

\*Preparing Knowledgeable, Reflective, and Caring Education Professionals to Support Student Learning and Family Participation in a Diverse, Technological and Global Society.

**FAYETTEVILLE STATE UNIVERSITY**  
**College of Arts and Sciences**  
**Department of Biological Sciences**

**NSCI 120 – Modern Biology (Online)**

**Fall 2010**

**I. LOCATOR INFORMATION**

Instructor: Dr. Flowers

Course Number and Name: NSCI 120 – Modern Biology

Term/Semester: Fall 2010

Credit Hours: 4.00

Meeting Times: Online (<http://fsu.blackboard.com>)

Class Location: Blackboard Learning System

Department: Biological Sciences

College: College of Arts and Sciences

Office Location: 225 Lyons Science Building

Office Telephone: (910) 672-2253 [leave a detailed message if I am unavailable]

E-mail: [lflowers@uncfsu.edu](mailto:lflowers@uncfsu.edu)

Office Hours:

Monday & Wednesday 10:00 a.m. – 1:00 p.m. (225 Lyons Science Building)

**FSU Policy on Electronic Mail:** Fayetteville State University provides to each student, free of charge, an electronic mail account that is easily accessible via the Internet. The university has established e-mail as the primary mode of communicating with enrolled students about impending deadlines, upcoming events, and other information important to student progression at the university. Students are responsible for reading their e-mail on a regular basis to remain aware of important information disseminated by the university. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail. Students making inquiries via e-mail to FSU faculty and staff about academic records, grades, bills, financial aid, and other matters of a confidential nature are required to use their FSU e-mail account. Rules and regulations governing the use of FSU e-mail may be found at: <http://www.uncfsu.edu/PDFs/E-mailPolicyFinal.pdf>.

## II. COURSE DESCRIPTION

Modern Biology (NSCI 120) is an introductory biology course covering basic biological concepts that provides the student with a comprehensive survey of biological sciences. Some important areas which will be investigated are: cell structure and reproduction, energy relationships at the cellular level, genetics, DNA, evolution, ecology, bacteria, protists, fungi, plants, and animal organ systems. **Prerequisite:** NSCI 110 (Comprehensive Physical Science)

This course is 100% online and utilizes Blackboard (<http://fsu.blackboard.com>) as the primary form of student/faculty interaction. We do not meet in a classroom but we have regular and frequent interaction via the computer. You are expected to know and utilize all the different elements of Blackboard for communication with your peers and with the instructor. We have 24/7 Blackboard Helpdesk Support available for students. The phone numbers are: local (910) 672-2085 and press "1" or toll free, 1-866-518-3955. If you have a question on how to use a function within Blackboard, please give the Helpdesk a call. They are there anytime, day or night, to assist you.

Throughout the course, the Discussion Board will be open for questions and answers (Q &A) about the class. You are expected to assist each other in discovering the answers to the questions that arise. I will monitor all group exercise discussions and provide input where appropriate. This course is much more challenging for the student because it requires greater technological skills and, most of all, because it requires you to be a highly motivated self-learner. You will be expected to be able to work independently and via online groups to accomplish a variety of tasks. You are required to obtain your textbook and other required class supplies on your own.

### Minimum Technological Prerequisites

You must have:

- **FULL ACCESS** to at least three computers or laptops with Internet access. Full access refers to the ability to use the computer terminal 24 hours a day, 7 days a week. Full access also refers to the ability to install software on the computer terminal. You do not have administrative rights to install any software on public (e.g., university, library, etc.) computers. No excuses will be accepted regarding the lack of computer access during the semester.
- 56K modem, Broadband, DSL high-speed Internet, or equivalent Internet access
- Adobe Acrobat Reader (FREE - <http://www.adobe.com/products/acrobat/readstep2.html>)
- PDF Maker (software capable of creating pdf files):
  - Adobe Acrobat Professional OR CutePDF (FREE software - <http://www.cutepdf.com/Products/CutePDF/writer.asp>)
  - All documents must be submitted as portable document format (PDF) files
- Word Processor (e.g., Microsoft Word 97-2003, Microsoft Word 2007, or Microsoft Works)

I have often observed that many of the problems students incur in online courses result from the use of inadequate computers (e.g., insufficient hardware or lack of critical software [shown above]). In those instances merely changing computers yielded positive results for students. Obviously, this approach will not work in all situations, but should be kept in mind as a potential success strategy.

A more detailed description of the recommended technological and computer competency prerequisites for the online course are outlined on the next page.

### III. REQUIRED TEXTBOOK

Johnson, G., Losos, J. (2009). *The Living World* (6th ed.). San Francisco, CA: McGraw-Hill.  
ISBN-13: 9780077280086

Textbooks are available in the FSU Bookstore (<http://www.uncfsu.edu/bookstore/>). No laboratory manual is required for this course. Use of both your textbook and lecture notes will increase your success on lecture quizzes and exams.

### IV. COURSE OBJECTIVES

By the end of this course, students will:

1. Gain a general understanding of biology and the diversity of all living organisms.
2. Have a basic knowledge of the scientific method of investigation.
3. Gain a fundamental understanding of genetic principles and biotechnology.
4. Understand evolutionary, ecological, and environmental influences on biological systems.
5. Develop an understanding of essential human body systems.

### V. EVALUATION CRITERIA

Evaluation in Modern Biology will primarily be based on five criteria:

- A. Examinations
- B. Lecture Quizzes
- C. Virtual Laboratory Exercises
- D. Discussion Board
- E. Essay

#### A. Examinations

Students will have the opportunity to take three exams during the semester. You have a limited time to complete each exam (3 hours). No extra time will be allowed to complete the exams. **No makeup exams will be given.** Students are encouraged to plan ahead to avoid any problems. Exams will be posted on the day of the exam between 9:00 a.m. – 7:00 p.m. This time depends on my availability in terms of being able to offer the class assistance in the event students encounter a problem during the exam. After 7:00 p.m. you will be unable to start the exam unless prior arrangements have been made. During 9:00 a.m. – 7:00 p.m. on exam days I can be reached by e-mail ([lflowers@uncfsu.edu](mailto:lflowers@uncfsu.edu)) or telephone (910-672-2253 [leave a detailed message if I am temporarily out of the office]).

Each exam will contain 50 questions. Each question will be worth 2 points each (50 questions x 2 points = 100 points). Examinations will consist of multiple-choice questions and true-false questions. Exams will be constructed to test your ability to recall pertinent facts, utilize conceptual knowledge in practical applications, and integrate information. Exams will be based on online lectures and textbook information.

The material covered on each examination is listed in the course schedule (page 25). Each exam will highlight the material covered since the previous exam. The dates for examinations are found on page 21. Students are expected to take exams when scheduled. If a student fails to take an exam on the day it is scheduled, they will be given a score of zero (0). Exams can be accessed by selecting the “Examinations” button (red arrow in picture [right]) on the homepage for this course. As you prepare for each exam please pay close attention to: 1) terms in bold print (underlined or italicized), 2) important diagrams/figures, and 3) important concepts found in the lecture notes/textbook. You may use whatever resources you have available, including your lecture notes and textbook.

However, be aware that there is a 3 hour time limit and there is only a 10 hour window in which to take the exam. Please work alone. Once you start the exam, you must complete it. You cannot stop taking the exam and come back to it later. If you unable to continue your exam due to power/computer failure please contact me immediately by e-mail or telephone and I will reset your exam. **No make-up exams will be given.**

Follow the steps on the Steps to Access Exams document found in the Course Information section of this online course site. The exam will be open from 9:00 am - 7:00 pm (only), therefore, technically you have until 6:59 pm to access (begin or start) the exam. However, as always, waiting to the very last minute is not a particularly good idea. Please make every effort to access every exam as early as possible to avoid any potential problems. You will be given 3 hours to complete your exam once you begin (access) your exam. You have 3 hours to complete each exam. After that time has expired Blackboard will not close the exam. Please pay close attention to the time as you complete your exam. You will lose 1 point for every minute you exceed the time limit. For example, if you complete an exam in 3 hours and 10 minutes and earn 90 points on the exam, a total of 80 points will be recorded in the gradebook. Please read, study, and understand the lecture notes and textbook material **BEFORE** you begin your lecture quizzes and exams. Studying your lecture notes and textbook **BEFORE** you begin your lecture quiz or exam will greatly enhance your success in the course. If for any reason you experience any kind of technical/Blackboard difficulty while taking your exam and you are unable to complete the exam please contact me immediately by telephone and e-mail. I will be very close to my telephone and computer (e-mail) the entire testing period (9:00 am - 7:00 pm) so that I may deal with your concerns as they arise. Send ALL e-mails using your standard university e-mail account.

If you try to call me and I am not in my office, please leave a message with a telephone number where you can be reached and then send a follow-up e-mail. The point is if you experience any computer or Blackboard problems while taking your exams please contact me via e-mail [lflowers@uncfsu.edu] and telephone [910-672-2253] to get help as soon as possible. I will leave my office at 7:00 pm on exam days. Failure to begin or start the exam during the designated time period will result in a grade of zero.

### **ACADEMIC HONESTY POLICY**

Academic integrity is very important. Please refer to the specific rules regarding violation of the academic honesty policies in the FSU Student Code of Conduct. Before every lecture quiz or exam you will be required to complete the Academic Honesty Policy before being allowed to continue the lecture quiz or exam as shown below. Simply read the instructions and proceed as directed. You will be given 2 points extra credit on each exam for completing the Academic Honesty Policy section and given 1 point extra credit on each lecture quiz for completing the Academic Honesty Policy. A sample Academic Honesty Policy for exams is shown below.

#### **ACADEMIC HONESTY POLICY**

Fayetteville State University (FSU) forbids academic dishonesty. Acts of academic dishonesty will not be tolerated and can result in the failure of a course and dismissal from the University. Academic dishonesty includes: cheating on a test, working with someone else on an exam, doing someone else's work for him or her, and plagiarism. Students who commit acts of academic dishonesty shall be subject to the sanctions outlined in the Fayetteville State University Student Handbook. This policy applies to all students registered at Fayetteville State University during or after their enrollment.

By selecting Yes to the question shown below you agree to adhere to the Academic Honesty Policy. If you do not agree to adhere to the Academic Honesty Policy for FSU you will not be allowed to complete the exam and will receive a grade of two points for the exam.

#### **Extra Credit (2 points)**

1. Do you agree to adhere to the Academic Honesty Policy for FSU?

- A. Yes
- B. No

## Exam Schedule

Exam 1: September 22, 2010 (Wednesday)

Exam 2: October 27, 2010 (Wednesday)

Exam 3: December 1, 2010 (Wednesday)

## B. Lecture Quizzes

Students must complete lecture quizzes on Blackboard after the completion of each chapter. Lecture quizzes will consist of 10 multiple-choice and true/false questions. Lecture quiz questions will be formulated from the lecture notes. There will be a total of 14 lecture quizzes given during the semester of which I will drop your two lowest quiz grades. Thus, only 12 lecture quiz grades will be calculated in your final course score. Lecture quizzes will be worth a total of 10 points each (12 quizzes x 10 points = 120 points).

As you prepare for each quiz please pay close attention to: 1) terms in bold print (underlined or italicized), 2) important diagrams/figures, and 3) important concepts found in the lecture notes. Lecture quizzes can be accessed by selecting the "Lecture Quizzes" button on the homepage for this course. Quizzes will be posted for approximately one week. After you access the quiz you will have 30 minutes to take the quiz.

Failure to complete the quiz in the required time will result in the loss of points. No makeup quizzes will be given. You may use whatever resources you have available, including your lecture notes and textbook. However, be aware that there is a 30 minute time limit for each quiz. You have 30 minutes to complete each lecture quiz. After that time has expired Blackboard will not close the lecture quiz. Please pay close attention to the time as you complete your lecture quiz.

For example, if you complete a lecture quiz in 31 minutes and earn 10 points on the lecture quiz, a total of 9 points will be recorded in the grade book. Lecture quizzes will be made available the same day the lecture is posted (see Fall 2010 Lecture Schedule on page 25). There will be an approximately 7 day window in which to take each quiz.

After that time you will be unable to take the quiz and will receive a grade of zero. Please contact the professor if you have problems accessing the lecture quiz. Please work alone. Once you start the quiz, you must complete it. You cannot stop taking the quiz and then come back to it later. If you are unable to continue your quiz due to power/computer failure please contact me immediately by e-mail or telephone and I will reset your quiz.

## C. Virtual Laboratory Exercises

Most virtual laboratories will consist of 3 components: 1) laboratory exercise, 2) Data Table, and 3) Journal Questions. A total of 375 points can be earned in laboratory. Points can be earned from completion of Data Tables (15 points/lab) and Journal Questions (20 points/lab). There will be a total of 12 virtual laboratories to complete (see Fall 2010 Virtual Laboratory Schedule on page 26). There will be a new virtual laboratory each week of the semester. You will have **1 week** to complete the entire virtual laboratory. Failure to complete the virtual laboratory, complete/submit the Data Table, and complete/submit your Journal Questions in the designated time period (1 week) may result in a grade of zero (partial credit may be given). Three laboratories do not contain Data Tables, they are: Energy in a Cell (Chapters 7/8), DNA and Genes (Chapter 13), and Gene Splicing (Chapters 14/16). You are not required to submit Data Tables for the three laboratories mentioned above, however, you are required to submit the Journal Questions for these laboratories.

As a reminder, your virtual laboratory is complete when you have: followed the procedures outlined in the laboratory exercise, recorded all of the data in the Data Table, answered the Journal Questions, and submitted your Data Table and Journal Questions to the professor to be graded by clicking on the “View/Complete Assignment: Virtual Lab - Exercise Name” link on Blackboard. Refer to the Instructions on Completion and Submission of Virtual Laboratory document on page 10. No assignments will be accepted late, please communicate any potential problems with the professor early to avoid penalty. It is your job to ensure that your assignments were submitted properly. Please read and utilize the Virtual Laboratory Submission Checklist document and the Step-by-Step Guide: Virtual Laboratory Submission booklet (found by clicking the “Course Information” button) to assist in the submission process. **No laboratory manual is required for this course.**

### Instructions on Completion and Submission of Virtual Laboratory

Most virtual laboratories will consist of 3 components: 1) laboratory exercise, 2) Data Table, and 3) Journal Questions. A total of 375 points can be earned in the laboratory portion of this online course. Points can be earned from completion of Data Tables (15 points/lab) and Journal Questions (20 points/lab). There will be a total of 12 virtual laboratories to complete during the semester. There will be a new virtual laboratory each week of the semester. You will have 1 week to complete the entire virtual laboratory and submit the required materials. Partial credit will be given on Data Tables and Journal Questions. Failure to complete the virtual laboratory, complete/submit the Data Table, and complete/submit your Journal Questions in the designated time (1 week) may result in a grade of zero (partial credit may be given).

You must first access the virtual laboratory by clicking on the “Virtual Laboratory – Exercise Name” link. Then you must read and follow the directions carefully in order to complete the laboratory exercise. After you have completed the laboratory exercise, you must record your data in the Data Table window. The Data Table can be accessed by clicking on the small “Data Table” icon located at the bottom (right) of the laboratory exercise. In order to receive full credit, you must record all of the data in the Data Table. Next, answer all of the questions in the Journal Questions window (use arrows to advance questions). The Journal Questions can be accessed by clicking on the small icon shown at the bottom (right) of the laboratory exercise.

Once you are done recording your information on the Data Table and finished answering your Journal Questions you must submit your Data Table and Journal Questions to the professor. All documents must be submitted in as a portable document format (PDF) file. If you do not have a PDF creator program installed on your computer you can install a FREE PDF creator program called [CutePDF](#) on your computer and use it to create PDF files. To access the FREE PDF creator program click on the following link [CutePDF](#). First, you **MUST** download the “Free Converter” then download the “Free Download”. Follow the instructions given to install [CutePDF](#) on your computer. You are not required to download, install, or use CutePDF. You can use ANY PDF creator software you have available. CutePDF merely provides a free alternative for students that do not have a PDF creator program. CutePDF can only be installed on your personal computer(s). You do not have the appropriate administrative rights to install CutePDF on any public computer (e.g., library, computer lab). Please be advised that you are required to submit your assignments as PDF documents or risk the loss of points. PDF files can also be created using FSU computers that lack CutePDF (via [Citrix](#)). The process of creating PDF files using FSU computers that lack CutePDF is somewhat complicated but can easily be done. Contact the professor for helpful hints regarding the creation of PDF files using FSU computers and [Citrix](#). To submit a PDF document using CutePDF or Adobe PDF, simply follow the steps shown below:

1. Once you have completed your Data Table or Journal Questions, click the small “Print” icon located on the bottom (left) of the Journal Questions or Data Table windows and wait for the Print Window to open.
2. In the Print Window select (click) either Adobe PDF or [CutePDF](#) and click “Print”. Do not click the “Submit” icon.
3. Save the file using the header: VL Exercise Number, your full name (type your first and last name only), and the assignment type. For example, if Jane Smith wanted to submit data tables for Virtual Laboratory - Dependent and Independent Variables, she would save the file as: **VL 1 - Jane Smith - DT**. Click “Save”. Save your files to a location that is easy to remember. Files names are character sensitive, it is imperative that you follow the guidelines for saving file names (e.g., maximum 50 total characters [including spaces]).
4. Print a paper copy of your Journal Questions and/or Data Tables to ensure that the “.pdf” document was created properly and for your records (optional). Proceed to step 5.
5. Click on the “View/Complete Assignment: Virtual Laboratory – Exercise Name” link.
6. Under the Assignment Materials area attach your file(s). Use “Browse” to locate your file(s). In this area you can type any comments you may have regarding the assignment(s). If attaching two or more documents you can use the Attach Another File button. Click “Submit” to finish. Click OK. Click OK again to return to the Virtual Laboratory home page. **Once you click “Submit” you cannot go back and alter the submitted assignments.** Click “Save” to stop working and continue working later. Click “Cancel” to quit without saving changes.
7. Confirm the accurate submission of your work by completing the Virtual Laboratory Submission Checklist (located on page 8). Remember, you will receive a grade of zero if the professor is unable to open (view) your laboratory assignments during the grading process.

Graded assignments will appear in the Gradebook. You can click on the actual grade to receive feedback from the professor. Assignments will be graded 1-4 days after the due date. As a reminder, your virtual laboratory is complete when you have:

1. Followed the procedures outlined in the laboratory exercise.
2. Recorded all of the data in the Data Table and answered all of the Journal Questions.
3. Submitted your Data Table and Journal Questions to the professor to be graded by utilizing the View/Complete Assignment link in Blackboard. Please refer to the Grading Rubric for Written Activity Assignments on page 11 when writing your answers to Journal Questions. You **MUST** use complete sentences when answering all of your Journal Questions.

**\*\*Special Note:** Three virtual laboratories do not contain Data Tables, they are: DNA and Genes (Chapter 13), Energy in a Cell (Chapters 7/8), and Gene Splicing (Chapters 14/16). You are not required to submit Data Tables for the three laboratories mentioned above however, you are required to submit the Journal Questions for these laboratories. The maximum number of points obtained from the above three virtual laboratories is 20 points/lab. **No Virtual Laboratory October 11-18 and November 22-December 13.**

### Grading Rubric for Written Activity Assignments

	20-15 Excellent	14-10 (Good)	9-5 (Fair)	4-0 (Poor)
<b>Thoroughness</b>	Answered all questions in the exercise completely and in the appropriate order.	Answered all questions in the exercise but not completely and/or not in the appropriate order.	Answered most of the questions in the exercise but not completely and/or not in the appropriate order.	Did not answer an adequate number of the questions in the exercise.
<b>Supporting Details</b>	Answered all questions in the exercise and provided a substantial amount of relevant details.	Answered all questions in the exercise and provided an adequate amount of relevant details.	Answered most of the questions in the exercise and provided an adequate amount of relevant details.	Answered some of the questions in the exercise and provided an inadequate amount of relevant details.
<b>Demonstrated Understanding of the Assignment</b>	Response demonstrates a thorough understanding of the exercise and is substantiated by several examples from the textbook and/or companion website.	Response demonstrates understanding of the exercise and is substantiated by at least one example from the textbook and/or companion website.	Response demonstrates some understanding of the exercise but is not substantiated by any examples from the textbook and/or companion website.	Response demonstrates very little understanding of the exercise.
<b>Grammar, Mechanics, Spelling, and Sentence Structure</b>	Response is highly polished; no grammar or spelling errors.	Response is polished; maximum of one grammar or spelling error.	Response is adequate; maximum of two grammar or spelling errors.	Inadequate response; more than two spelling or grammar errors.


# Virtual Laboratory Submission Checklist

Completed

I followed the 7 submission procedures outlined in the Instructions on Completion and Submission of Virtual Laboratory (briefly outlined below).

- A. Once you have completed your Data Table or Journal Questions, click the small "Print" icon located on the bottom (left) of the Journal Questions or Data Table window and wait for the Print Window to open.
- B. In the Print Window select (click) either Adobe PDF or [CutePDF](#) and click "Print". Do not click the submit icon.
- C. Save the file using the header: VL Exercise Number, your full name (type your first and last name only), and the assignment type. For example, if Jane Smith wanted to submit data tables for Virtual Laboratory - Dependent and Independent Variables, she would save the file as: **VL 1 - Jane Smith - DT**. Click "Save". Save your files to a location that is easy to remember. Files names are character sensitive, it is imperative that you follow the guidelines for saving file names (e.g., maximum 50 total characters [including spaces]).
- D. Print a paper copy of your Journal Questions and/or Data Tables to ensure that the ".pdf" document was created properly and for your records. Proceed to step 5.
- E. Click on the "View/Complete Assignment: Virtual Laboratory – Exercise Name" link.
- F. Under the Assignment Materials area attach your file(s). Use "Browse" to locate your file(s). In this area you can type in any comments you may have regarding the assignment. If attaching two or more documents you can use the Attach Another File button. Click "Submit" to finish. Click OK. Click OK again to return to the Virtual Laboratory home page. **Once you click "Submit" you cannot go back and alter the submitted assignments.** Click "Save" to stop working and continue working later. Click "Cancel" to quit without saving changes.
- G. Confirm the accurate submission of your work by completing the Virtual Laboratory Submission. Remember, you will receive a grade of zero if the professor is unable to open (view) your laboratory assignments during the grading process.

I followed the procedure outlined below.

- A. Click the appropriate Virtual Laboratory link to return to the recently completed virtual laboratory exercise.
- B. Scroll down and click the [View/Complete Assignment: Virtual Laboratory – Exercise Name](#) link. After clicking the [View/Complete Assignment: Virtual Laboratory – Exercise Name](#) link the following message should appear: "This assignment is complete. Click OK to review the results." Click OK.
- C. Scroll down until you locate the  Assignment Materials section. Click on your attached assignment and wait.
- D. You should see your Data Table and Journal Questions. **If you are unable to view or open your Data Table and Journal Questions then I will also be unable to view or open your Data Table and Journal Questions.** If you are unable to view or open your assignments, contact me immediately so that the problem can be quickly resolved.
- E. If you are able to view or open your assignments then close the window and click OK. Scroll down and click OK again to return to the Virtual Laboratory home page. Congratulations, you just successfully submitted your virtual laboratory assignments!

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## SPECIAL NOTE

No assignments will be accepted late, please communicate any potential problems with the professor in advance (e.g., 2-3 days) to avoid penalty. You will receive a grade of zero if I am unable to open (view) your laboratory assignments during the grading process. Again, if I am unable to open your assignments (for any reason) during the grading process you will receive a zero for that assignment. I typically grade your submitted work 1-4 days after the submission due date. It is your job to ensure that your assignments were submitted properly.

## D. Discussion Board

The Discussion Board will allow each student the opportunity to interact with other students in the course and offer their insights on a variety of topics that relate to the lecture material. Each student can receive a total of 10 points for participation in each discussion board. There will be 11 discussion topics (postings) during the semester. A total of 110 points can be earned in the Discussion Board. Each topic will be posted on Wednesday and discussed for four days. The asynchronous Discussion Board will close on Saturday of every week at 11:59 pm. Transcripts of the discussion board will be reviewed by the professor to assess the level of participation by each student. Failure to participate during Discussion Board in the designated time [Wednesday – Saturday (11:59 pm)] will result in a grade of zero (0) for the week. Refer to Grading Rubric for Discussion Postings on page 14 of the Modern Biology Course Syllabus to determine the point breakdown and student expectations regarding the Discussion Board. An entire list of Discussion Board topics are listed on page 15 of the Modern Biology course syllabus. A minimum of 2 comments (at two different times) are required per week. If you only provide one comment you will be given a grade of zero for the week. One comment must pertain to the discussion board topic, the other comment must be in response to another student's comment. When you respond to a classmate's post please use the name of the person to whom you are responding (e.g., John Smith,...). If you do not understand the Discussion Board Participation Policy please contact me and I will explain this policy in detail. Failure to post two comments (1 original, 1 response) will result in a grade of zero for the week. Failure to follow these rules WILL result in loss of points. If you combine your original comment and your response in a single post you will receive a grade of zero. Use of information from the Internet is acceptable however, you must provide original observations, simply copying information from the Internet and pasting that information into the thread without critical analysis of that information is unacceptable and may result in a grade of zero. You can post a comment by clicking "Reply" or by clicking on "Thread" to initiate a discussion regarding the Discussion Board topic.

### Participation in Topic Discussions

You are required to participate in the Discussion Board forums during the semester. The dates of the required discussion sessions are listed in the Discussion Board Topic List (p. 15). I will monitor these discussions and will rate students on both the quality and quantity of their involvement. The forums will be open for a limited time and students are expected to keep track of the forums and participate promptly without prodding from me. You are required to review the lecture notes and perform the appropriate readings for each chapter in the textbook before participation in the discussion. The lecture notes are found under the "Course Documents" and "Assignments" buttons in the Blackboard course site and are identified in the course outline of this syllabus.

When commenting on a classmate's post make sure that you actually comment on the specific intellectual strengths (what do you like about it) and weaknesses (what don't you like about it) of the post. Simply stating that you "like their post" is not sufficient and will result in the loss of points. Your response to a classmate's post must contain at least 150 words (you will lose at least 5 points if your individual response posts are less than 100 words). Lastly, remember Discussion Board topics are posted from Wednesday (8:00 a) until Saturday (11:59 p) of each week. **Failure to follow the above policies WILL result in the loss of points.**

Make sure you include the person's name you are responding to in the actual post. Most of you do a good with this but some of you fail to include the name of the person in the post. Some of you write the person's name in the Subject line (e.g., Post: DB #1 - John Smith). Please do not continue this practice. Write the person's name in the post (e.g., John Smith,). Write your response as if you were writing a letter to one of your classmates (you will lose at least 3 points if you do not follow this rule). Contact the professor if you do not understand the above information.

### Respect for Classmates

We are each required to show proper respect toward each other. Respect is demonstrated by adhering to the following rules:

1. Do not express opinions which are intended to incite anger and violence.
2. Do not use racist, sexist, or heterosexist remarks or insinuations.
3. Complete all the reading assignments on time and only participate in discussions on the material for which you have already read. Do not participate in any form of academic misconduct or plagiarism.

As stated above each student is expected to post at least two comments regarding the discussion board topic. Students will be graded on their ability to illuminate the high points of the material and to form questions about the topic after reading the material, their active participation, and the quality of their posts. Group discussions will be monitored by the professor. If you do not post your comment and replies during the time period for each posting you will receive a grade of zero (0) for that specific posting. Emergency situations will be addressed on an individual basis.

### Q & A (Questions and Answers – Student to Professor)

Q & A provides students with a forum for posting questions about the course to the professor. Your questions (postings) will be monitored daily. Responses to your questions or concerns will be made by the professor within 24-48 hours. Frequently asked questions will be placed in the FAQs portion of the Discussion Board. Students should post all questions about the course on Q & A, not FAQs (Students can only read the information on FAQs). Students can also call (901-672-2253), e-mail (lflowers@uncfsu.edu) the professor questions about the course.

### FAQs (Professor to Student)

The purpose of FAQs or Frequently Asked Questions is to present the questions and answers to common student concerns or issues. Please check FAQs within the Discussion Board periodically during the semester.

### Connection Café (Student to Student)

This is an asynchronous environment to socialize with your classmates. Connection Cafe provides students with a forum to interact with each other (e.g., ask questions). Remember, proper netiquette and good manners apply. To post a comment click on the “Thread” link.

## Grading Rubric for Discussion Postings

	10 (Excellent)	9 (Good)	8 (Fair)	7 (Poor)
<b>Contribution to the Classroom</b>	<b>Posting is insightful, thorough, and interesting.</b>	<b>Posting is thorough and interesting.</b>	<b>Posting is interesting but lacks insight and depth.</b>	<b>Posting is uninteresting and/or too brief for the assignment.</b>
<b>Inspires Reply Postings from Other Students</b>	<b>A serious effort is made to frame the discussion posting in such a way as to encourage others to reply. Posting generates questions and opens up new avenues for discussion.</b>	<b>A serious effort is made to frame the discussion posting in such a way as to encourage others to reply.</b>	<b>Some effort is made to frame the discussion posting in such a way as to encourage others to reply.</b>	<b>No effort is made to frame the discussion posting in such a way as to encourage others to reply.</b>
<b>Demonstrated Understanding of the Reading Assignment</b>	<b>Posting demonstrates a thorough understanding of the reading assignment and is substantiated by several examples from the textbook and/or companion website.</b>	<b>Posting demonstrates an understanding of the reading assignment and is substantiated by at least one example from the textbook and/or companion website.</b>	<b>Posting demonstrates an understanding of the reading assignment but is not substantiated by examples from the textbook and/or companion website.</b>	<b>Posting demonstrates very little understanding of the reading assignment.</b>
<b>Grammar, Mechanics, Spelling, and Sentence Structure</b>	<b>Posting is highly polished; no grammar or spelling errors.</b>	<b>Posting is polished; maximum of one grammar or spelling error.</b>	<b>Posting is adequate; maximum of two grammar or spelling errors.</b>	<b>Inadequate posting; more than two spelling or grammar errors.</b>

## FALL 2010 DISCUSSION BOARD TOPIC LIST

Week	Topic	TLW Chapter (pages)
1 (Aug. 18–21)	<b>No Discussion Board</b>	
2 (Aug. 25–28)	<b>No Discussion Board</b>	
3 (Sep. 1–4)	What should be done to reduce acid rain in the US?	3 (p. 54)
4 (Sep. 8–11)	What was the most important observation that led to the discovery of the structure of DNA?	4 (pp. 67–69)
5 (Sep. 15–18)	Do you feel enough research efforts are being done to help cure cystic fibrosis and other diseases such as AIDS for which we still do not have cure? If, so what is your solution to addressing finding a cure for deadly diseases?	5 (p. 84)
6 (Sep. 22–25)	The greenhouse effect is the process believed to increase global warming in which carbon dioxide and other gases (e.g., methane) that occur in the earth's atmosphere transmit radiant energy from the sun but trap the longer wavelengths of infrared light, or heat, and prevent them from radiating into space. What should be done to help reduce global warming?	40 (p. 794)
7 (Sep. 29–Oct. 2)	Recently, we have heard many news reports on the use of performance-enhancing drugs in professional athletics. What are your opinions on the use of performance-enhancing drugs in the world of professional sports?	35 (pp. 684)
8 (Oct. 6–9)	Based on your understanding of mitosis, what type of drugs could be used to treat cancer? Specifically, how would your drug help prevent cancer?	9 (pp. 166–169)
9 (Oct. 13–16)	<b>No Discussion Board</b>	
10 (Oct. 20–23)	With the completion of the Human Genome Project scientists now know the nucleotide sequences of all the genes in the human body. With this information we can now show a person's predisposition to a particular illness or disease. Do you think Health Maintenance Organizations (HMOs) should have knowledge of a person's genetic map? How could this affect who an HMO decides to grant insurance?	13 (pp. 233–237, 273)
10 (Oct. 27–30)	What are the potential advantages to genetic engineering? What are the potential disadvantages to genetic engineering?	14 (pp. 251–270)
11 (Nov. 3–6)	Based on your knowledge of embryonic stem cells, do you feel that stem cell research is ethical? Explain your response.	16 (pp. 287–300)
12 (Nov. 10–13)	What are your views on the theory of evolution?	17 (pp. 303–313)
13 (Nov. 17–20)	Based on your immunological understanding of AIDS, what would be an effective therapeutic treatments to eliminate the disease?	33 (pp. 648–649)
14 (Nov. 24–27)	<b>No Discussion Board</b>	
15 (Dec. 1–4)	<b>No Discussion Board</b>	
16 (Dec. 8–11)	<b>No Discussion Board</b>	

## E. Essay

Each student must write an essay that explores the major human body systems. Each essay will be worth a total of 100 points. The guidelines for the essay are shown below. Click the "Essay" button on the Blackboard course site to access important information regarding the essay.

1. Use uppercase **BOLD** headers in the center of the page for the major section headers (e.g., **INTRODUCTION, REFERENCES**)
2. Use subheaders to separate sections using Title Case **Bold** letters (e.g., **Digestive System**); section subheaders should be left justified
3. Indent the first word of each new paragraph; double-space text; use complete sentences; Do not include quotes or RUNNING HEADS in your essay.
4. Only the title page and reference page should appear on a separate page; Do not include quotes in your essay (paraphrase information from other sources)
5. Use the American Psychological Association (APA) citation style to format your essay
6. Essay should contain approximately 7-10 total pages; only address the topic of the essay
7. Use Times New Roman (size 12) or Arial font (size 11); use 1 inch margins on all sides
8. Include page numbers (center-bottom) on every page except the title page
9. Your essay must include at least 2 references from journals (e.g., journal articles); do not reference websites (e.g., wikipedia); your reference page should appear on a separate sheet; you can include other references (e.g., books, journals) in your essay, but you must have 2 actual journal articles as references
10. Web citations (e.g., Wikipedia) are not allowed in your essay
11. No page inflation (DO NOT INCLUDE figures, tables, pictures, diagrams, illustrations, graphs, etc.)
12. Paraphrase information (do not plagiarize - do not cheat)
13. Use Microsoft Word to construct your essay
14. Consult Chapters 28-35 in your textbook when constructing your essay; **Submit your essay as a PDF file** (just like the virtual laboratories)
15. Submit an electronic copy of your essay by scrolling down and clicking on the "[View/Complete Assignment: Modern Biology Essay Submission Center](#)" link; Submit electronic submission only.
16. Failure to submit an electronic copy of your essay on or before the due date (November 30, 2010 [Tuesday] – 11:59 pm) will result in a grade of zero on this assignment; essays will be processed through [Turnitin®](#) to check for plagiarism; plagiarized essays will receive a zero (learn more about [Turnitin®](#) and the Plagiarism Policy by clicking on the Course Policies button); Do not submit your essay to me via e-mail. **Simply click on the "[View/Complete Assignment: Modern Biology Essay Submission Center](#)" link (below) to submit your essay.**
17. Failure to follow the guidelines above will result in the loss of points on your essay; If you have ANY questions regarding this assignment contact Dr. Flowers for clarification immediately
18. Be consistent with font type (choose either Arial or Times New Roman). Use the same font throughout the entire essay

**DUE DATE: Nov. 30, 2010 (by 11:59 pm)**

**Using the above guidelines address the following issue:**

Describe the major human body systems (e.g., skeletal, circulatory, respiratory, digestive, excretory, immune, nervous, and endocrine). In your essay provide a definition of each major body system (discussed in Chapters 28-35 of your textbook) and fully describe the components (e.g., organs, tissues, cells) that make up each major human body system.

## Course Grading System

As stated earlier, your final grade in this course will be determined on the basis of three lecture exams (300 total points), 12 lecture quizzes (120 total points), 12 virtual laboratory exercises (375 total points), participation in 11 discussion boards (110 total points), and 1 essay (100 total points). The maximum number of points you can earn for the course is 1005 points. The course grading system is shown below:

### Course Grading System

	Total Points	Percentage
Exam 1	100	10%
Exam 2	100	10%
Exam 3	100	10%
Lecture Quizzes	120	12%
Virtual Laboratory	375	37%
Discussion Board	110	11%
Essay	100	10%
Maximum Course Points/Percentage: 1005		100%

### Assignment Grading Policy

All of your assignments will be graded 1-4 days after the submission date or due date. For example, if the due date for an assignment is October 4, 2010 (11:59 pm) then you might not see a grade until October 8, 2010 (11:59 pm). This grading policy (1-4 days after submission) will be in place the entire semester. During the 1-4 day period please do not contact me regarding grades. If your grade is not posted after the 1-4 day period please contact me so that I can resolve the problem. After the entire 4-day period if you feel your grade is incorrect please contact me via e-mail so that I can investigate your inquiry.

The course grading scale is shown below:

### Course Grading Scale

1005 - 925	=	A
924 - 810	=	B
809 - 656	=	C
655 - 480	=	D
479 - 000	=	F

## ACADEMIC HONESTY AND INTELLECTUAL INTEGRITY

Students are expected to hold the highest standards of honesty and integrity according to the FSU Code of Student Conduct published in the undergraduate and graduate catalogs. Any student that engages in academic misconduct (e.g., plagiarism, cheating, etc.) will be subjected to established procedures outlined in the FSU Code of Student Conduct.

## **POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES AND SPECIAL NEEDS**

Students requesting special classroom accommodations must register with the Center for Personal Development (CPD). The CPD will coordinate appropriate individualized services. Individuals needing assistance from the University Center for Personal Development should complete the Services for Students with Disabilities form and return it to Fred Sapp at the Center for Personal Development, located in the Spaulding Building at FSU. The Center for Personal Development office hours are from 8:00 a.m. to 5:00 p.m. Mon-Fri. The telephone number is (910) 672-1222. Several procedures and guidelines have been established to assist students with disabilities in meeting their needs. Additional procedures and guidelines will be established as needed and existing procedures and guidelines will be periodically evaluated. Additionally, students requiring special accommodations are strongly encouraged to notify the professor so that appropriate actions can be taken to ensure your success in this course.

### **ADDITIONAL COURSE POLICIES**

As a student in this course, you are responsible for all assigned work. Students are expected to complete assignments on time. Work submitted late will not be accepted, unless accompanied by a valid written excuse (e.g., doctor's note) or unless prior arrangements have been made with the professor.

#### **VI. STUDENT EXPECTATIONS**

1. Students are expected to read the syllabus and understand all of the course policies. Students must submit all assignments on time. Failure to do so will result in a grade of zero. It is the responsibility of the student to obtain lecture notes, announcements, and other course documents or assignments.
2. Students are expected to be respectful to fellow classmates. Students are expected to display appropriate conduct at all times and follow the rules established by the FSU Code of Student Conduct. Students are expected to actively participate in the Discussion Board.
3. All course assignments will be made available on the dates listed in the syllabus. It is your responsibility to access all course information at the appropriate time, if you have difficulty accessing any document/assignment please seek assistance from the professor immediately ([lflowers@uncfsu.edu](mailto:lflowers@uncfsu.edu) or (910) 672-2253 [leave a message if unavailable]).
4. This is an online course so there is a great deal of independence that comes with completing the assignments. However, there are specific due dates to help guide you so you don't get behind. Pay close attention to those due dates, they are there to keep you on track.
5. Students are expected to have read the material assigned for each date prior to completing all assignments. Demonstration of your compliance with the assigned materials will be done in a number of ways, including: exams, quizzes, and postings of comments and replies.
6. It is important that you post comments and replies on the Discussion Board. This benefits you in three ways: 1) it offers you an opportunity to voice your point of view on a specific topic, 2) it allows you the chance to analyze your point of view with others, and 3) it can influence your final grade.
7. Students are expected to complete their own work. Acts of academic dishonesty will not be tolerated and can result in the failure of this course and dismissal from this course and the University. Academic dishonesty includes: cheating on a test, working with someone else on an assignment when you're not allowed to, using someone else's work as your own (or doing someone else's work for him or her), and plagiarism. See page 8 for information regarding the Academic Honesty Policy that appears before every online exam or lecture quiz.
8. Students are responsible for understanding all pertinent students policies found in the Student [Code of Conduct \(2006-2007\)](#) and the [FSU Undergraduate Student Catalog \(2006-2009\)](#).

## VII. SPECIFIC COURSE OBJECTIVES

In accordance with the **Conceptual Framework** of the School of Education which is aligned with NCATE (National Council for Accreditation of Teacher Education) standards, upon completion of this course the pre-service facilitator of learning will:

### Knowledge

Demonstrate an understanding of the content knowledge, how it relates to other disciplines, and to everyday living. Demonstrate in-depth knowledge of the content that they plan to teach.

### Technology

Apply new technologies to teaching, learning, and research.

### Reflection

Reflect upon his/her science knowledge, and make improvements as needed. Demonstrate a commitment to ongoing professional development in all areas of science learning and instruction. The following program standards from the National Science Teachers Association that are directly related to the Content Knowledge standard for NCATE will serve as guides for structuring the objectives and competencies of this course.

1. **Content:** The program prepares candidates to structure and interpret the concepts, ideas and relationships in science that are needed to advance student learning in the area of licensure as defined by state and national standards developed by the science education community. Content refers to:
  - Concepts and principles understood through science.
  - Concepts and relationships unifying science domains.
  - Processes of investigation in a science discipline.
  - Applications of mathematics in science research.
2. **Nature of Science:** The program prepares teachers to engage students in activities to define the values, beliefs and assumptions inherent to the creation of scientific knowledge within the scientific community, and contrast science to other ways of knowing. Nature of Science refers to:
  - Characteristics distinguishing science from other ways of knowing.
  - Characteristics distinguishing basic science, applied science, and technology.
  - Processes and conventions of science as a professional activity.
  - Standards defining acceptable evidence and scientific explanation.
3. **Inquiry:** The program prepares candidates to engage students regularly and effectively in science inquiry and facilitate understanding of the role inquiry plays in the development of scientific knowledge. Inquiry refers to:
  - Questioning and formulating solvable problems.
  - Reflecting on, and constructing, knowledge from data.
  - Collaborating and exchanging information while seeking solutions.
  - Developing concepts and relationships from empirical experience.
4. **Context of Science:** the program prepares candidates to relate science to the daily lives and interests and to a larger framework of human endeavor and understanding. The context of science refers to:
  - Relationships among systems of human endeavor including science and technology.
  - Relationships among scientific, technological, personal, social, and cultural values.
  - Relevance and importance of science to the personal lives of students.

## LEARNING OUTCOMES

Additionally, upon completion of this course all students will be able to:

- Demonstrates an understanding of the way the science of biology is divided into various divisions.
- Applies the scientific method to appropriate problem situations by the use of observation and experiment.
- Explain the different levels of biological organization. Explain the four types of macromolecules.
- Understands the chemical basis of life. Explain the unique properties of water.
- Arranges the major groups of organisms into distinct categories based on their general characteristics.
- Contrasts the theory of spontaneous generation with the cell theory.
- Relates the surface area ratio of cells to their ability to carry on the life processes.
- Analyzes information about the different types of cells and determines their common characteristics.
- Illustrates the ways in which the prokaryotic cell differs from the eukaryotic cell.
- Explains the different parts of the cell. Understands the biological basis of heredity.
- Explains replication, transcription, translation.
- Explains active and passive transport.
- Evaluates the effect of osmosis on different kinds of cells and tissues.
- Assesses the effect of concentration gradients on the movement of water and ions in living systems.
- Illustrates the ways energy is transferred from one organic system to another.
- Evaluates the relationship between bond energy and stored chemical potential energy in organic compounds.
- Assess the effect of various environmental factors such as temperature, pH, and water that affect enzymes.
- Compares and contrasts the process of photosynthesis with cellular respiration.
- Describe examples of gene cloning, genetic engineering, and uses of stem cells.
- Explain terms genotype, chromosome, phenotype, and genes.
- Contrasts the process of mitosis with meiosis in complex cells.
- Assesses the effect of sexual and asexual reproduction on populations of organisms.
- Uses the laws of genetics to solve genetic problems involving monohybrid and dihybrid crosses.
- Demonstrates an understanding of the ways genetic information is coded in an transcribed from DNA.
- Illustrates the process of protein synthesis in a cell containing DNA, RNA, and cellular energy.
- Describes the factors that can cause a change in the genetic makeup of a population.
- Explain the terms ecology and evolution.
- Understand photosynthesis, glycolysis, Krebs cycle, electron transport chain, and chemiosmosis.
- Explains the process of natural selection. Explains how species can be formed.
- Knows the main characteristics that distinguish viruses from bacteria and bacteria from Protista.
- Understands the harmful and beneficial effects of microorganisms.
- Identifies the components of blood and traces its flow through the human circulatory system.
- Explain how the body fights disease.
- Identifies the organs in the human digestive system and explains their functions.
- Understands the action of a respiratory system, by identifying its parts and indicating functions.
- Understands the role of the liver and kidneys in maintaining homeostasis.
- Sketches a neuron and identifies its cell body, axon, and dendrites.
- Describes how a nervous impulse is transmitted.
- Lists the major parts of the vertebrate brain and indicates an important function of each.
- Understands the effect of various drugs on human behavior and the human nervous system.
- Describes how a muscle contracts.
- Names the main endocrine glands, indicates where each is located in the body, and gives their functions.
- Identifies the parts of the female and male reproductive systems and explains how they function.
- Understands how density of populations may be regulated.
- Illustrates the flow of energy through an ecosystem.
- Describes the general characteristics of the world's biomes and how nutrient cycles operate in them.
- Demonstrates understanding of how human activities affect the biosphere.

## **COURSE COMPETENCIES**

This course addresses the following competencies specified by the North Carolina Department of Public Instruction.

### **COURSE COMPETENCIES (SDPI)**

The specific competencies required to obtain middle grades science licensure (grades 6-9). The student should acquire understanding of and have opportunities to investigate:

- Kingdoms of living things. Evolution, including evidence and mechanisms of organic evolution.
- Growth, development, reproduction, and heredity. The cell and cellular processes.
- Ecology and the environment, including the study of populations, communities, and ecosystems.

The specific competencies required to obtain high school science licensure (grades 9-12) are listed below. The Student should acquire understanding of and have opportunities to investigate:

- The major concepts and principles of biology, including concepts in anatomy, physiology, behavior, evolution, genetics, cell biology, microbiology, diversity, growth, human biology, ecology, and the environment. Students should demonstrate competence and understanding in their ability to investigate.
- The difference between living/non-living things and scientific theories for the origin of life earth.
- The cell, including chemical composition, the structure and function of cell parts, the role of cells in growth, reproduction and heredity, and methods for the study of cells.
- The chemical processes of life, including respiration, digestion, photosynthesis, protein synthesis, and methods for studying chemical processes.
- Homeostasis at the cell, organism, and population levels.
- Anatomy and physiology of representatives of major taxonomic groups.
- The response of organisms to environmental variations.
- The diversity and classification of organisms. The relationship of biology to human health.
- Relating the concepts and principles of biology to contemporary, historical, environmental, technological, and societal issues.
- Locate resources; design and conduct inquiry-based, open-ended investigations in biology; interpret findings, communicate results and make judgments based on evidence.

### **COURSE COMPETENCIES (NSTA)**

Preparation to teach science should enable high school level teachers to provide all students with a holistic, interdisciplinary understanding of science, as well as to:

- Relate science to contemporary events, research results, and the student's daily lives.
- Provide students with information about career opportunities in science and technology.
- Fulfill the professional and legal obligations of science teaching.

Use a variety of instructional strategies, science curricula and community resources, also:

- Adapt instruction to the needs of a wide range of learner abilities, backgrounds and goals.
- Plan instruction based on prior knowledge and conceptualizations of the students.
- Use electronic educational technology, including computers, interactive video, telecommunications and others.
- Foster the development of decision-making and value- analysis skills need to explore issues and relationships involving scientific, technological, societal, and individual human issues and cultural values.

This course also addresses the following INTASC (Interstate New Teacher Assessment and Support Consortium) standards as they relate to the facilitation of learning in the sciences.

## Standard 1: Content Knowledge

The teacher understands the central concepts, tools of inquiry, and the structures of the discipline he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

### Knowledge

- Understands major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the discipline he/she teaches.
- Understands how students' conceptual frameworks and their misconceptions for an area of knowledge can influence their learning.
- Relate his/her disciplinary knowledge to other subject areas.

### Dispositions

- Realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. He/she seeks to keep abreast of new ideas and understandings in the field.
- Appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the knower.
- Enthusiasm for the discipline he/she teaches and sees connections to everyday life.
- Committed to continuous learning and engages in professional discourse about subject matter knowledge and children's learning of the discipline.

## Standard 4: Critical Thinking

The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

### Knowledge

- Understands the cognitive processes associated with various kinds of learning (critical and creative thinking, problem structuring and solving, invention, memorization, and recall) and how these processes can be stimulated.
- Understands standards and techniques, along with advantages and limitations, associated with various instructional strategies (cooperative learning, direct instruction, discovery learning, whole group discussion, independent study, interdisciplinary instruction).
- Knows how to enhance learning through the use of a wide variety of materials as well as human and technological resources (computers, audio-visual technologies, videotapes and discs, experts, primary documents, artifacts, texts, reference books, literature, and other resources).

### Dispositions

- Values the development of students' critical thinking, independent problem solving, and performance capabilities.
- Values flexibility and reciprocity in the teaching process as necessary for adapting instruction to student responses, ideas, and needs.

## VIII. COURSE OUTLINE

### FALL 2010 LECTURE QUIZ SCHEDULE

<u>Week</u>	<u>Chapter(s)</u>	<u>Lecture Topic(s)</u>	<u>Reading (TLW)</u>
(Aug. 19–Aug. 30)	1	The Science of Biology	pp. 1–22
(Aug. 30–Sep. 7)	3	The Chemistry of Life	pp. 43–58
(Sep. 7–Sep. 13)	4	Molecules of Life	pp. 59–76
(Sep. 13–Sep. 20)	5/6	Cells & Energy and Life	pp. 77–120

#### **EXAM 1 – September 22, 2010 (Wednesday)**

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(Sep. 20–Sep. 27)	7	Photosynthesis: Acquiring Energy from the Sun	pp. 121–138
(Sep. 27–Oct. 4)	8	How Cells Harvest Energy from Food	pp. 139–156
(Oct. 4–Oct. 11)	9/10	Mitosis & Meiosis	pp. 157–186
(Oct. 11–Oct. 18)	11	Foundations of Genetics	pp. 187–216
(Oct. 18–Oct. 25)	13	How Genes Work	pp. 233–250

#### **EXAM 2 – October 27, 2010 (Wednesday)**

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(Oct. 25–Nov. 1)	14	Gene Technology	pp. 251–270
(Nov. 1–Nov. 8)	16	The Revolution in Cell Technology	pp. 287–302
(Nov. 8–Nov. 15)	17	Evolution and Natural Selection	pp. 303–334
(Nov. 15–Nov. 22)	38	Populations and Communities	pp. 745–770
(Nov. 22–Nov. 29)	33	How the Animal Body Defends Itself	pp. 631–652
(Nov. 29–Dec. 6)		<b>No Lecture Notes This Week</b>	
(Dec. 6–Dec. 13)		<b>No Lecture Notes This Week</b>	

#### **EXAM 3 – December 1, 2010 (Wednesday)**

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**Note:** The professor of Modern Biology reserves the right to modify the course syllabus at any time during the semester. In the event that modifications are made to the syllabus, advance notice will be given via e-mail and course announcements.

**Key:** TLW – The Living World (6<sup>th</sup> ed.)

## FALL 2010 VIRTUAL LABORATORY SCHEDULE

<b>Week</b>	<b>TLW Chapter(s)</b>	<b>Laboratory Topic(s)</b>	<b>Reading (TLW)</b>
(Aug. 19–Aug. 30)	1	Dependent and Independent Variables (VL 1)	pp. 1–22
(Aug. 30–Sep. 7)	13	<b>**DNA and Genes (VL 2)</b>	pp. 233–250
(Sep. 7–Sep. 13)	6	Enzyme Controlled Reactions (VL 3)	pp. 109–120
(Sep. 13–Sep. 20)	7/8	<b>**Energy in a Cell (VL 4)</b>	pp. 121–156
(Sep. 20–Sep. 27)	9	Cell Reproduction (VL 5)	pp. 157–172
(Sep. 27–Oct. 4)	11	Punnett Squares (VL 6)	pp. 187–216
(Oct. 4–Oct. 11)	14	Knocking Out Genes (VL 7)	pp. 251–270
(Oct. 11–Oct. 18)		<b>No Virtual Laboratory This Week</b>	
(Oct. 18–Oct. 25)	14/16	<b>**Gene Splicing (VL 8)</b>	pp. 251–270 pp. 287–302
(Oct. 25–Nov. 1)	17	Natural Selection (VL 9)	pp. 303–334
(Nov. 1–Nov. 8)	18	Classifying Using Biotechnology (VL 10)	pp. 335–350
(Nov. 8–Nov. 15)	38	Communities and Biomes (VL 11)	pp. 745–770
(Nov. 15–Nov. 22)	33	Virtual Pathology (VL 12)	pp. 631–652
(Nov. 22–Nov. 29)		<b>No Virtual Laboratory This Week</b>	
(Nov. 29–Dec. 6)		<b>No Virtual Laboratory This week</b>	
(Dec. 6–Dec. 13)		<b>No Virtual Laboratory This Week</b>	

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**\*\*Special Note:** Three virtual laboratories do not contain Data Tables, they are: DNA and Genes (Chapter 13), Energy in a Cell (Chapters 7/8), and Gene Splicing (Chapters 14/16). You are not required to submit Data Tables for the three laboratories mentioned above however, you are required to submit the Journal Questions for these virtual laboratories. The maximum number of points obtained from the above three virtual laboratories is 20 points/lab. **No Virtual Laboratory October 11-18 and November 22-December 13.**

- Notes:**
1. The professor of Modern Biology reserves the right to modify the course syllabus at any time during the semester. Advance notice will be given when changes to the syllabus are made via e-mail and course announcements.
  2. Any laboratory assignments (Data Table & Journal Questions) received after the due date will receive a grade of zero. Please submit all work on time to avoid penalty.

**Key:** TLW – The Living World (6<sup>th</sup> ed.)

## **IX. ADDITIONAL COURSE POLICIES**

### **Incomplete Grades**

The grade of "I" is assigned when a student has maintained a passing average but for reasons beyond his or her control, is unable to complete some specific course requirement(s) such as a report, field experience, experiment, or examination. An "I" grade must be removed before the expiration of the first nine weeks of the student's next regular semester (fall or spring) of enrollment, or within twelve months of the last day of the semester or term in which the "I" was assigned, whichever comes first. If the "I" grade is not removed within the stipulated time limit, the grade will be converted to a grade of "F." Students are responsible for initiating the actions necessary to remove "I" grades.

"I" grades earned in eight-week terms (Weekend and Evening College, Fort Bragg Center, Seymour Johnson AFB or other distance learning sites) must be removed before the end of the next term in which the student is enrolled, or within twelve months of the last day of the term in which the "I" was assigned, whichever comes first. Students are responsible for initiating the actions necessary to remove "I" grades. An extension to the time limit for removing an Incomplete grade will be granted only once, and only under extremely unusual circumstances. A request for such an extension must be made in writing, with appropriate documentation, to the instructor of the course, and must be approved by the instructor, his or her department chair, and dean, and submitted to the Office of the Registrar prior to the deadline for removing the Incomplete grade. Deferred final examination. Students not present at an officially-scheduled final exam must contact the instructor of the course before the end of the final exam week to request a deferred final examination. Students who need to defer an examination must furnish valid support for the request. If the deferred examination is granted, a grade of "I" will be assigned. If the instructor is unavailable, the student should seek assistance from the instructor's department chair or dean in contacting the faculty member before the end of the final exam week.

### **Extension Grade Policy**

An Extension Grade may be assigned in lieu of a final grade of D or F for undergraduate students taking the following courses for the first time at Fayetteville State University: ENGL 108, ENGL 110, ENGL 120, MATH 121, MATH 123, MATH 124, PHIL 110, UNIV 110, ASTR 111, ASTR 112, NSCI 110, **NSCI 120**, BIOL 110, BIOL 130, BIOL 150, CHEM 140, CHEM 160, PHYS 111 and PHYS 112. The Extension Grade will be designated as "EX D" or as "EX F" and is not calculated into the student's Grade Point Average. Any student requesting an Extension Grade must sign an Extension Grade Contract with the instructor not later than the end of the fifth week of the semester, or not later than the end of the first week of each summer term. To be eligible for the Extension Grade, a student must complete all requirements for the course and all requirements of academic support services. When a student receives an Extension Grade, the student must re-enroll for the course in the next semester that the student matriculates at the university. If the student does not re-enroll in the course, the Extension Grade will revert to the original grade of D or F, and will be calculated into the student's Grade Point Average.

### **University Withdrawal**

Students wishing to withdraw from all of their classes for a semester/term must withdraw from the university according to the official university withdrawal process. Cessation (ceasing) of attendance does not constitute official withdrawal from the university. The student must initiate the university withdrawal process at the Center for Personal Development, located in the Spaulding Health Services Building. Students must be cleared by the Financial Aid Office and Business Office and the withdrawal must be approved by the student's dean. The official date of withdrawal is the date that the completed university withdrawal form is submitted to the Registrar's Office. Depending on the official date of withdrawal a student may receive partial refund of tuition and fees. (See "Expenses" for more information on the university withdrawal process and refunds.)

## Class Withdrawal

Students may withdraw from individual classes until the deadline each semester, term, or session. (See Academic Calendar [below] for specific dates.) Students who complete the class withdrawal process will receive a grade of W. Tuition and fees are not adjusted for withdrawing from individual classes. Students are required to earn at least 67% of their attempted hours each semester to maintain financial aid eligibility so that students who withdraw from more than 33% of their attempted hours in a semester will lose financial aid. Failure to attend class does not constitute official withdrawal from that class.

Fall 2010 Semester		
August 25	Wednesday	Late registration ends; tuition/fees will not be reduced for W from individual classes after this date; No charge for classes dropped before deadline; students are not permitted to attend classes for which they are not registered
August 26	Thursday	Class withdrawals begin; Undergraduate students are permitted to W from no more than five courses with no impact on GPA. Hours included in attempted hours for financial aid. (See "Satisfactory Academic Progress.") No adjustment of tuition/fees for W from individual classes.
August 26	Thursday	University withdrawal (W from all classes) begins; WU grades for all classes with no impact on GPA. Hours counted as attempted hours for financial aid eligibility. (See "Satisfactory Academic Progress.") Tuition/fees may be adjusted based on date of WU. See "Expenses" for WU schedule. Students who withdraw from the university remain eligible to enroll in immediate next semester. Students not enrolled for one or more semesters must apply for readmission.
September 6	Monday	Labor Day - University closed
September 14	Tuesday	Fall Convocation (2:15 pm - 3:30 pm)
October 7	Thursday	Midterm exams begin
October 13	Wednesday	Midterm exams end
October 15	Friday	Midterm break begins - No classes - university open
October 18	Monday	Midterm break ends - No classes - university open
October 29	Friday	Deadline for withdrawing from class(es); Undergraduate students are permitted to withdraw from no more than 5 courses with no impact on GPA. Hours counted as attempted hours. No adjustment of tuition/fees for withdrawal from individual classes.
October 30	Saturday	Homecoming
November 11	Thursday	Veteran's Day - University closed
November 17	Wednesday	Deadline for WU (all classes); WU grades for all classes with no impact on GPA. Hours counted as attempted hours for financial aid eligibility. (See "Satisfactory Academic Progress.") Tuition/fees may be adjusted based on date of WU. See "Expenses" for WU refund schedule. Students who W from the university remain eligible to enroll in the immediate next semester. Students not enrolled for one or more semesters must apply for readmission.
November 25-26	Thursday-Friday	Thanksgiving holiday - University closed
November 29	Monday	Final exams for graduating seniors begin
December 3	Friday	Last day of classes
December 4	Saturday	Final exams begin (for students not graduating)
December 4	Saturday	Final exams for graduating seniors end
December 6	Monday	Final grades for graduating seniors due
December 10	Friday	Final exams end (for students not graduating)
December 11	Saturday	Commencement (9:00 am)
December 13	Monday	Final grades due for students not graduating

## Revision of Grades – Student Responsibilities

### WN GRADE DISCONTINUED:

- WN - Withdrawal due to non-attendance - discontinued, effective August 16, 2007. STUDENTS: Do not expect faculty to withdraw you for non-attendance. Drop or withdraw\* from classes according to the deadlines published in the catalog. \*See warning below about class withdrawals.

NEW TYPE OF GRADE: INTERIM GRADES – (New name for “midterm grade,” with additional purposes). Interim grades will be assigned from the first week of the semester until the deadline for class withdrawals. Interim grades are used for informational and warning purposes only; they are not part of your permanent transcript and have no effect on your GPA. Instructors may assign interim grade of F to warn students of poor academic performance or they may assign “X” or “EA” grades. (See below for explanations) After midterm, faculty will assign all students an interim grade of A – F to inform students of their academic status as of midterm.

- INTERIM GRADE X = NO SHOW – Assigned to students who are on a class roster, but never attend class. For warning purposes only; NOT a final grade. STUDENTS: Check interim grades early in the semester. If you have an X grade, either begin attending the class or withdraw\* from it. \*See warning below about class withdrawals. If you do not take action in response to an X grade, you will receive a final grade of FN. (See “FN” below)
- INTERIM GRADE EA = EXCESSIVE ABSENCES - Assigned to students whose class absences exceed 10% of the total contact hours. For warning purposes only, NOT a final grade. STUDENTS: Check your interim grades often. If you have an “EA” grade for a class, you are in jeopardy of failure if you do not take immediate actions. Either resume attending the class or withdraw from it. \*See warning below about class withdrawals.

### NEW FINAL GRADE:

- FN = FAILURE DUE TO NON-ATTENDANCE – Assigned to students who are on class roster, but never attend the class. An FN grades is equivalent to an F grade in the GPA calculation. STUDENTS: You must attend (or withdraw\* from) all the classes for which you are enrolled. \*See warning below about class withdrawals.

### WARNING ABOUT CLASS WITHDRAWALS:

- When you withdraw from a class, you are wasting your money and time. You receive no refund for withdrawing from individual classes and you slow your progress toward degree completion.
- If you withdraw from or fail more than one-third of your classes, you will no longer be eligible for financial aid. STRIVE TO EARN CREDIT FOR ALL THE CLASSES IN WHICH YOU ENROLL; WITHDRAW FROM CLASSES ONLY WHEN IT IS ABSOLUTELY NECESSARY!

## X. REFERENCES

1. Johnson, G. and Losos, J. (2009). *The Living World* (6<sup>th</sup> Ed.). New York, NY: McGraw Hill.
2. All general biology students are encouraged to use the library and to do supplemental readings in the biological sciences. The following science periodicals provide a source of current information in a format appropriate for both the major and non-major biology student.

- A. Discover
- B. Scientific American
- C. New England Journal of Medicine
- D. Science
- E. Nature
- F. Newsweek