>Click on the “<b>Multiple Choice</b>” link on the left side of the page and do the 15 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts</p> <p>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</p>	November 25
November 26	<p>Got to Chapter 8 in the textbook website at <a href="http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313467-.00.html">http://wps.prenhall.com/esm_lutgens_foundations_4/0,9084,1313467-.00.html</a></p>	December 02

Date Assigned	Assignments	Date Due
	<p>Click on the <b><i>“Critical Thinking”</i></b> link on the left side of the page and do the 10 questions. Once you have scored 100% submit the results to me <a href="mailto:sayyark@uamont.edu">sayyark@uamont.edu</a> . 10 pts</p> <p>NOTE: there is a mistake in the answers for question 4. The “D. Paleozoic” answer should read “early Cambrian” and match with the “origin of the Earth”.</p> <p><b>On the response form, be sure to fill in your name and e-mail address, my e-mail address, and check the box in front of your e-mail address and my e-mail address. Leave the format as text.</b></p>	

# UAM - SYLLABUS

## School of Mathematical and Natural Sciences

### Earth and Atmosphere - Spring 2015

Sec. 01 – 08:10-09:30 TH

Sec. 02 – 11:10-12:30 TH

- I. INSTRUCTOR: Dr. Jim Edson  
Office: Room 109 - Museum – Phone: 870-460-1966 - email: edson@uamont.edu  
Office Hours: MWF 9:00 – 11:00; 2:00 – 3:00, TT 10:00 – 11:00; 3:00 – 4:00  
Website: <http://www.uamont.edu/FacultyWeb/Edson/>
- II. COURSE: ESCI 1073(ACTS – PHSC 1104) - Earth and Atmosphere, 3 credit hours  
*NOTE: This course fulfills specific general education requirements. For more information, see the catalog.*  
*PREREQUISITES: None*
- III. COURSE DESCRIPTION: Survey of the nature of the Earth's hydrosphere in terms of composition, origin, and physical processes; weather, climate, oceans, streams, groundwater, and glaciers.
- IV. TEXT: Foundations of Earth Science, 5<sup>th</sup>, 6<sup>th</sup> or 7<sup>th</sup> ed. (ISBN: 0321811798) - Lutgens & Tarbuck-Required  
Textbook website: [http://wps.prenhall.com/esm\\_lutgens\\_foundations\\_4e](http://wps.prenhall.com/esm_lutgens_foundations_4e)
- V. STUDENT LEARNING OUTCOMES: By the time the student completes this course s/he should be able to:
1. understand the methodologies of science.
  2. describe how earth science relates to the other natural sciences.
  3. develop an appreciation for the role that water, wind and ice have in the development of landscapes.
  4. have an understanding of the extent and boundaries of the world's oceans.
  5. describe the major features of the continental margin, ocean basin floor, and mid-ocean ridges.
  6. list the factors that influence ocean currents.
  7. explain the difference between weather and climate.
  8. discuss the formation and forms of precipitation.
  9. describe the idealized global patterns of pressure, wind and atmospheric circulation.
- VI. CONTENT OUTLINE: See page 3 for more details.

#### 1. Introduction and Landscape Development

- A. The nature of science – Intro Chp.
- B. Environment and resources – Intro Chp.
- C. The scientific process – Intro Chp.
- D. Mass wasting – Chp. 3

- E. Hydrologic cycle – Chp. 3
- F. Surface water and stream flow – Chp. 3
- G. Ground water and artesian systems – Chp. 3
- H. Glaciers and deserts – Chp. 4

#### 2. The Global Ocean

- A. Nature of the ocean basins – Chp. 9

- B. Shoreline development – Chp. 10

#### 3. Nature of the Atmosphere

- A. Weather vs. Climate – Chp. 11
- B. Temperature – Chp. 11

- C. Seasons – Chp. 11
- D. Clouds and precipitation – Chp. 12

#### 4. Motion of the Atmosphere

- A. Pressure centers – Chp. 13
- B. Middle latitude winds – Chp. 13
- C. Local winds and air masses – Chp. 14
- D. Fronts and severe weather – Chp. 14

## VII. TESTING AND GRADING PRACTICES:

1. There will be (4) 200 point, non-comprehensive tests given during the semester. All of the tests will consist of 50 multiple choice questions worth 4 points each for a total of 200 points. If you miss a test, there will be one comprehensive makeup at the end of the semester. You will need a Scantron and a pencil for each test.
2. The 4<sup>th</sup> test will be the final. It will be given on the date scheduled by UAM. You must take the final on the date scheduled for the class section for which you are enrolled. No exceptions. Do not make early travel plans.
3. You will also have the option to take the comprehensive makeup to replace one of the grades on the 4 regularly scheduled tests.
4. There will be 20 daily assignments worth four (4) points each (80 points total). No make-ups.
5. Eight online quizzes from the textbook website worth 10 points each will be assigned during the semester for a total of 80 points. 40 additional points will come from various outside assignments that will be announced in class. No late assignments will be accepted.
6. Grades will be determined based on the following scale:
  - 1000 - 895 = A ( 100 - 89.5%)
  - 894 - 795 = B ( 89.4 - 79.5%)
  - 794 - 695 = C ( 79.4 - 69.5%)
  - 694 - 595 = D ( 69.4 - 59.5%)
  - 594 - 0 = F ( 59.4 - 0%)
7. You will be assigned a code number for the purpose of posting grades. You have the right not to have your grades posted. Please tell me if you wish not to have your grades posted.

VIII. CLASSROOM POLICIES: Attendance is expected. Students missing lecture notes or assignments because of absences (excused or unexcused) are still responsible for the material. All students are required to have an UAM email account. The following action is prohibited under the UAM Student Conduct Code: **Disorderly Conduct**: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

## IX. ACADEMIC DISHONESTY:

23. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper.
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor.
  - c. Collaboration with another student during the examination.
24. Collusion: Collusion is defined as obtaining from another party, with out specific approval in advance by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
25. Plagiarism: To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students

involved will be that the instructor will assign a grade of “0” for the examination or assignment involved. (See page 42 of the UAM catalog 2011-13 for further academic code violations)

- X. **POLICY ON STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 121, phone 870-460-1026; TDD 870-460-1626; or FAX 870-460-1926.



## **EARTH AND ATMOSPHERE SCHEDULE**

Week 1	Jan 08	Course policies and Introductory Chapter
Week 2	Jan 13	Introductory Chapter – The Nature of Earth Science
	Jan 15	Introductory Chapter – The Nature of Earth Science
Week 3	Jan 20	Introductory Chapter – The Nature of Earth Science
	Jan 22	Chapter 3 – Landscapes Fashioned by Water
Week 4	Jan 27	Chapter 3 – Landscapes Fashioned by Water
	Jan 29	Chapter 3 – Landscapes Fashioned by Water
Week 5	Feb 03	Chapter 3 – Landscapes Fashioned by Water
	Feb 05	Chapter 3 – Landscapes Fashioned by Water
Week 6	Feb 10	Chapter 3 – Landscapes Fashioned by Water
	<b>Feb 12</b>	<b>Test #1</b>
Week 7	Feb 17	Chapter 4 – Glacial and Arid Landscapes
	Feb 19	Chapter 4 – Glacial and Arid Landscapes
Week 8	Feb 24	Chapter 4 – Glacial and Arid Landscapes
	Feb 26	Chapter 9 – Geography and Composition of Oceans
Week 9	Mar 03	Chapter 9 – Geography and Composition of Oceans
	Mar 05	Chapter 10 – Shorelines Processes
Week 10	Mar 10	Chapter 10 – Shorelines Processes
	<b>Mar 12</b>	<b>Test #2</b>
Week 11	Mar 17	Chapter 11 – Composition of the Atmosphere
	Mar 19	Chapter 11 – Earth-Sun Relationships
Week 12	Mar 24	<b>No Class – Spring Break</b>
	Mar 26	<b>No Class – Spring Break</b>
Week 13	Mar 31	Chapter 11 – Heating of the Atmosphere
	Apr 02	Chapter 12 – Moisture, Clouds and Precipitation
Week 14	Apr 07	Chapter 12 – Moisture, Clouds and Precipitation
	<b>Apr 09</b>	<b>Test #3</b>
Week 15	Apr 14	Chapter 13 – The Atmosphere in Motion
	Apr 16	Chapter 13 – The Atmosphere in Motion
Week 16	Apr 21	Chapter 14 – Weather Patterns and Severe Weather
	Apr 23	Chapter 14 – Weather Patterns and Severe Weather
Week 17	Apr 28	Chapter 14 – Weather Patterns and Severe Weather
<b>Wednesday</b>	<b>Apr 29</b>	<b>Final and Make-up Test – Sect. 02@ 1:30</b>

Thursday	Apr 30	Final and Make-up Test – Sect. 01 @ 08:00
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**UAM - SYLLABUS**  
**School of Mathematical and Natural Sciences**  
**Earth and Atmosphere Lab – Spring 2015**

Sec. 01: 01:40 – 02:30 one hour on Tue and Thu  
Sec. 02: 01:10 – 02:00 one hour on Mon and Wed  
Sec. 03: 12:10 – 01:00 one hour on Mon and Wed

- I. INSTRUCTOR: Dr. Jim Edson  
Office: Room 109 – Museum  
Phone: 460-1966 - FAX: 870-460-1316 - email: [edson@uamont.edu](mailto:edson@uamont.edu)  
Office Hours: MWF 9:00 – 11:00; 2:00 – 3:00, TT 10:00 – 11:00; 3:00 – 4:00  
Website: <http://www.uamont.edu/FacultyWeb/Edson/>
- II. COURSE: ESCI 1081(ACTS – PHSC 1104) - Earth and Atmosphere Lab, 1 credit hour  
*NOTE: This course fulfills specific general education requirements. For more information, see the catalog. Pre/Co requisite: ESCI 1073*
- III. COURSE DESCRIPTION: Exercises involving interpretation of oceanic data, methodology of collecting weather data, stream and groundwater flow problems.
- IV. TEXT: Instructor generated handouts.
- V. STUDENT LEARNING OUTCOMES: By the time the student completes this course s/he should be able to:
1. read and construct topographic maps.
  2. name and recognize the basic oceanic processes.
  3. interpret the nature of changes in the Earth's climate, weather and seasons.
  4. access data from weather instruments.
  5. read and construct weather maps.
- VI. CONTENT OUTLINE: See attached schedules for specific topics and dates.
1. Topographic maps and the Public Land Survey System.
  2. Surface water and groundwater.
  3. Weather and weather patterns.
  4. Oceans and ocean basins.
- VII. TESTING AND GRADING PRACTICES:
1. There will be (3) 200 point, non-comprehensive tests given during the semester.
  2. The third exam will be the final.
  3. **Make-up exams will only be permitted for verifiable, excused absences.**
  4. There will be 100 points possible from lab work.
  5. Grades will be determined based on the following scale:

700 - 627 = A ( 100 - 89.5%)

626 - 557	=	B	( 89.4 - 79.5%)
556 - 487	=	C	( 79.4 - 69.5%)
486 - 417	=	D	( 69.4 - 59.5%)
416 - 0	=	F	( 59.4 - 0%)

6. You will be assigned a code number for the purpose of posting grades. You have the right not to have your grades posted. Please tell me if you wish not to have your grades posted.

VIII. CLASSROOM POLICIES: Attendance is expected. Students missing lecture notes or assignments because of absences (excused or unexcused) are still responsible for the material. **Please do not bring children, friends or pets to class without prior approval.** The following action is prohibited under the UAM Student Conduct Code: **Disorderly Conduct:** Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

IX. ACADEMIC DISHONESTY:

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper.
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor.
  - c. Collaboration with another student during the examination.
2. Collusion: Collusion is defined as obtaining from another party, with out specific approval in advance by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name in on the work submitted.
3. Plagiarism: To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students involved will be that the instructor will assign a grade of F for the examination or assignment involved. (See page 60 of the UAM catalog 2009-11 for further academic code violations)

X. POLICIES ON STUDENTS WITH DISABILITIES: It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 121, phone 870-460-1026; TDD 870-460-1626; or FAX 870-460-1926.

# EARTH AND ATMOSPHERE LAB SCHEDULE

## Monday – Wednesday Sections

### SPRING SEMESTER 2015

Week 1	Jan 07	Orientation and introduction to maps
Week 2	Jan 12	Topographic Maps
	Jan 14	Topographic Maps
Week 3	Jan 19	No Lab
	Jan 21	Topographic Maps
Week 4	Jan 26	Topographic Maps
	Jan 28	Topographic Maps
Week 5	Feb 02	Topographic Maps
	Feb 04	Review
Week 6	Feb 09	Test #1
	Feb 11	Arkansas Groundwater Aquifer
Week 7	Feb 16	Nebraska Groundwater Aquifer
	Feb 18	Nebraska Groundwater Aquifer
Week 8	Feb 23	Characteristics of Ocean Water
	Feb 25	Characteristics of Ocean Water
Week 9	Mar 02	Characteristics of Wave Action
	Mar 04	Characteristics of Wave Action
Week 10	Mar 09	Review
	Mar 11	Test #2
Week 11	Mar 16	Earth-Sun Relationships
	Mar 18	Earth-Sun Relationships
Week 12	Mar 23	No Class – Spring Break
	Mar 25	No Class – Spring Break
Week 13	Mar 30	Earth-Sun Relationships
	Apr 01	Earth-Sun Relationships
Week 14	Apr 06	Atmospheric Moisture
	Apr 08	Atmospheric Moisture
Week 15	Apr 13	Atmospheric Moisture
	Apr 15	Atmospheric Moisture
Week 16	Apr 20	Atmospheric Moisture

	Apr 22	Review
Week 17	Apr 27	Test #3 – Final

# EARTH AND ATMOSPHERE LAB SCHEDULE

## Tuesday – Thursday Section

### SPRING SEMESTER 2015

Week 1	Jan 08	Orientation and introduction to maps
Week 2	Jan 13	Topographic Maps
	Jan 15	Topographic Maps
Week 3	Jan 20	No Lab
	Jan 22	Topographic Maps
Week 4	Jan 27	Topographic Maps
	Jan 29	Topographic Maps
Week 5	Feb 03	Topographic Maps
	Feb 05	Review
Week 6	Feb 10	Test #1
	Feb 12	Arkansas Groundwater Aquifer
Week 7	Feb 17	Arkansas Groundwater Aquifer
	Feb 19	Nebraska Groundwater Aquifer
Week 8	Feb 24	Characteristics of Ocean Water
	Feb 26	Characteristics of Ocean Water
Week 9	Mar 03	Characteristics of Wave Action
	Mar 05	Characteristics of Wave Action
Week 10	Mar 10	Review
	Mar 12	Test #2
Week 11	Mar 17	Earth-Sun Relationships
	Mar 19	Earth-Sun Relationships
Week 12	Mar 24	No Lab – Spring Break
	Mar 26	No Lab – Spring Break
Week 13	Mar 31	Earth-Sun Relationships
	Apr 02	Earth-Sun Relationships
Week 14	Apr 07	Atmospheric Moisture
	Apr 09	Atmospheric Moisture
Week 15	Apr 14	Atmospheric Moisture
	Apr 16	Atmospheric Moisture
Week 16	Apr 21	Atmospheric Moisture

	Apr 23	Review
Week 17	Apr 28	Test #3



**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES**  
**ONLINE METEOROLOGY LAB COURSE SYLLABUS**  
**Fall 2015**

**Course Title:** Meteorology Lab ESCI 1131

**Co-requisite:** ESCI 1123 Meteorology lecture or previously, successfully passed that course.

**Credit Hours:** 1

**Instructor:** Mrs. Kelley Sayyar

**E-mail:** [sayyark@uamont.edu](mailto:sayyark@uamont.edu)

**Office:** Room C-10 Science Center

**Office Phone:** (870)460-1365

**Office Hours:** MWF 10-11:00 am and T 2-3:00 pm (on-line/on-campus) or by appointment

**MODE OF INSTRUCTION:** Modified On-line instruction utilizing Blackboard and the American Meteorological Society (AMS) website. All assignments will be submitted to Blackboard. All exams will be taken on the UAM campus.

**COURSE DESCRIPTION AND OBJECTIVES:**

The overall goal of this course is to introduce the vast subject of meteorology in a manner, and with a philosophy, that will show that meteorology is an integrated discipline involving processes and response to those processes known as products.

By the time the student completes this course he/she should be able to:

1. Interpret the nature of changes in the Earth's climate, weather and seasons.
2. Access data from weather instruments.
3. Read and construct weather maps.

**REQUIRED COURSE TEXTS:** Available from the UAM bookstore website:  
<http://www.uamont.edu/student.htm> or the AMS bookstore website:  
[www.ametsoc.org/amsedu/bookstorelink/index.html](http://www.ametsoc.org/amsedu/bookstorelink/index.html)

1. eInvestigations Manual 2015-2016  
ISBN: 194003342X (Lab book only – select this option if you are not taking the lecture)  
or
2. eInvestigations Manual 2015-2016 and Weather Studies: Introduction to Atmospheric Science, 6<sup>th</sup> ed. – eText  
ISBN: 1940033438 (Select this package option if you are taking the lecture class and lab together)

**MINIMUM TECHNOLOGY REQUIREMENTS:**

- Access to a working computer with Internet capability is required.
- Operating System: Windows 2000, XP, Vista or Macintosh OS X
- Hardware: 256 MB of RAM, 1 GB free hard disk space

- Microsoft Office 2007, Adobe Reader 9 recommended
- Internet Connection: Broadband connection such as RoadRunner, Cable, DSL or Satellite Internet required.
- Be sure you have an alternate location for conducting your class work. **Failure of your computer is not an excuse for missing assignments.** Suggestions: Campus Computer Labs (Computer section of Taylor Library : <http://www.uamont.edu/library/> or Science Center Computer Lab), Parent's, Friend's or Relative's home computers.

#### **UAM TECHNICAL SUPPORT INFORMATION:**

- **Issues with Blackboard:**  
Contact Office of Academic Computing: phone (870)460-1663. The Office of Academic Computing is located in the Taylor Library and Technology Center, 2nd floor, Room 210. Open Monday –Friday 8:00 am -4:30 pm  
**Help Desk at [fendley@uamont.edu](mailto:fendley@uamont.edu) or phone (870)460-1663.**
- **Issues with usernames, passwords, or UAM Email:**  
Contact Office of Information Technology: phone 870-460-1036.  
Open Monday-Friday 8:00am-4:30 pm
- The Student Handbook for Distance Education is available at the following link:  
<http://www.uamont.edu/AcademicComputing/>

#### **COURSE PROCEDURES AND EXPECTATIONS:**

**1. Computer Skills:** You must know how to use and be comfortable with a computer and the internet before you attempt this course. All of our course materials are delivered through various web sites and downloaded textbooks. Use of a computer to obtain and read the material is essential to your success in the course. You should be comfortable with and familiar with the following:

- a. Blackboard; Web browsers such as MS Internet Explorer, Mozilla, etc.
- b. Sending and receiving e-mail using your UAM email account.
- c. Word processing program, such as MS Word, and PDF files.
- d. Adobe Digital Editions Reader

#### **2. Submitting assignments:**

a. For each chapter assigned the Weather Studies Manual Investigations and Applications parts A and B located from the purchased eInvestigations Manual are to be answered on the Investigation Answer Forms A and B that are available only from the AMS Weather Website <http://www.ametsoc.org/amsedu/login.cfm> (alternate website <http://amsedu.ametsoc.org/amsedu/login.cfm> ) There are two AMS websites so be sure to bookmark both and you will be issued a Login ID and password when the manual materials are purchased. In

addition, the supplemental online *Current Weather Studies* (CWS) questions are assigned and located only on the AMS Weather Website.

**b.** The A and B answer sheets and online Current Weather Studies investigation questions are posted on the AMS website. Each “A” investigation will be posted on Mondays by noon Eastern Time and the “B” investigation will be posted on Wednesdays. CWS answer forms A and B also follow this schedule of posting on the AMS website. (See assignment schedule below)

**c.** Make a copy of the answer sheets in order to edit the documents with your answer selections. On the answer forms, **delete** the incorrect answer(s) on the multiple choice questions.

**d.** These two answer sheets may be submitted as PDF documents sent to Blackboard to your instructor by 11:59 pm CDT on the due dates listed below in the assignment schedule. All submissions should be titled with your last and first name and course title (e.g., Smith, Joe ESCI 1131). **No late assignments will be accepted for any reason.**

**e.** Drawings do not need to be sent.

**f. Please Note: You may only submit your assignment to Blackboard one time. So please be sure your submission is your final version of the assignment.**

**g.** Students are expected to spend sufficient time (at least 10-15 hours per week) preparing for this course by reading/reviewing the investigation manual material; answering the assigned manual questions and Current Weather Studies questions; and preparing for exams.

**3. Assignment Schedule:** Assignments are due by 11:59 pm CDT on the due dates listed below. **No late assignments will be accepted for any reason.**

**There will be an orientation meeting on Wednesday, August 27<sup>th</sup> at 5:00 pm in room C-18 of the UAM Science Center.**

**Fall 2015 Assignment Schedule AMS Weather Studies**

<b>Week</b>	<b>Current Weather Studies A (Posted about Monday noon ET)</b>	<b>Current Weather Studies B (Posted about Wednesday noon ET)</b>	<b>Due Date</b>
Preview	Aug 24 - Surface Air Pressure Patterns	Aug 26 - Air Pressure and Wind - <b>Orientation meeting August 27<sup>th</sup></b>	Preview
1	Aug 31 - Surface Air Pressure Patterns	Sep 02 - Air Pressure and Wind	Sept 06
2	Sep 07 - Surface Weather Maps	Sep 09 - The Atmosphere in the Vertical	Sept 13
3	Sep 14 - Weather Satellite Imagery	Sep 16 - Sunlight Throughout the Year	Sept 20
4	Sep 21 - Temperature and Air Mass Advection	Sep 23 - Heating Degree-Days and Wind Chill	Sept 27
5	Sep 28 - Air Pressure Change	Sep 30 - Atmospheric Pressure in the Vertical <b>Exam #1 – October 1<sup>st</sup></b>	Oct 04
Fall Break	Oct 05 - AMS Fall Break	AMS Fall Break (No Assignment due)	-----
6	Oct 12 - Clouds, Temperature, and Air Pressure	Oct 14 - Rising and Sinking Air	Oct 18

7	Oct 19 - Precipitation Patterns	Oct 21 - Doppler Radar	Oct 25
8	Oct 26 - Surface Weather Maps and Forces	Oct 28 - Upper-Air Weather Maps	Nov 01
9	Nov 02 - Westerlies and the Jet Stream	Nov 04 - El Niño - Exam #2 – November 5 <sup>th</sup>	Nov 08
10	Nov 09 - The Extra-Tropical Cyclone	Nov 11 - Extra-Tropical Cyclone Track Weather	Nov 15
11	Nov 16 - Thunderstorms	Nov 18 - Tornadoes	Nov 22
Holiday	Nov 23 - Thanksgiving Holiday	Thanksgiving Holiday (No Assignment due)	-----
12	Nov 30 - Hurricanes	Dec 02 - Hurricane Wind Speeds and Pressure Changes	Dec 06
	Dec 07-	Exam #3 – December 10 <sup>th</sup>	

#### GRADES AND ASSESSMENTS:

1. There will be three (3) 200-point, non-comprehensive tests given during the semester for a total of 600 points. The third exam will be the final.

2. All tests will be taken on-campus at UAM. You must bring a valid UAM ID for admission. The test dates are listed in the schedule above. They will be at 5:00 pm in room C-18 in the Science Center.

3. During the semester you will attempt twelve (12) A Investigations/CWS and twelve (12) B Investigations/CWS assignments for a total of 24 lab investigations. Each investigation will be worth 10 points. Scores from the 10 best "A" and the 10 best "B" investigations attempted will be counted for a possible 200 points.

4. Grades will be determined based on the following scale at the end of the semester:

A	B	C	D	F
89.5-100% (716-800 pts)	79.5-89.4% (636-715 pts)	69.5-79.4% (556-635 pts)	59.5-69.4% (476-555 pts)	0-59.4% (0-475 pts)

5. Scores will be posted on Blackboard under the Contents heading-Grades folder. A code number will be assigned to you. You have the right not to have your grades posted. Please let the instructor know if you do not wish to have your grades posted.

#### INSTRUCTOR FEEDBACK SCHEDULE:

Typically, you will receive an e-mail within 24 hours or less. If you do not receive a return message, please send your e-mail again. **Don't wait days for a response.**

#### ACADEMIC DISHONESTY:

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- Copying from another student's paper (assignments or examinations);
- Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
- Collaboration with another student during the examination;

- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
- e. Substituting for another person during an examination or allowing such substitutions for oneself.
- 2. Collusion: Collusion is defined as obtaining from another party, without specific advance approval by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
- 3. Duplicity: To offer for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
- 4. Plagiarism: To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgment the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students involved will be that the instructor will assign a grade of F for the examination or assignment involved. A second offense will result in a grade of F for the course and the Provost of Academic Affairs will be notified. (See page 38 of the UAM catalog 2015-2016 for further academic code violations.)

**POLICY ON STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 121, phone 870-460-1026; TDD 870-460-1726; or FAX 870-460-1926.

**DATES TO REMEMBER:  
FALL 2015 CALENDAR**

August 19 (Wed) - First day of classes  
August 21 (Fri) - Last day to register or add classes.  
September 07 (Mon) - Labor Day Holiday. Offices and classes closed.  
October 28 (Wed) – Last day to drop a regular fall class. Grade will be W.  
November 02-13 - Preregistration for Spring 2015 begins.  
November 25(Wed) - Classes closed. University offices open.  
November 26-27 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.  
December 04 (Fri) - Last day of classes.  
December 07-11 (Mon-Fri) - Final exam period.

**DISCLAIMER:** This syllabus is a tentative guide and the instructor reserves the right to make changes.

**UNIVERSITY OF ARKANSAS AT MONTICELLO  
SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES  
ONLINE METEOROLOGY LECTURE COURSE SYLLABUS  
Fall 2015**

**Course Title:** Meteorology ESCI 1123

**Credit Hours:** 3

**This course fulfills specific general education requirements. For more information, consult the current academic catalogue.**

**Instructor:** Mrs. Kelley Sayyar

**E-mail:** sayyark@uamont.edu

**Office:** Room C-10 Science Center

**Office Phone:** (870)460-1365

**Office Hours:** MWF 10-11:00 am and T 2-3:00 pm (on-line/on-campus) or by appointment

**MODE OF INSTRUCTION:** Modified On-line instruction utilizing Blackboard and the American Meteorological Society (AMS) website. All assignments will be submitted to Blackboard. All exams will be taken on the UAM campus.

**REQUIRED COURSE TEXTS:** Available from the UAM bookstore website:

<http://www.uamont.edu/student.htm> or the AMS bookstore website:

[www.ametsoc.org/amsedu/bookstorelink/index.html](http://www.ametsoc.org/amsedu/bookstorelink/index.html)

1. Weather Studies: Introduction to Atmospheric Science, 6<sup>th</sup> ed. – e Text  
ISBN: 1940033411 (Textbook only – select this option if you are not taking the lab)

or

2. e Investigations Manual 2015-2016 and Weather Studies: Introduction to Atmospheric Science, 6<sup>th</sup> ed. –e Text ISBN: 1940033438 (Select this package option if you are taking the lecture class and lab together)

**COURSE DESCRIPTION AND OBJECTIVES:**

The overall goal of this course is to introduce the vast subject of meteorology in a manner, and with a philosophy, that will show that meteorology is an integrated discipline involving processes and response to those processes known as products.

By the time the student completes this course he/she should be able to:

1. understand the methodologies of science.
2. describe how meteorology relates to the other natural sciences.
3. develop an appreciation for the role that water, wind and ice have in Earth's system.
4. explain the difference between weather and climate.
5. discuss the formation and forms of precipitation.
6. describe the idealized global patterns of pressure, wind and atmospheric circulation.

## TOPICS TO BE COVERED:

- Chapter 1 Monitoring Weather
- Chapter 2 Atmosphere: Origin, Composition, and Structure
- Chapter 3 Solar and Terrestrial Radiation
- Chapter 4 Heat, Temperature, and Atmospheric Circulation
- Chapter 5 Air Pressure
- Chapter 6 Humidity, Saturation, and Stability
- Chapter 7 Clouds, Precipitation, and Weather Radar
- Chapter 8 Wind and Weather
- Chapter 9 Atmosphere and Planetary Circulation
- Chapter 10 Weather Systems of Middle Latitudes
- Chapter 11 Thunderstorms and Tornadoes
- Chapter 12 Tropical Weather Systems

## MINIMUM TECHNOLOGY REQUIREMENTS:

- Access to a working computer with Internet capability is required.
- Operating System: Windows 2000, XP, Vista or Macintosh OS X
- Hardware: 256 MB of RAM, 1 GB free hard disk space
- Microsoft Office 2007, Adobe Reader 9 recommended
- Internet Connection: Broadband connection such as RoadRunner, Cable, DSL or Satellite Internet required.
- Be sure you have an alternate location for conducting your class work. **Failure of your computer is not an excuse for missing assignments.** Suggestions: Campus Computer Labs (Computer section of Taylor Library : <http://www.uamont.edu/library/> or Science Center Computer Lab), Parent's, Friend's or Relative's home computers.

## UAM TECHNICAL SUPPORT INFORMATION:

- **Issues with Blackboard:**  
Contact Office of Academic Computing: phone (870)460-1663. The Office of Academic Computing is located in the Taylor Library and Technology Center, 2nd floor, Room 210. Open Monday –Friday 8:00 am -4:30 pm  
**Help Desk** at [fendley@uamont.edu](mailto:fendley@uamont.edu) or phone (870)460-1663.
- **Issues with usernames, passwords, or UAM Email:**  
Contact Office of Information Technology: phone 870-460-1036.  
Open Monday-Friday 8:00am-4:30 pm
- The Student Handbook for Distance Education is available at the following link:  
<http://www.uamont.edu/AcademicComputing/>

## COURSE PROCEDURES AND EXPECTATIONS:

1. **Computer Skills:** You must know how to use and be comfortable with a computer and the internet

before you attempt this course. All of our course materials are delivered through various web sites. Use of a computer to obtain and read the material is essential to your success in the course. You should be comfortable with and familiar with the following:

- a. Blackboard ; Web browsers such as MS Internet Explorer, Mozilla, etc.
- b. Sending and receiving e-mail using your UAM email account.
- c. Word processing program, such as MS Word, and PDF files.

**2. Submitting Assignments:**

- a. Assignments consist of 10 Review Questions for each chapter and are located on Blackboard under the Contents heading-Review Questions folder.
- b. For each chapter download the 10 Review Questions to a word processing document and provide thorough short answers.
- c. Please include the questions with your answers in your document; use upper- and lower- case type; use 12 point size type and Times New Roman, Arial, or Courier fonts; use spell check and proof read your work.
- d. The assignments may be submitted as PDF documents sent to Blackboard to your instructor by 11:59 pm CDT on the due dates listed below in the assignment schedule. All submissions should be titled with your last and first name and course title (e.g., Smith, Joe ESCI 1123). **No late assignments will be accepted for any reason.**
- e. **Please Note: You may only submit your assignment to Blackboard one time. So please be sure your submission is your final version of the assignment.**
- f. Students are expected to spend sufficient time (at least 10-15 hours per week) preparing for this course by reading/reviewing the textbook material and answering the assigned review questions; and preparing for exams by utilizing the practice tests made available on Blackboard.

**3. Assignment Schedule:** The 10 Review Questions for each chapter are located on Blackboard so that you can download them. Assignments are due by 11:59 pm CDT on the due dates listed below. **No late assignments will be accepted for any reason.**

**Note: There will be an orientation meeting on Wednesday, August 27<sup>th</sup> at 5:00 pm in room C-18 of the UAM Science Center.**

Week of	Assignments	Assignment Due
Aug 24	Chapter 1: Preview <b>Orientation meeting on Wednesday, August 27<sup>th</sup></b>	-----
Aug 31	Chapter 1: Monitoring Weather	<b>Sept 06</b>
Sept 07	Chapter 2: Atmosphere: Origin, Composition, and Structure	<b>Sept 13</b>
Sept 14	Chapter 3: Solar and Terrestrial Radiation	<b>Sept 20</b>
Sept 21	Chapter 4: Heat, Temperature, and Atmospheric Circulation	<b>Sept 27</b>
Sept 28	Chapter 5: Air Pressure <b>Exam # 1- October 1<sup>st</sup></b>	<b>Oct 04</b>



Oct 05	<b>AMS Fall Break (No Assignment due)</b>	-----
Oct 12	Chapter 6: Humidity, Saturation, and Stability	<b>Oct 18</b>
Oct 19	Chapter 7: Clouds, Precipitation and Weather Radar	<b>Oct 25</b>
Oct 26	Chapter 8: Wind and Weather	<b>Nov 01</b>
Nov 02	Chapter 9: Atmosphere's Planetary Circulation <b>Exam # 2- November 5<sup>th</sup></b>	<b>Nov 08</b>
Nov 09	Chapter 10: Weather Systems of Middle Latitudes	<b>Nov 15</b>
Nov 16	Chapter 11: Thunderstorms and Tornadoes	<b>Nov 22</b>
Nov 23	<b>Thanksgiving Break (No Assignment due)</b>	-----
Nov 30	Chapter 12: Tropical Weather Systems	<b>Dec 06</b>
Dec 07	<b>Final Exam #3- December 10<sup>th</sup></b>	

#### GRADES AND EVALUATION:

1. There will be three (3) 250 point exams given during the semester. All of the exams will consist of 50 multiple choice questions. You will need a pencil for each test. Practice Tests are available as a useful study resource for each chapter and are located on Blackboard under the Contents heading-Practice Tests folder.
2. **All exams will be taken on-campus. You must bring your valid UAM ID for admission.** The exam dates are listed in the schedule above. They will be at 5:00 pm in room C-18 of the UAM Science Center.
3. There will be 12 assignments consisting of 10 short-answer review questions based on the reading of each chapter of the text. The 10 Review Questions for each chapter are located on the Blackboard. These will be assigned and due on the dates given in the schedule above. Each assignment will be worth 25 points. The ten best scores will be counted for a possible total of 250 points. See the information above on how to submit them.
4. Maximum number of points (Review Questions + Exams) is 1000. Grades are based on the following scale at the end of the semester:

A	B	C	D	F
<b>89.5-100%</b> <b>(895-1000 pts)</b>	<b>79.5-89.4%</b> <b>(795-894 pts)</b>	<b>69.5-79.4%</b> <b>(695-794 pts)</b>	<b>59.5-69.4%</b> <b>(595-694 pts)</b>	<b>0-59.4%</b> <b>(0-594 pts)</b>

5. Scores will be posted on Blackboard under the Contents heading-Grades folder. A code number will

be assigned to you. You have the right not to have your grades posted. Please let the instructor know if you do not wish to have your grades posted.

**INSTRUCTOR FEEDBACK SCHEDULE:**

Typically, you will receive an e-mail within 24 hours or less. If you do not receive a return message, please send your e-mail again. **Don't wait days for a response.**

**ACADEMIC DISHONESTY:**

**1. Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- a. Copying from another student's paper (assignments or examinations);
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
- 2. Collusion:** Collusion is defined as obtaining from another party, without specific advance approval by the instructor, assistance in the production of work offered for credit, to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**3. Duplicity:** To offer for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**4. Plagiarism:** To adopt and reproduce as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgment the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student or students involved will be that the instructor will assign a grade of F for the examination or assignment involved. A second offense will result in a grade of F for the course and the Provost of Academic Affairs will be notified. (See page 38 of the UAM catalog 2015-2016 for further academic code violations.)

**POLICY ON STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas-Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall, Room 121, phone 870-460-1026; TDD 870-460-1726; or FAX 870-460-1926.

**DATES TO REMEMBER:**

**FALL 2015 CALENDAR**

August 19 (Wed) - First day of classes

August 21 (Fri) - Last day to register or add classes.

September 07 (Mon) - Labor Day Holiday. Offices and classes closed.

October 28 (Wed) – Last day to drop a regular fall class. Grade will be W.

November 02-13 - Preregistration for Spring 2015 begins.

November 25(Wed) - Classes closed. University offices open.

November 26-27 (Thurs-Fri) - Thanksgiving Holiday. Offices and classes closed.

December 04 (Fri) - Last day of classes.

December 07-11 (Mon-Fri) - Final exam period.

**DISCLAIMER:** This syllabus is a tentative guide and the instructor reserves the right to make changes.

# SYLLABUS

## School of Mathematical and Natural Sciences

- I. COURSE: ESCI 358V – Natural History
- II. TEXT: Instructor generated handouts
- III. INSTRUCTOR: Dr. Jim Edson
- IV. COURSE FORMAT: Field Trip to Yellowstone NP
- V. COURSE GOALS: The overall goal of this course is to introduce the broad concept of the subject of science teaching. We will examine the abiotic parameters (rocks, climate and glacial activity) and see what effect they have on the biotic component of Yellowstone. Philosopher-historian Will Durant once said, “Civilization exists by geological consent, subject to change without notice,” I would like to modify this quote by replacing the word "civilization" with the word "life" to remind us of the remarkable circumstances that make this planet congenial to life as we know it.
- VI. OBJECTIVES: By the time the student completes this course he/she should be able to:
  1. identify the materials that make up the Earth.
  2. describe the cycles through which abiotic and biotic materials move.
  3. have an understanding of the time scale used in reference to geological processes and biotic successions
  4. understand and to be able to explain the occurrence of natural disasters which come in the form of earthquakes, landslides, volcanic eruptions, and floods and how plant and animal communities adapt to the change
  5. describe how the science disciplines, are related to one another.
- VII. TOPICS TO BE COVERED:
  1. Introduction
    - A. The science of geology
    - B. Gross morphology of the Earth
    - C. Earth Dynamics
    - D. The scientific process as it applies to geology.
    - E. A historical perspective
  2. Biomes
    - A. The elements
    - B. Plants
    - C. Animals
  3. The Hydrologic Cycle & Erosion
    - A. Surface and ground water
    - B. Mass movement
- VIII. TESTING AND GRADING PRACTICES:

Each student will write a journal recording detailed observations of the rocks, biomes, and plant communities during our trip. Also comments will need to be included to demonstrate an understanding of the relationships that tie the landforms to the geologic processes that produced them, i.e., processes and products.

The course grade will be based entirely on quality of the journal.
- IX. POLICY ON STUDENTS WITH DISABILITIES: It is the policy of the University of AR—Monticello to accommodate individuals with disabilities pursuant to federal law and the University’s commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the

Office of Special Student Services located in Harris Hall Room 120; phone 870 460-1026; TDD 870 460-1626; fax 870 460-1926.

- X. CLASSROOM POLICIES: The following action is prohibited under the UAM Student Conduct Code: Disorderly Conduct: Any behavior which disrupts the regular or normal functions of the University community, including behavior which breaches the peace or violates the rights of others.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematical and Natural Sciences**  
**COURSE SYLLABUS**  
Fall 2015 – MWF 12:10 p.m.

**Instructor Name:** Ross H. Burrows

**Instructor Location of Office:** SCA21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** burrows@uamont.edu

**Office Hours:** 10-12 MWF, 2-4 M. Other times by appointment.

**Course Title and Credit Hours:** PHYS 2203 College Physics I, 3 credit hours.

**Prerequisites:** College algebra (MATH 1043), trigonometry (MATH 1033).

**Course Description:** Physics 2203 covers *Part One: Mechanics* of the required textbook *College Physics* by Wilson, Buffa and Lou. In class we will focus on physics concepts, teamwork and group learning. You will learn in class but also need to study the textbook and do the homework in order to be successful.

**Student Learning Outcomes:**

After this course you should be able to apply knowledge of physics concepts to solve challenging analytic problems. Apply conceptual physics knowledge to better understand what's happening in the world around us; understand science and technology so you can use it to your advantage—not be used by it.

Required textbook: *College Physics* by Wilson, Buffa and Lou, Addison-Wesley, Seventh Edition, ISBN 978-0-321-60183-4. Optional supplementary textbook--*College Physics*, by OpenStax College, Rice University, ISBN-10 1938168003: this optional textbook is available for free download at <http://openstaxcollege.org> and I will also make it available in Blackboard.

**Technical Support Information:**

Blackboard Assistance:

Contact Office of Instructional Technology; phone 870-460-1663; open Monday-Friday, 8 a.m. – 4:30 p.m.

Online Help Desk: <http://www.uamont.edu/pages/resources/academic-computing/>

Email Assistance:

Contact the Office of Information Technology; phone 870-460-1036; open Monday-Friday, 8 a.m. – 4:30 p.m.

Library Services: The computer section in the Library is open during regular Library hours. Go to the Taylor Library website for hours of operation: <http://www.uamont.edu/pages/library/>

**Attendance Policy:**

As evident from the grading policy, attendance is rewarded. This class uses the interactive Peer Instruction (PI) method that has been shown to be highly effective by Physics Education Research (PER). In order to benefit from this approach you need to come to class.

Students are expected to attend all required class sessions during the semester. The University does not allow for unexcused absences. Students involved in University sponsored events can be considered excused if the proper notifications are delivered to the instructor according to Policy XV on page 71 of the UAM Faculty Handbook.

**Academic Alert:**

The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior or are having difficulty adjusting to campus life, University faculty, staff or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

**Academic Resources:****MATH TUTORIAL LAB**

Math and Science Center, 870-460-1016

Free one-on-one tutoring is available for any mathematics class. Help with ALEKS, WebAssign, and MyMathLab is available. Math tutoring is located in the A-Wing of the Science Center.

**Students with Disabilities:**

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**Feedback Schedule:**

A student can expect a response to email within a day or two, Monday through Friday. Emails won't be answered after 5 p.m. on Friday until the following Monday.

**Assessments:**

Class participation means voting on all concept question and engaging in peer instruction (PI); as long as you participate you will get these points. There will be several low-stakes group quizzes (counting toward the participation score.) Homework assignments, including reading and working problems from the end of each chapter, will be due weekly. There will be two midterms and a final exam. All exams are closed book, but you can bring in a one-page formula sheet to the exam.

**Grading Policy:**

Participation:	<b>20%</b> , This includes attendance, participation in group activities like Peer Instruction (PI), concept questions and group quizzes.
Homework:	<b>15%</b> , No late homework accepted.
Exams:	<b>65%</b> , Two midterms worth %20 each and a final worth 25% of the grade.

**Grade Assignment:**

Grading Scale:

A= 90—100

B= 80 — 89

C= 70 — 79

D= 60 — 69

F= 59 and below

**Student Conduct Statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic Dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the

extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be an automatic score of zero for that test or assignment.

**Course Outline/Calendar:**

<b>Week</b>	<b>Chapter</b>	<b>Topic</b>
<b>1</b>	<b>1-2</b>	<b>Measurement</b>
<b>2</b>	<b>2</b>	<b>Kinematics 1D</b>
<b>3</b>	<b>3</b>	<b>Kinematics 2D</b>
<b>4</b>	<b>4</b>	<b>Newton's Laws of Motion</b>
<b>5</b>	<b>5</b>	<b>Work=&gt;Energy</b>
<b>6</b>	<b>6</b>	<b>Linear Momentum and Collisions</b>
<b>7</b>	<b>7</b>	<b>Circular Motion</b>
<b>8</b>	<b>8</b>	<b>Rotational Motion</b>
<b>9</b>	<b>9</b>	<b>Fluids</b>
<b>10</b>	<b>10</b>	<b>Temperature</b>
<b>11</b>	<b>11</b>	<b>Heat</b>
<b>12</b>	<b>12</b>	<b>Thermodynamics</b>
<b>13</b>	<b>13</b>	<b>Waves</b>
<b>14</b>	<b>14</b>	<b>Sound</b>

**Special Dates of Concern:**

Final exam: Thursday, December 10, 10:30 – 12:30



**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematical and Natural Sciences**  
**COURSE SYLLABUS**  
Fall 2015 – MWF 12:10 p.m.

**Instructor Name:** Ross H. Burrows

**Instructor Location of Office:** SCA21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** burrows@uamont.edu

**Office Hours:** 10-12 MWF, 2-4 M. Other times: by appointment.

**Course Title and Credit Hours:** PHYS 2231 Lab Physics I, 1 credit hour.

**Co-requisites:** PHYS 2203 or PHYS 2313.

**Course Description:** Physics 2231 is an introductory physics lab, designed for students working towards a science major. The application of good experimental practices will give the student hands-on understanding and insight into basic principles of mechanics, thermodynamics and waves.

**Student Learning Outcomes:**

Develop a solid understanding of laboratory techniques including analysis of experimental error and how error propagates through formulae and affects final results. Be able to apply good lab techniques to verify the basic laws of physics.

Required materials: A graph-paper notebook to serve as a lab-book. Scientific calculator.

**Technical Support Information:**

Blackboard Assistance:

Contact Office of Instructional Technology; phone 870-460-1663; open Monday-Friday, 8 a.m. – 4:30 p.m.

Online Help Desk: <http://www.uamont.edu/pages/resources/academic-computing/>

Email Assistance:

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Library Services: The computer section in the Library is open during regular Library hours. Go to the Taylor Library website for hours of operation: <http://www.uamont.edu/pages/library/>

**Attendance Policy:**

As evident from the grading policy, attendance is rewarded. Your participation score for this class will be based on you being present during for each lab and for the entire session. Your participation score will be the percentage of the scheduled class time for which you are actually present. It's a three hour lab, so if you leave an hour early you would get a 66% participation score for that session.

Students are expected to attend all required class sessions during the semester. The University does not allow for unexcused absences. Students involved in University sponsored events can be considered excused if the proper notifications are delivered to the instructor according to Policy XV on page 71 of the UAM Faculty Handbook.

**Academic Alert:**

The Academic Alert System is a retention program that puts students in contact with the appropriate campus resources to assist them in meeting their educational goals at UAM. If you are doing poorly in your academic work, are chronically absent from class, are exhibiting disruptive behavior or are having difficulty adjusting to campus life, University faculty, staff or a fellow student may report you to the Office of Academic Affairs through the Academic Alert system.

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**Feedback Schedule:**

A student can expect a response to email within a day or two, Monday through Friday. Emails won't be answered after 5 p.m. on Friday until the following Monday.

**Assessments:**

Class participation, worth 50%, means attending for the entire class period and engaging proactively in the lab. If you finish early please help others who may be struggling. Like the lecture class, our lab will be a team-effort where we help each other to learn. Developing an informative lab-book that documents your work and experiments is the other 50% of the grade.

Let's do our best to enjoy science.

### **Grading Policy:**

Participation:	<b>50%</b> , This includes attending the entire class period, participation, teamwork and helping others to learn.
Lab Book:	<b>50%</b> , Handwritten notes, documentation and analysis of your experimental results.

### **Grade Assignment:**

Grading Scale:

A= 90—100

B= 80 — 89

C= 70 — 79

D= 60 — 69

F= 59 and below

### **Student Conduct Statement:**

Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

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  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.
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<b>6</b>	<b>6</b>	<b>Linear Momentum and Collisions</b>
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**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
**Lab Physics II Syllabus**  
**Spring 2015 – T 1:40PM – W 2:10PM**  
**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M F 9:30AM–12:00PM; T Th 9:30AM–11:00AM; M 2:00PM–4:00PM; W 11:00AM–12:00PM; Other times by appointment.

**Course Title / Credit Hours:** PHYS 2241 Lab Physics II / 1 credit hour (ACTS 2424).

**Course Description:** Physics 2241 is the second semester of a one-year introductory lab sequence in physics designed for students majoring in basic and applied sciences, engineering, and technologies. This lab is intended to provide the students with a strong experimental foundation in electricity, magnetism, optics, and modern physics relying heavily on the student's understanding of algebra (MATH 1043 or MATH 1175) and trigonometry (MATH 1033). This course supplements general and university physics, and the experiments are closely related to those courses.

**Goals and Objectives of the Course:**

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Develop skills in scientific methods and handling scientific equipment, as well as collaborative learning skills by working in groups.
- Awake the natural interest and curiosity about physical phenomena, and help to understand the relevance of physics in other fields.
- Help students build the analytical and quantitative skills and confidence needed to apply physics in problem-solving for science and engineering by stimulating their creativity and logical thinking.

**Corequisites:** General physics II (PHYS 2213) or university physics II (PHYS 2323). Do not take PHYS 2241 at this time if you do not have these minimum corequisites.

**Required textbooks, workbooks, supplementary materials:**

- I will provide you with copies of activities to be worked on in the lab.
- Scientific calculator.
- *College Physics (Hybrid)* by R. A. Serway and C. Vuille, 9th ed. (Cengage Learning) 2011. ISBN-13: 978-1111572075  
(This textbook is supplemental and not required.)

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.

- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices etc.**

**ATTENDANCE POLICY:** You are expected to attend all labs and be on time. If you miss a lab, challenge, or in-class assignment, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation lab will consist (perhaps) of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** Come to labs on time and prepared physically and mentally (**remember the labs are 3 hours long**). Please do not start your lab until I indicate that it is time to do it. The reason for doing this is that I will give you a 30-minute lecture over the material. This lecture will help you to understand some fundamental concepts necessary for the activity. If you are late for a lab by a considerable amount of time, you may not get to work on the activity. If you are a member of a sport team or another officially sponsored group and you need to miss a lab, it is your responsibility to speak to your instructor at least a week before the session you will miss. A professional attitude is to be maintained during your participation in labs. Some students are here in laboratories for a reason: they want to learn! Do not be disrespectful by talking during class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class. Students should not leave class to answer the phone.

**Grading and evaluation policies:** There will be 13 labs during the semester. Each lab will be worth 20 points and will consist of three different parts: a prelab quiz (5 points), the experimental procedure (10 points), and the final survey (5 points). At the end of the semester, I will drop **one** lab (that with the lowest grade). Thus, the course will consist of a total of **240 points**. There will be neither final exam nor make up labs. Prelab quizzes are given at the beginning of each lab period, and they are based on the topic corresponding to the activity due that day. Therefore, be on time! The lab reports are to be completed and turned in by the end of the lab period. All grades are determined by using the total possible points. They are based on a fixed scale, so you do not need to compete with each other. The grading scale is shown in the chart below:

**A** 90–100%    **B** 80–89%    **C** 65–79%    **D** 50–64%    **F** 0–49%

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Lab Dates Topics**

- 1 Jan 13/14 Simple Harmonic Oscillations I
- 2 Jan 20/21 Simple Harmonic Oscillations II
- 3 Jan 27/28 Standing Waves

4 Feb 3/4 Speed of Sound in Air  
5 Feb 10/11 Electrostatics  
6 Feb 17/18 Electric Field Lines  
7 Feb 24/25 DC Circuits  
8 Mar 3/4 Ohm's Law  
9 Mar 10/11 Measuring the RC Time  
10 Mar 17/18 Magnetism  
11 Mar 31/1 Speaker and Motor Construction  
12 Apr 7/8 Geometrical Optics  
13 Apr 14/15 Physical Optics

UAM will no longer mail grade reports to all students. You may access your grades through WeevilNet Student Self-Service at <http://www.uamont.edu/weevilnet/>. To have your grades mailed to you, complete the grade request form available in the Registrar's Office in Monticello or the Student Services offices in Crossett and McGehee.

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For assistance on a College of Technology campus contact:

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**Academic dishonesty:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:
  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
  - e. Substituting for another person during an examination or allowing such substitutions for oneself.



**2. Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**3. Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**4. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for that particular assignment. Severe cases will result in a failing grade for the course.

### **Date Event**

Jan 7 First day of classes

Jan 9 Last day to register or add classes

Jan 19 Martin Luther King Holiday. Offices and classes closed

Feb 27 Deadline to apply for August and December graduation

Mar 18 Last day to drop with W

Mar 23 Spring Break

Apr 6 Preregistration for summer and fall begins

Apr 17 Preregistration for summer and fall ends

Apr 28 Last day of classes

May 5 Final exam (Lecture). 10:30AM-12:30PM

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
**College Physics II Syllabus**  
**Spring 2015 – MWF 12:10PM**

**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M F 9:30AM–12:00PM; T Th 9:30AM–11:00AM; M 2:00PM–4:00PM; W 11:00AM–12:00PM; Other times by appointment.

**Course Title / Credit Hours:** PHYS 2213 College Physics II / 3 credit hours (ACTS PHYS 2424).

**Course Description:** Physics 2213 is the second semester of a one-year introductory course in physics that uses algebra and trigonometry but not calculus. The college physics sequence is designed for students majoring in biology, premedical sciences, earth and environmental sciences, and technologies. This course is intended to provide a strong foundation in waves, sound, electricity, magnetism, fluids, and physical optics.

**Goals and Objectives of the Course:**

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Explain physics in an accessible and clear way by anticipating students’ needs and difficulties, and building a stronger conceptual understanding of the fundamental physical laws.
- Help students develop the analytical and quantitative skills and confidence needed to apply physics in problem-solving for science and engineering by stimulating their creativity and logical thinking, as well as the use of the scientific method.
- Show students how physics may be useful in their lives and future professions by means of wide-ranging and contemporary applications in science, technology, and everyday life.

**Prerequisites:** College Physics I (PHYS 2203). Do not take PHYS 2213 at this time if you do not have this minimum prerequisite.

**Required textbooks, workbooks, supplementary materials:**

- *College Physics* by Jerry D. Wilson, Anthony J. Buffa, and Bo Lou. 7th ed. (Addison Wesley) 2009.  
ISBN-13: 978-0321601834
- Scientific calculator.
- *Physics: Principles with Applications* by Douglas C. Giancoli, 6th ed. (Pearson-Prentice Hall) 2008.  
ISBN-13: 978-0321569837 (This textbook is supplemental and not required.)

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices, etc.**

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** It is important to be on time for class. Handouts are distributed, and announcements are made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time also for tests. If you are late for a test by a considerable amount of time, you may not get to take the test. If you are a member of a sport team or another officially sponsored group and you need to miss a test, it is your responsibility to

speak to your instructor at least a week before the test you will miss. Come to class prepared physically and mentally. You are expected to read the material to be covered in class each day. It is also your responsibility to review the lecture notes and work on the problems at the end of every chapter. Physics is best learned by solving problems. Late homework will not be accepted. So plan your time adequately, and start working the homework enough in advance. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions. A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

**LABORATORY:** This course is intended to be taken in conjunction with PHYS 2241 Physics II Laboratory. I encourage you to do it that way. The lab is an integral and fundamental part of the lecture, and so they should be taken simultaneously. Frequently, I use some lab time to continuing discussions about topics introduced during a lecture, give some extra examples, and help with the solution of some homework problems. Then, if you are not attending the lab simultaneously with the lecture, it is your responsibility to catch up with a classmate on material missed in the lab.

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Chapter Reading Topics Sections**

Ch 13 Vibrations and Waves all

Ch 14 Sound all

Ch 15 Electric Forces and Electric Fields all

Ch 16 Electrical Energy and Capacitance all

Ch 17 Current and Resistance all  
Ch 18 DC Circuits all  
Ch 19 Magnetism all  
Ch 20 Induced Voltages and Inductance all  
Ch 21 AC Circuits all  
Ch 22 Optics all

**Grading and evaluation policies:** There will be four (4) fifty-minute exams during the semester and a comprehensive two-hour final exam which will include all subject matter covered in the course. The average of the fifty-minute exams will determine the 60% of the final course grade; the final exam will represent a 20%, the assigned homework and in-class (or online) quizzes the remaining 20%. The schedule of exams and the grades' scale are as follow:

**Exam #1:** Jan 30, 2015      **Exam #2:** Feb 20, 2015      **Exam #3:** Mar 16, 2015  
**Exam #4:** Apr 13, 2015      **Final Exam:** May 5, 2015

**A** 90–100%    **B** 80–89%    **C** 65–79%    **D** 50–64%    **F** 0–49%

Each fifty-minute exam is closed book. They are written so a prepared student can take them within the time. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the exam. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be a number of quizzes and homework during the semester. Homework assignments are due on Mondays and will be posted on the course website (Blackboard TM). **No late homework will be accepted.** Discussion of homework problems is allowed and encouraged; however, copying of homework is not. All work submitted should represent your own best effort. Remember that homework will represent the 20% of the final grade.

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**BLACKBOARD:** You must have a valid Blackboard account in order to access the website of this course. Homework, announcements, examination dates, on-line quizzes, handouts, and copies of the syllabi are found there. If you do not have an account, you need to create one at <http://blackboard.uamont.edu/>. After login into Blackboard, enroll yourself into the College Physics II class. You can find this course by clicking on the Courses Tab, then selecting Spring 2015 (or Spring 2015 On Campus Courses Only) in the Course Catalog window. A list of all courses offered during the semester will show up. Find the PHYS 2213 – College Physics II class in the list, and add the course by clicking the drop-down arrow button located next to it. If you need help in these matters, you may contact the university's Office of Academic Computing at 870-460-1663.

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- c. Collaboration with another student during the examination;
- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
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**Date Event**

Jan 7 First day of classes

Jan 9 Last day to register or add classes

Jan 19 Martin Luther King Holiday. Offices and classes closed

Feb 27 Deadline to apply for August and December graduation

Mar 18 Last day to drop with W

Mar 23 Spring Break

Apr 6 Preregistration for summer and fall begins

Apr 17 Preregistration for summer and fall ends  
Apr 28 Last day of classes  
May 5 Final exam. 10:30AM-12:30PM

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematical and Natural Sciences – Fall 2014**

**Course:** University Physics I PHYS 2313 - 01/ CI# 1738/ (w/ Lab) Acts # PHYS 2034/ 3 credit hours

**Time and Place:** TTh 11:10 – 12:30pm / Science Center - Room A30

**Instructor Name:** Dr. Jared Gavin

**Email Address:** [gavinj@uamont.edu](mailto:gavinj@uamont.edu)

**Phone:** (870) 460-1364

**Office Location:** Science Center C23

**Office Hours:**

M: 9-10am / 1-2pm • W: 9-10am / 1-5pm • F: 9-10am

T: 9-9:30am / 12:30-1pm • H: 9-9:30am / 12:30-1pm

**Course Description**

This course is a study of mechanics, sound, energy and momentum relying heavily on the student's understanding of basic math including algebra, trigonometry, and calculus.

**Goals and Objectives**

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Explain physics in an accessible and clear way by anticipating students' needs and difficulties, and building a stronger conceptual understanding of the fundamental physical laws.
- Help students develop the analytical and quantitative skills and confidence needed to apply physics in problem solving for science and engineering by stimulating their creativity and logical thinking, as well as the use of the scientific method.
- Show students how physics may be useful in their lives and future professions by means of wide-ranging and contemporary applications in science, technology, and everyday life.

**Co/Prerequisites**

Calculus I MATH 2255

**Required Materials**

- *Essential University Physics* by Richard Wolfson. 2nd ed. (Addison-Wesley) 2007, 2012.  
ISBN-13: 9780321714381
- Mastering Physics: Course ID – MPGAVIN 43364
- Scientific calculator.

**Supplemental**

- Various useful websites (you may type the full address or just google the bolded parts)

[http://\*\*hyperphysics\*\*.phy-astr.gsu.edu/hbase/hframe.html](http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html)

[http://www.\*\*khanacademy\*\*.org/science/physics](http://www.khanacademy.org/science/physics)

[http://\*\*phet\*\*.colorado.edu/en/simulations/category/physics](http://phet.colorado.edu/en/simulations/category/physics)

[http://www.\*\*physicsclassroom\*\*.com](http://www.physicsclassroom.com)

[http://\*\*education-portal\*\*.com](http://education-portal.com)

**Student Learning Outcomes:**

By the conclusion of the course you should be able to;

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Be able to apply different forces and work force problems including the fundamental force of gravity and Newton's laws.
- Be able to classify the different forms of energy and use the conservation of energy to work problems.
- Demonstrate quantitative problem solving skills by using algebra and trigonometry to derive and manipulate formal relationships between physical quantities.

### **Attendance Policy**

Most students find that regular attendance and consistent effort are required for success in this course. If you are a member of an official UAM sponsored group (including the various athletic teams) and you need to miss a test, it is your responsibility to email me with advance notice. Other professional reasons for missing a test e.g. MCAT, DAT or interview are acceptable as well. Should something unexpected arise and cause you to miss a test, once again, please contact me through email as soon as possible so that I can schedule a make-up for you.

### **Responsibilities**

Handouts are distributed and announcements are typically made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time for tests. The later you arrive to take a test, the less time you will have. You are expected to read your textbooks and sometimes I will assume that you have. As you may already now, physics is best learned by solving problems. Homework assignments are accessed on the Mastering Physics website. Coming to class regularly will aid you in completing your homework. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions.

A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

### **Laboratory**

This course is intended to be taken in conjunction with PHYS 2231 Physics I Laboratory. I encourage you to do it that way. The lab is an integral and fundamental part of the lecture, and so they should be taken simultaneously.

### **Course Content**

Test 1/Ch 2: Motion in One Dimension

Test 1/Ch 3: Motion in 2D and 3D

Test 2/Ch 4: Force and Motion

Test 2/Ch 5: Usage of Newton's Laws

Test 3/Ch 6: Work, Energy and Power

Test 3/Ch 7: Conservation of Energy

Test 4/Ch 8: Gravity

Test 4/Ch 9: Systems of Particles



## Grading Policy

There will be 4 multiple choice/show your work/ true-false style tests. Each test will be worth 100 points. The tests will count as 60% of your course grade. Homework will count as 30%. Quizzes and other in class assignments will count for 10%. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the test. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be quizzes during the semester, consisting either of conceptual questions or short tasks related with the material.

All grades are determined by using the total possible points. They are based on a fixed scale, so you do not need to compete with each other. The grading scale is as follows:

**A** 100-90%, **B** 89-80%, **C** 79-65%, **D** 64-50%, **F** 49-0%

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## Dates of Concern:

August 21 (Thursday)	First day of classes
August 23 (Friday)	Last day to register or add classes
September 1 (Monday)	Classes Closed - Labor Day Holiday
<b>October 29 (Wednesday)</b>	<b>Last day to drop a regular fall class. Grade will be W.</b>
November 3 (Monday)	Preregistration for Spring 2015 begins
November 14 (Friday)	Preregistration for Spring 2015 ends
November 26 – 28 (Wednesday – Friday)	Classes Closed - Thanksgiving Holiday
December 5 (Friday)	Last day of classes
December 8-12 (Tuesday)	Final Exam Period

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- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
- e. Substituting for another person during an examination or allowing such substitutions for oneself.

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## **UNIVERSITY OF ARKANSAS AT MONTICELLO**

### **School of Mathematical and Natural Sciences – Fall 2014**

**Course:** University Physics II PHYS 2323 - 01/ CI# 1672/ (w/ Lab) Acts # PHYS 2044/ 3 credit hours

**Time and Place:** TTh 9:40 – 11:00pm / Science Center - Room A30

**Instructor Name:** Dr. Jared Gavin

**Email Address:** [gavinj@uamont.edu](mailto:gavinj@uamont.edu)

**Phone:** (870) 460-1364

**Office Location:** Science Center C23

**Office Hours:** MWF: 10-11am / MW: 12 – 2pm / TTh: 9-9:30am, 11-12pm

## **Course Description**

A study of fluids, periodic motion, electricity, and magnetism relying heavily on the student's understanding of basic math including algebra, trigonometry and calculus.

## Goals and Objectives

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Explain physics in an accessible and clear way by anticipating students’ needs and difficulties, and building a stronger conceptual understanding of the fundamental physical laws.
- Help students develop the analytical and quantitative skills and confidence needed to apply physics in problem solving for science and engineering by stimulating their creativity and logical thinking, as well as the use of the scientific method.
- Show students how physics may be useful in their lives and future professions by means of wide-ranging and contemporary applications in science, technology, and everyday life.

## Co/Prerequisites PHYS 2313

### Required Materials

- *Essential University Physics* by Richard Wolfson. 2nd ed. (Addison-Wesley) 2007, 2012.  
ISBN-13: 9780321714381
- Scientific calculator.

### Supplemental

- Various useful websites (you may type the full address or just google the bolded parts)  
[http://\*\*hyper\*\*physics.phy-astr.gsu.edu/hbase/hframe.html](http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html)  
[http://www.\*\*khanacademy\*\*.org/science/physics](http://www.khanacademy.org/science/physics)  
[http://\*\*phet\*\*.colorado.edu/en/simulations/category/physics](http://phet.colorado.edu/en/simulations/category/physics)  
[http://www.\*\*physicsclassroom\*\*.com](http://www.physicsclassroom.com)  
<http://education-portal.com>

### Student Learning Outcomes:

By the conclusion of the course you should be able to;

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Be able to apply different forces and work force problems including the fundamental force of gravity and Newton’s laws.
- Be able to classify the different forms of energy and use the conservation of energy to work problems.
- Demonstrate quantitative problem solving skills by using algebra and trigonometry to derive and manipulate formal relationships between physical quantities.

### Attendance Policy

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### Responsibilities

Handouts are distributed and announcements are typically made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time for tests. The later you arrive to take a test, the less time you will have. You are expected to

read your textbooks and sometimes I will assume that you have. As you may already now, physics is best learned by solving problems. Homework assignments are assigned from the text and sometimes handouts in class. Coming to class regularly will aid you in completing your homework. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions.

A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

### **Laboratory**

This course is intended to be taken in conjunction with PHYS 2241 Physics II Laboratory. I encourage you to do it that way. The lab is an integral and fundamental part of the lecture, and so they should be taken simultaneously.

### **Course Content**

Test 1/Ch 13: Oscillatory Motion

Ch 14: Wave Motion

Ch 15: Fluid Motion

Test 2/Ch 20: Electric Charge

Ch 21: Gauss's Law

Ch 22: Electric Potential

Ch 23: Electrostatic Energy and Capacitors

Test 3/Ch 24: Electric Current

Ch 25: Electric Circuits

Ch 26: Magnetism: Force and Field

Test 4/Ch 27: Electromagnetic Induction

Ch 28: Alternating-Current Circuits

Ch 29: Electromagnetic Waves

### **Grading Policy**

There will be 4 multiple-choice/show-your-work/matching/true-false style tests. Each test will be worth 100 points. The tests will count as 60% of your course grade. Homework will count as 30%. Quizzes and other in class assignments will count for 10%. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the test. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be quizzes during the semester, consisting either of conceptual questions or short tasks related with the material. Test 4 will serve as our final exam.

All grades are determined by using the total possible points. They are based on a fixed scale, so you do not need to compete with each other. The grading scale is as follows:

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**Dates of Concern:**

January 8 (Thursday)	First day of classes
January 9 (Friday)	Last day to register or add classes
January 19 (Monday)	Classes Closed – Martin Luther King Holiday
<b>March 8 (Wednesday)</b>	<b>Last day to drop a regular spring class. Grade will be W.</b>
March 23 - 27 (Monday – Friday)	Classes Closed – Spring Break
April 6 (Monday)	Preregistration for Summer and Fall 2015 begins
April 17 (Friday)	Preregistration for Summer and Fall 2015 ends
April 28 (Tuesday)	Last day of classes
May 5 (Tuesday)	<b>Final Exam</b>

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**1. Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- a. Copying from another student’s paper;
- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
- c. Collaboration with another student during the examination;
- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
- e. Substituting for another person during an examination or allowing such substitutions for oneself.

**2. Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**3. Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**4. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others. For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for that particular assignment. Severe cases will result in a failing grade for the course.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
**Optics Syllabus**  
**Spring 2015 / W 9:40AM–11:00AM - Th 2:10PM–4:00PM**

**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M F 9:30AM–12:00PM; T Th 9:30AM–11:00AM; M 2:00PM–4:00PM; W 11:00AM–12:00PM; Other times by appointment.

**Course Title / Credit Hours:** PHYS 3444 Optics / 4 credit hours (Lab included).

**Course Description:** Physics 3444 is a one-semester introductory/intermediate course that provides a systematic study of the properties and behavior of light and its interaction with matter. This course is designed for students majoring in basic sciences, premedical sciences, earth and environmental sciences, engineering, and technologies. Physics 3444 (Optics) is intended to provide a strong foundation in geometrical optics; interference, diffraction, and polarization of light; lasers, optics of the eye, and vision.

**Goals and Objectives of the Course:**

- Explain optics in an accessible and clear way by anticipating students' needs and difficulties without oversimplifying important but rather technical details.
- Show students the relevance of optics to other fields of physics and science, and its role in medicine, engineering and technology.
- Help students build the analytical and quantitative skills and confidence needed to apply optics and physics in problem-solving for science and engineering by stimulating their creativity and logical thinking, as well as the use of the scientific method.
- Address key misconceptions in optics and help students build a stronger conceptual understanding of the nature of light and its interaction with matter.
- Explore the optics of the eye and the nature of vision based upon the understanding of light control through optical systems.

**Prerequisites:** College/University Physics II (PHYS 2213/2323). Do not take PHYS 3444 at this time if you do not have this minimum physics prerequisites.

**Required textbooks, workbooks, supplementary materials:**

- *Introduction to Modern Optics*, 2nd ed., Grant. R. Fowles (New York: Dover) 1989. ISBN-13: 978-0486659572
- Scientific calculator.
- *Optics and Vision*, L. S. Pedrotti and F. L. Pedrotti (Upper Saddle River: Prentice-Hall) 1998. ISBN-13: 978-0132422239

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices, etc.**

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** It is important to be on time for class. Handouts are distributed, and announcements are made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time also for tests. If you are late for a test by a considerable amount of time, you may not get to take the test. If you are a member of a sport team or another officially sponsored group and you need to miss a test, it is your responsibility to speak to your instructor at least a week before the test you will miss. Come to class prepared physically and mentally. You are expected to read the material to be covered in class each day. It is also your responsibility to review the lecture notes and work on the problems at the end of every chapter. Physics is best learned by solving problems. Late homework will not be accepted. So plan your time adequately, and start working the homework enough in advance. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions. A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

**LABORATORY:** The optics lab is designed to closely follow the Physics 3444 course. It provides hand-on experience with most of the concepts taught in the lecture. The lab will consist of 10 activities to be performed outside class hours. Some of the lab reports are to be completed and turned in by the end of the lab period, some others are required to be presented as fully written reports the following week. The reports should include all the basic elements of a scientific paper, including introduction, equipment, theoretical background, procedure, data analysis, and conclusions. No late efforts will be accepted. Laboratory attendance is absolutely required, because there will be no make-up labs.



**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Chapter Reading Topics Sections**

Ch 10 Ray Optics all

Ch 1 Propagation of Light all

Ch 2 The Vectorial Nature of Light all

Ch 3 Coherence and Interference all

Ch 4 Multi-Beam Interference all

Ch 5 Diffraction all

**Grading and evaluation policies:** There will be four (4) eighty-minute exams during the term. The average of these exams will determine the 80% of the final course grade; The assigned homework and in-class (or online) quizzes the remaining 20%. The schedule of exams is as follows:

**All exams will be announced a minimum of one week prior to test date.**

**The grading scale is:**

**A** 86–100%    **B** 70–85%    **C** 60–69%    **D** 50–59%    **F** 0–49%

Each exam is closed book. They are written so a prepared student can take them within the time. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the exam. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be also homework assignments due on Mondays, and posted on the course website (Blackboard™). Each assignment should be turned into my mailbox, located at the Faculty Lounge (Room SC A17).

**No late homework will be accepted.** Discussion of homework problems is allowed and encouraged; however, copying of homework is not. All work submitted should represent your own best effort. **Remember that homework will represent the 20% of the final grade.**

**BLACKBOARD:** You must have a valid Blackboard account in order to access the website of this course. Homework, announcements, examination dates, on-line quizzes, handouts, and copies of the syllabi are found there. If you do not have an account, you need to create one at <http://blackboard.uamont.edu/>. After login into Blackboard, enroll yourself into the Optics class. You can find this course by clicking on the Courses Tab, then selecting the course in the Course Catalog window. Add the class by clicking the drop-down arrow button located next to it. If you need help in these matters, you may contact the university's Office of Academic Computing at (870) 460-1663.

**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 121; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu)  
For assistance on a College of Technology campus contact:

McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.

Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

**1. Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- a. Copying from another student's paper;
- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
- c. Collaboration with another student during the examination;
- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
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**3. Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**4. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for that particular assignment. Severe cases will result in a failing grade for the course.

**5. Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**6. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgment the ideas or passages from the writings or works of others.

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**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
***University Physics III Syllabus***  
**Fall 2014 / Time: TBA**

**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M W F 10:00AM–12:00PM; M 4:00PM–5:00PM; Th 2:00PM–3:00PM. Other times by appointment.

**Course Title / Credit Hours:** PHYS 3013 University Physics III / 3 credit hours.

**Course Description:** Physics 3013 is the last semester of an introductory course in physics that uses calculus. This course explores the fundamentals of fluids, physical optics, and thermal physics for those who have no experience in these fields. The student will learn the basics of hydrostatics, fluid dynamics, interference and diffraction of light, temperature and heat, the three laws of thermodynamics, and statistical mechanics. This course is designed for students majoring in basic and applied sciences, earth and environmental sciences, engineering, and technologies.

**Goals and Objectives of the Course:**

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Explain physics in an accessible and clear way by anticipating students’ needs and difficulties, and building a stronger conceptual understanding of the fundamental physical laws.
- Help students develop the analytical and quantitative skills and confidence needed to apply physics in problem-solving for science and engineering by stimulating their creativity and logical thinking, as well as the use of the scientific method.
- Show students how physics may be useful in their lives and future professions by means of wide-ranging and contemporary applications in science, technology, and everyday life.

**Prerequisites:** University Physics I (PHYS 2313). Do not take PHYS 2323 at this time if you do not have this minimum physics prerequisite.

**Required textbooks, workbooks, supplementary materials:**

- *Essential university physics*, R. Wolfson, 2nd ed. (San Francisco: Pearson Addison-Wesley) 2011.  
ISBN-13: 978-0321714381
- Scientific calculator.
- Supplemental book (not required): *Physics for scientists and engineers, with modern physics.*, R. A. Serway and J. W. Jewett Jr., 6th Ed. (Belmont, CA:

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices, etc.**

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** It is important to be on time for class. Handouts are distributed, and announcements are made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time also for tests. If you are late for a test by a considerable amount of time, you may not get to take the test. If you are a member of a sport team or another officially sponsored group and you need to miss a test, it is your responsibility to speak to your instructor at least a week before the test you will miss. Come to class prepared physically and mentally. You are expected to read the material to be covered in class each day. It is also your responsibility to review the lecture notes and work on the problems at the end of every chapter. Physics is best learned by solving problems. Late homework will not be accepted. So plan your time adequately, and start working the homework enough in advance. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions. A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

**LABORATORY:** This course is intended to be taken in conjunction with PHYS 3013 Lab Physics III. I encourage you to do it that way. The lab is an integral and fundamental part of the lecture, and so they should be taken simultaneously. Frequently, I use some lab time to continuing discussions about topics introduced during a lecture, give some extra examples, and help with the solution of some homework problems. Then, if you are not attending the lab simultaneously with the lecture, it is your responsibility to catch up with a classmate on material missed in the lab.

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Chapter Reading Topics Sections**

Ch 21 Gauss's Law all  
Ch 22 Electric Potential all  
Ch 15 Fluid Motion all  
Ch 16 Temperature and Heat all  
Ch 17 The Thermal Behavior of Matter all  
Ch 18 Heat, Work, and the First Law of Thermodynamics all  
Ch 19 The Second Law of Thermodynamics all  
Ch 27 Electromagnetic Induction all  
Ch 28 Alternating-Current Circuits all  
Ch 30 Reflection and Refraction all  
Ch 31 Images and Optical Instruments all  
Ch 32 Interference and Diffraction all

**Grading and evaluation policies:** There will be four (4) exams during the semester and a comprehensive two-hour final exam which will include all subject matter covered in the course. The average of the exams will determine the 60% of the final course grade; the final exam will represent a 20%, the assigned homework and inclass (or online) quizzes the remaining 20%. The schedule of exams and the grades' scale are as follow:

**All exams will be announced a minimum of one week prior to exam date**

**The grading scale is as follows:**

**A** 86–100%    **B** 70–85%    **C** 60–69%    **D** 50–59%    **F** 0–49%

Each exam is closed book. They are written so a prepared student can take them within the time. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the exam. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be a number of quizzes and homework during the semester. Homework assignments will be posted on the course website (Blackboard™). **No late homework will be accepted.** Discussion of homework problems is allowed and encouraged; however, copying of homework is not. All work submitted should represent your own best effort. Remember that homework will represent the 20% of the final grade.

UAM will no longer mail grade reports to all students. You may access your grades through WeevilNet Student Self-Service at <http://www.uamont.edu/weevilnet/>. To have your grades mailed to you, complete the grade request form available in the Registrar's Office in Monticello or the Student Services offices in Crossett and McGehee.

**BLACKBOARD:** You must have a valid Blackboard account in order to access the website of this course. Homework, announcements, examination dates, on-line quizzes, handouts, and copies of the syllabi are found there. If you do not have an account, you need to create one at <http://blackboard.uamont.edu/>. After login into Blackboard, enroll yourself into the University Physics III class. You can find this course by clicking on the Courses Tab, then selecting the course in the Course

Catalog window. Add the class by clicking the drop-down arrow button located next to it. If you need help in these matters, you may contact the university's Office of Academic Computing at (870) 460-1663.

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  - a. Copying from another student's paper;
  - b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
  - c. Collaboration with another student during the examination;
  - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
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2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
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For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for

that particular assignment. Severe cases will result in a failing grade for the course.

**Date Event**

Aug 20 First day of classes.

Aug 22 Last day to register or add classes.

Sep 01 Labor Day Holiday. Offices and classes closed.

Oct 03 Deadline to apply for May graduation.

Oct 11 Homecoming.

Oct 29 Last day to drop with W.

Nov 03 Preregistration for spring 2015 begins.

Nov 14 Preregistration for spring 2015 ends.

Nov 27 Thanksgiving Holiday.

Dec 05 Last day of classes

Dec -- Final exam. TBA.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
**Lab University Physics III Syllabus**  
**Fall 2014 – Time: TBA**

**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M W F 10:00AM–12:00PM; M 4:00PM–5:00PM; Th 2:00PM–3:00PM. Other times by appointment.

**Course Title / Credit Hours:** PHYS 3011 Lab Physics III / 1 credit hour.

**Course Description:** This lab is intended to provide students with a strong experimental foundation in fluids, thermodynamics, and geometric and physical optics, relying heavily on the student's understanding of Calculus I (MATH 2255). This one-hour credit laboratory supplements the Special Topics: Fluids, Optics, and Thermal Physics lecture and the experiments are closely related to this course.

**Goals and Objectives of the Course:**

- Change and enrich the way students look at the world by helping them to discover and understand the rules (“laws”) that govern observed phenomena.
- Develop skills in scientific methods and handling scientific equipment, as well as collaborative learning skills by working in groups.
- Awake the natural interest and curiosity about physical phenomena, and help to understand the relevance of physics in other fields.
- Help students build the analytical and quantitative skills and confidence needed to apply physics in problem-solving for science and engineering by stimulating their creativity and logical thinking.

**Corequisites:** University Physics III (PHYS 3013). Do not take PHYS 3011 at this time if you do not have these minimum corequisites.

**Required textbooks, workbooks, supplementary materials:**

- I will provide you with copies of activities to be worked on in the lab.
- Scientific calculator.
- *Essential university physics*, R. Wolfson, 2nd ed. (San Francisco: Pearson Addison-Wesley) 2011. ISBN-13: 978-0321714381  
(This textbook is supplemental and not required for the lab.)

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.



- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices etc.**

**ATTENDANCE POLICY:** You are expected to attend all labs and be on time. If you miss a lab, challenge, or in-class assignment, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation lab will consist (perhaps) of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** Come to labs on time and prepared physically and mentally (**remember the labs are 3 hours long**). Please do not start your lab until I indicate that it is time to do it. The reason for doing this is that I will give you a 30-minute lecture over the material. This lecture will help you to understand some fundamental concepts necessary for the activity. If you are late for a lab by a considerable amount of time, you may not get to work on the activity. If you are a member of a sport team or another officially sponsored group and you need to miss a lab, it is your responsibility to speak to your instructor at least a week before the session you will miss. A professional attitude is to be maintained during your participation in labs. Some students are here in laboratories for a reason: they want to learn! Do not be disrespectful by talking during class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class. Students should not leave class to answer the phone.

**Grading and evaluation policies:** There will be 14 labs during the semester. Each lab will be worth 20 points and will consist of three different parts: a prelab quiz (5 points), the experimental procedure (10 points), and the final survey (5 points). At the end of the semester, I will drop **one** lab (that with the lowest grade). Thus, the course will consist of a total of **260 points**. There will be neither final exam nor make up labs. Prelab quizzes are given at the beginning of each lab period, and they are based on the topic corresponding to the activity due that day. Therefore, be on time! The lab reports are to be completed and turned in by the end of the lab period. All grades are determined by using the total possible points. They are based on a fixed scale, so you do not need to compete with each other. The grading scale is shown in the chart below:

**A** 90–100%    **B** 80–89%    **C** 65–79%    **D** 50–64%    **F** 0–49%

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Lab N. Dates Topics**

- 1 --- DC circuits
- 2 --- Hydrostatic Pressure
- 3 --- Archimedes' Principle
- 4 --- Specific Heat of Solids
- 5 --- The Mechanical Equivalent of Heat
- 6 --- Coefficient of Linear Expansion
- 7 --- The Ideal Gas Law
- 8 --- Joule Heating of a Resistor
- 9 --- Oscilloscope Measurements
- 10 --- Electromagnetic Induction
- 11 --- Alternating Current LR Circuits
- 12 --- Alternating Current RC and LRC Circuits
- 13 --- Optics I
- 14 --- Optics II

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- c. Collaboration with another student during the examination;
- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
- e. Substituting for another person during an examination or allowing such substitutions for oneself.

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**Date Event**

Aug 20 First day of classes.

Aug 22 Last day to register or add classes.

Sep 01 Labor Day Holiday. Offices and classes closed.

Oct 03 Deadline to apply for May graduation.

Oct 11 Homecoming.

Oct 29 Last day to drop with W.

Nov 03 Preregistration for spring 2015 begins.

Nov 14 Preregistration for spring 2015 ends.

Nov 27 Thanksgiving Holiday.

Dec 05 Last day of classes

Dec -- Final exam. TBA

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
***Computational Physics Syllabus***  
**Spring 2014 – Time: TBA**  
**Instructor Name: Juan D. Serna**

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M W F 10:00AM–12:00PM; T Th 11:00AM–12:00PM; M Th F 4:00PM–5:00PM;  
Other times by appointment.

**Course Title / Credit Hours:** PHYS 3423 Computational Physics / 3 credit hours.

**Course Description:** Introduction to Computational Physics is a one-semester introductory/intermediate level course that provides a systematic study and implementation of numerical algorithms to solve problems in physics. It is designed to introduce students with a high-level programming language (Python), as well as some basic numerical techniques to compute integrals, derivatives, and solve differential equations. This course is intended for students majoring in basic and applied sciences, earth and environmental sciences, engineering, and technologies.

**Goals and Objectives of the Course:**

- Show students how to use computers to solve mathematics and physics problems.
- Model mathematically some physical problems of interest and explore their solutions using different numerical approaches.
- Learn how to program computers by using a dynamic and high-level object-oriented programming language: Python.
- Understand the important role of computers as a tool in doing modern science, in particular, physics and mathematics.

**Prerequisites:** Calculus I (MATH 2255) and Collegel/University Physics II (PHYS 2213/2323). Do not take this Special Topics class at this time if you do not have these minimum prerequisites.

**Required textbooks, workbooks, supplementary materials:**

- *Python Programming: An Introduction to Computer Science*, 2nd ed., John Zelle (Franklin, Beedle & Associates, Inc., Wilsonville, Oregon) 2010. ISBN-13: 978-1590282410
- *Introductory Computational Physics*, A. Klein and A. Godunov. (Cambridge University Press, Cambridge) 2010. ISBN-13: 978-0521535625. (This textbook is supplemental and not required.)

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic computational tools to analyze and model qualitatively physics real-world problems.

- Demonstrate quantitative problem-solving skills using mathematical and programming language techniques to derive, manipulate, and solve formal relationships between mathematical and physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices, etc.**

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** It is important to be on time for class. Handouts are distributed, and announcements are made at the beginning of class. You are responsible for all information and instructions discussed in class whether or not you were present. Show up on time also for tests. If you are late for a test by a considerable amount of time, you may not get to take the test. If you are a member of a sport team or another officially sponsored group and you need to miss a test, it is your responsibility to speak to your instructor at least a week before the test you will miss. Come to class prepared physically and mentally. You are expected to read the material to be covered in class each day. It is also your responsibility to review the lecture notes and work on the problems at the end of every chapter. Physics is best learned by solving problems. Late homework will not be accepted. So plan your time adequately, and start working the homework enough in advance. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions. A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

**Grading and evaluation policies:** There will be three (4) two-hour exams during the semester and a final project that the student must complete by the end of the semester. The average of the two-hour exams will account for a 60% of the final course grade; the homework will account for another 20%; and the final project will decide the remaining 20%. The schedule of exams and the grades' scale are as follow:

**All exams will be announced a minimum one week prior to test date**

**The grading scale is as follows:**

**A 86–100%    B 70–85%    C 60–69%    D 50–59%    F 0–49%**

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**1. Part One:** Python programming basics

- a)Computers and programs
- b)Writing simple programs
- c)Computing with numbers
- d)Objects and graphics
- e)Sequences
- f) Defining functions
- g)Decision structures
- h)Loop structures
- i) Simulation and design
- j) Defining classes

**2. Part Two:** Numerical methods in physics

- a)Numerical integration
- b)Solving differential equations numerically
- c)Physical simulation

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**Students with disabilities:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 121; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: [whitingm@uamont.edu](mailto:whitingm@uamont.edu)  
For assistance on a College of Technology campus contact:  
McGehee: Office of Special Student Services representative on campus; phone 870 222-5360; fax 870 222-1105.  
Crossett: Office of Special Student Services representative on campus; phone 870 364-6414; fax 870 364-5707.

**Student conduct statement:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**Academic dishonesty:**

**1. Cheating:** Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

- a. Copying from another student's paper;
- b. Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;
- c. Collaboration with another student during the examination;
- d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
- e. Substituting for another person during an examination or allowing such substitutions for oneself.

**2. Collusion:** Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.

**3. Duplicity:** Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.

**4. Plagiarism:** Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgment the ideas or passages from the writings or works of others.

For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for that particular assignment. Severe cases will result in a failing grade for the course.

**PHYS 3404 Fall 2011**  
**Modern Physics MWF 10:10AM–11:00AM**  
**<http://blackboard.uamont.edu/> SC A3**

**Instructor:** Dr. Juan D. Serna

**E-mail** serna@uamont.edu

**Office:** SC A21

**Office Phone:** 870-460-1567

**Office Hours:** M W F 11:00AM–12:00PM T H 9:30AM–11:00AM (Other times by appointment)

**COURSE DESCRIPTION:** Physics 3404 is a one-semester introductory/intermediate course that provides a systematic study of the modern physical theories developed during the course of the 20th century, including relativity and quantum mechanics. This course is designed for students majoring in basic sciences, earth and environmental sciences, engineering, and technologies. Physics 3404 (Modern Physics) is a 3 hour credit course intended to provide a strong foundation in the phenomena and theories of atomic, nuclear, and solid state physics; special relativity and the quantum theory.

**PREREQUISITE:** Calculus II (MATH 3495) and General Physics II (PHYS 2213) or University Physics II (PHYS 2323). Do not take PHYS 3404 at this time if you do not have these minimum prerequisites.

**COURSE OBJECTIVES:**

- \_ Develop a qualitative understanding of the experimental evidence that support modern physical theories.
- \_ Develop a strong conceptual understanding of the special theory of relativity and elementary quantum mechanics.
- \_ Build the analytical and quantitative skills and confidence needed to apply quantum mechanics ideas in problem-solving by stimulating the creativity and logical thinking, as well as the use of the scientific method.
- \_ Address key misconceptions and help students build a stronger conceptual understanding of modern physical theories.

**STUDENT LEARNING OUTCOMES:**

- \_ Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- \_ Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- \_ Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.



**COURSE MATERIALS:**

- \_ *Modern Physics* by Randy Harris, 2nd ed. (Addison-Wesley) 2007. ISBN-13: 978-0805303087
- \_ Scientific calculator.

**SUPPLEMENTAL BOOKS (NOT REQUIRED):**

- \_ *Modern Physics* by Kenneth S. Krane, 2nd ed. (Wiley) 1995. ISBN-13: 978-0471828723

**GRADING AND EVALUATION POLICIES:** There will be four (4) fifty-minute exams during the semester and a comprehensive two-hour final exam which will include all subject matter covered in the course. The average of the fifty-minute exams will determine the 40% of the final course grade; the final exam will represent a 15%, the assigned homework a 20%, and the physics lab the remaining 25%. The schedule of exams is as follows:

Exam #1: Sep 16, 2011;                      Exam #3: Oct 28, 2011;  
Exam #2: Oct 7, 2011;                      Exam #4: Nov 18, 2011;  
Final Exam: Dec 13, 2011 (1:30PM)

Each fifty-minute exam is closed book. They are written so a prepared student can take them within the time. I will supply you with a formula sheet that includes all the equations relevant to the topics evaluated in the exam. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. Every week, there will be homework assignments due on Mondays and posted on the course website (Blackboard™). Each assignment should be turned into my mailbox, located at the Faculty Lounge (Room SC A17). No late initial efforts can be accepted. Discussion of homework problems is allowed and encouraged; however, copying of homework is not. All work submitted should represent your own best effort. Remember that homework will represent the 20% of the final grade. All grades are determined by using the total possible points. They are based on a fixed scale, so you do not need to compete with each other.

**The grading scale is shown in the chart below:**

A 86–100%      B 70–85%      C 60–69%      D 50–59%      F 0–49%

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**BLACKBOARD:** You must have a valid Blackboard account in order to access the website of this course. Homework, announcements, examination dates, online quizzes, handouts, and copies of the syllabi are found there. If you do not have an account, you need to create one at <http://blackboard.uamont.edu/>. After login into Blackboard, enroll yourself into the Modern Physics class. You can find this course by clicking on the Courses Tab, then selecting Fall 2011 (or Fall 2011 On Campus Courses Only) in the Course Catalog window. A list of all courses offered during the semester will show up. Find the PHYS 3404 - Modern Physics class in the list, and add the course by clicking the dropdown arrow button located next to it. If you need help in these matters, you may contact the university's Office of Academic Computing at 870-460-1663.

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

**RESPONSIBILITIES:** It is important to be on time for class. Handouts are distributed, and announcements are made at the beginning of class. *You are responsible for all information and instructions discussed in class whether or not you were present.* Show up on time also for tests. If you are late for a test by a considerable amount of time, you may not get to take the test. If you are a member of a sport team or another officially sponsored group and you need to miss a test, it is your responsibility to speak to your instructor at least a week before the test you will miss. Come to class prepared physically and mentally. *You are expected to read the material to be covered in class each day.* It is also your responsibility to review the lecture notes and work on the problems at the end of every chapter. Physics is best learned by solving problems. Late homework will not be accepted. So plan your time adequately, and start working the homework enough in advance. You must try to recognize when you need help and be willing to ask for it, both in and out of class. Do not hesitate to drop by my office if you have any questions. A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment. Cell phones and pagers must be silent during class.

**LABORATORY:** The modern physics lab is designed to closely follow the Physics 3404 course. It provides hand-on experience with most of the concepts taught in the lecture. The lab will consist of five different activities to be scheduled by the instructor. Each lab write-up is due at the start of the following lab and must include all the basic elements of a scientific paper, including introduction, equipment, theoretical background, procedure, data analysis, and conclusions. No late efforts will be accepted. Laboratory attendance is absolutely required, because there will be no make up labs.

**STUDENTS WITH DISABILITIES:** It is the policy of the University of Arkansas at Monticello to accommodate individuals with disabilities pursuant to federal law and the University's commitment to equal educational opportunities. It is the responsibility of the student to inform the instructor of any necessary accommodations at the beginning of the course. Any student requiring accommodations should contact the Office of Special Student Services located in Harris Hall Room 120; phone 870-460-1026; TDD 870-460-1626; Fax 870-460-1926; email: whitingm@uamont.edu. For assistance on a College of Technology campus contact:  
McGehee: Office of Special Student Services representative on campus; phone 870-222-5360; fax 870-222-1105.  
Crossett: Office of Special Student Services representative on campus; phone 870-364-6414; fax 870-364-5707.

**STUDENT CONDUCT STATEMENT:** Students at the University of Arkansas at Monticello are expected to conduct themselves appropriately, keeping in mind that they are subject to the laws of the community and standards of society. The student must not conduct him/herself in a manner that disrupts the academic community or breaches the freedom of other students to progress academically.

**ACADEMIC DISHONESTY:**

1. Cheating: Students shall not give, receive, offer, or solicit information on examinations, quizzes, etc. This includes but is not limited to the following classes of dishonesty:

(a) Copying from another student's paper;

(b) Use during the examination of prepared materials, notes, or texts other than those specifically permitted by the instructor;

(c) Collaboration with another student during the examination;

(d) Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;

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For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of *zero* for that particular assignment.

Severe cases will result in a failing grade for the course.

**COURSE CALENDAR AND READING ASSIGNMENTS:** In order to prepare for classes, please complete each reading assignment before the class during which the topic is discussed (see Table 1).

**Table 1: Course content and schedule outline.**

Chapters Reading Topics Sections

Ch 2 Special Relativity 1–3, 5–8

Ch 3 E.M. Radiation Behaving as Particles all

Ch 4 Matter Behaving as Waves 1–5

Ch 5 Bound States 1–8

Ch 6 Unbound States all

Ch 7 Quantum Mechanics and the Hydrogen Atom 1–8

Ch 11 Nuclear Physics all

CALENDAR OF EVENTS: Special dates of concern to this course are given in Table 2.

Table 2: Fall 2011 simplified calendar of events.

Dates Events

Aug 24 First day of classes

Aug 30 Last day to register or add fall classes

Sep 5 Labor Day Holiday. All offices and classes closed

Oct 7 Deadline to apply for May graduation

Oct 29 Homecoming

Nov 7 Preregistration for spring begins

Nov 9 Last day to drop with W

Nov 18 Preregistration for spring ends

Nov 24 Thanksgiving Holiday

Dec 6 Last day to withdraw from class

Dec 9 Last day of classes

Dec 13 Final exam

**HINTS FOR BEST PERFORMANCE:**

\_ Prepare for class, read material in the text *before* the lecture, then read the material again *after* class discussion of the topics.

\_ Do not miss class; get notes from someone if you have an unavoidable absence.

\_ Read, study, and analyze carefully *ALL* examples already solved in the textbook. They provide you with the necessary physical insight and help you to develop your solving problem skills by giving you useful hints and tips.

\_ Work lots of problems.

\_ Review and practice math as necessary.

\_ Participate in class. Bring your calculator every day.

\_ Let me know how you are doing.

**UNIVERSITY OF ARKANSAS AT MONTICELLO**  
**School of Mathematics and Natural Sciences**  
***Introduction to Electronics Syllabus***  
**Fall 2014 / M 2:10PM–4:00PM / Th 3:10PM–5:00PM**

**Instructor Name:** Juan D. Serna

**Instructor Location of Office:** SC A21

**Instructor Phone:** 870-460-1567.

**Instructor Email Address:** serna@uamont.edu

**Office Hours:** M W F 10:00AM–12:00PM; M 4:00PM–5:00PM; Th 2:00PM–3:00PM. Other times by appointment.

**Course Title / Credit Hours:** PHYS 3504 Introduction to Electronics / 4 credit hours.

**Course Description:** This course explores the fundamentals of electronics and circuits for those who have no experience in these fields. The student will learn the basics of circuit components, electronic schematics, Ohm's and Kirchhoff's laws, DC and AC circuits, transformers, power supplies, semiconductors, diodes, and transistors. Skills in using materials and instruments like multimeters, oscilloscopes, power supplies, function generators, soldering circuits will be learned. This course is designed for students majoring in basic and applied sciences, earth and environmental sciences, engineering, and technologies.

**Goals and Objectives of the Course:**

- Develop a coherent and a solid understanding of the basic principles of electronics and circuits.
- Identify basic electronic components and use them to construct simple electronic projects.
- Make effective use of electronic devices and basic testing equipment.
- Help students develop the analytical and quantitative skills and confidence needed to apply electronics in problem-solving for science by stimulating their creativity and logical thinking, as well as the use of the scientific method.

**Prerequisites:** College/University Physics II (PHYS 2213/2323). Do not take PHYS 3504 at this time if you do not have this minimum physics prerequisites.

**Required textbooks, workbooks, supplementary materials:**

- Basic Electronics, G. McWhorter and A. J. Evans (Niles: Master Publishing) 2000.
- Scientific calculator.
- *Essential university physics*, R. Wolfson, 2nd ed. (San Francisco: Pearson Addison-Wesley) 2011.

ISBN-13: 978-0321714381

**Student Learning Outcomes:** By the conclusion of the course you should be able to

- Demonstrate critical thinking by using appropriate, basic physical concepts to analyze and model qualitatively real-world problems.
- Demonstrate quantitative problem solving skills by using algebra, trigonometry, and calculus to derive and manipulate formal relationships between physical quantities.
- Integrate the scientific method into problem-solving and experimentation by setting up appropriate laboratory investigation and safely employing experimental apparatuses making accurate physical measurements.

**Statement of special policies such as absenteeism, cheating, plagiarism, cell phones, electronic devices, etc.**

**ATTENDANCE POLICY:** Most students find that regular attendance and consistent effort are required for success in this course. I want you to come to class! If you miss a quiz, in-class assignment, or test, you may not make it up unless you are sick, you are in UAM travel, or there is an emergency. In these cases, the compensation test will consist of completely new material. Be aware that you may have to furnish an excuse for your absence and that we retain the right to call your doctors or sponsors to check and make sure the excuse is valid.

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A professional attitude is to be maintained during your participation in class. Students with inappropriate behavior will be asked to leave the learning environment.

Cell phones and pagers must be silent during class.

**LABORATORY:** The electronics lab is designed to closely follow the Physics 3504 course. It provides hand-on experience with most of the concepts taught in the lecture. The lab will consist of a number of activities to be performed during class time. Some of the lab reports are to be completed and turned in by the end of the lab period, some others are required to be presented as fully written reports the following week. The reports should include all the basic elements of a scientific paper, including introduction, equipment, theoretical background, procedure, data analysis, and conclusions. No late efforts will be accepted. Laboratory attendance is absolutely required, because there will be no make up labs.

**Content outline with schedule or sequencing plus required readings Special dates of concern**

**Chapter Reading Topics Sections**

Ch 2 DC Current all  
Ch 3 AC Current all  
Ch 4 Diodes and Transistors all  
Ch 5 Amplifiers and Oscillators all  
Ch 6 Radios all  
Ch 7 Digital Circuits all  
Ch 8 Digital Logic Circuits all  
Ch 9 Electronic Memory all  
Ch 10 Digital Systems all  
Ch 11 Photoelectric Devices all

**Grading and evaluation policies:** There will be four (4) exams during the semester. The average of the exams will determine the 60% of the final course grade; homework and labs will determine the remaining 40%. The schedule of exams and the grades' scale are as follow:

**All exams will be announced a minimum of one week prior to the test date**

**The grading scale is as follows:**

**A** 86–100%    **B** 70–85%    **C** 60–69%    **D** 50–59%    **F** 0–49%

Each exam is closed book. They are written so a prepared student can take them within the time. I will provide you with a formula sheet that includes all the equations relevant to the topics evaluated in the exam. Be sure to bring with you a pencil, an eraser, and a calculator with good batteries. There will be a number of quizzes and homework during the semester. Homework assignments will be posted on the course website (Blackboard™). **No late homework will be accepted.** Discussion of homework problems is allowed and encouraged; however, copying of homework is not. All work submitted should represent your own best effort. Remember that homework will represent a big portion of the final grade. UAM will no longer mail grade reports to all students. You may access your grades through WeevilNet Student Self-Service at <http://www.uamont.edu/weevilnet/>. To have your grades mailed to you, complete the grade request form available in the Registrar's Office in Monticello or the Student Services offices in Crossett and McGehee.

**BLACKBOARD:** You must have a valid Blackboard account in order to access the website of this course. Homework, announcements, examination dates, on-line quizzes, handouts, and copies of the syllabi are found there. If you do not have an account, you need to create one at <http://blackboard.uamont.edu/>. After login into Blackboard, enroll yourself into the Intro to Electronics class. You can find this course by clicking on the Courses Tab, then selecting the course in the Course Catalog window. Add the class by clicking the drop-down arrow button located next to it. If you need help in these matters, you may contact the university's Office of Academic Computing at (870) 460-1663.

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    - c. Collaboration with another student during the examination;
    - d. Buying, selling, stealing, soliciting, or transmitting an examination or any material purported to be the unreleased contents of coming examinations or the use of any such material;
    - e. Substituting for another person during an examination or allowing such substitutions for oneself.
  2. Collusion: Collusion is defined as obtaining from another party, without specific approval in advance by the instructor, assistance in the production of work offered for credit to the extent that the work reflects the ideas of the party consulted rather than those of the person whose name is on the work submitted.
  3. Duplicity: Duplicity is defined as offering for credit identical or substantially unchanged work in two or more courses, without specific advanced approval of the instructors involved.
  4. Plagiarism: Plagiarism is defined as adopting and reproducing as one's own, to appropriate to one's use, and to incorporate in one's own work without acknowledgement the ideas or passages from the writings or works of others.
- For any instance of academic dishonesty that is discovered by the instructor, whether the dishonesty is found to be cheating, collusion, duplicity, or plagiarism, the result for the student(s) involved will be a grade of zero for that particular assignment. Severe cases will result in a failing grade for the course.



**Date Event**

Aug 20 First day of classes.

Aug 22 Last day to register or add classes.

Sep 01 Labor Day Holiday. Offices and classes closed.

Oct 03 Deadline to apply for May graduation.

Oct 11 Homecoming.

Oct 29 Last day to drop with W.

Nov 03 Preregistration for spring 2015 begins.

Nov 14 Preregistration for spring 2015 ends.

Nov 27 Thanksgiving Holiday.

Dec 05 Last day of classes

Dec -- Final exam. TBA