

**Syllabus**

<b>Instructor:</b>	Dr. William H. Jackson	<b>Office Hours:</b>	By appointment
<b>Office:</b>	SBDG 201A	<b>Email:</b>	<a href="mailto:Billj@usca.edu">Billj@usca.edu</a>
<b>Telephone:</b>	641-3601	<b>Laboratory:</b>	T, 1:00-3:40PM (003, Harmon) in SCI 107 W, 8:00-10:40AM (004, Casey) in SCI 108 W, 1:00-3:40PM (005, Harmon) in SCI 107 M, 9:00-11:40AM (005, Jackson) in Sci 108
<b>Lecture:</b>	TTH, 10:50AM-12:05PM in SBDG 327	<b>Lab Manual:</b>	<b>Biology 101 Laboratory Manual, 4<sup>th</sup> edition</b> by Jackson and Yates
<b>Text:</b>	<b>Biology, 7<sup>th</sup> Ed.</b> by Raven, Johnson, Losos, and Singer	<b>Information:</b>	<a href="http://www.usca.edu/biogeofaculty/Jackson/Bio101/bio101.asp">http://www.usca.edu/biogeofaculty/Jackson/Bio101/bio101.asp</a>
<b>Supplies:</b>	Scantron Sheets and Quad-ruled laboratory notebook obtainable from the USCA Bookstore		
<b>Credit:</b>	Four (4) Semester Hours		

**Course Description:** A study of the biological principles and concepts through the cellular level of organization including evolutionary processes.

**Course Objectives:** This course will introduce the student to the underlying principles governing the science of biology. Its primary emphasis will be on cellular components and processes. The concepts introduced in this course are intended to introduce majors and non-majors alike to the study of biology. Moreover, the laboratory experience is designed to introduce the student to the Scientific Method as a means of problem solving and consists of both open- and closed-end exercises. Initial laboratory exercises will introduce the student to concepts and techniques that will be useful in completing more open-ended experiments. These will require the student to think critically, develop experiments, analyze data, and present data in a scientific format. Upon completion of this course students will be expected to

1. Describe the major biological molecules and their utilization by cells;
2. Describe the structure of prokaryotic and eukaryotic cells and how structure facilitates function;
3. Discuss energy flow in biological systems;
4. Describe general protein structure;
5. Discuss the role of enzymes in metabolism;
6. Discuss the importance of nucleic acids in biological systems and the nature of DNA replication;
7. Describe the nature of genes and gene expression;
8. Discuss heredity as it pertains to patterns of inheritance and genetic variation.

**Attendance Policy:** Students should refer to the USCA Student Handbook regarding the number of absences permitted. In this regard, the instructor may impose a penalty for absences in excess of 25% of regularly scheduled class meetings by assigning an "F" for the course. Absences, *neither excused nor unexcused*, absolve the student from meeting class assignments. Because of their nature, laboratory exercises cannot be made up – therefore students should make every effort to attend laboratory sessions. Exam make-ups will only be allowed for a *documented, excusable* reason.

**Electronic Devices:** Unless you can be responsible, do not bring cell phones into the lecture or laboratory. Ringing cell phones cause an unfair disruption, as does leaving the room to answer silent rings. Please plan to be out of touch during all class times.

**Disability Statement:** If you have a physical, psychological, and/or learning disability, which might affect your performance in class, please contact the Office of Disability Services, 126A B&E (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

**Methods of Presentation and Evaluation:** Information will be presented through lectures along with appropriate visual aids. Traditional exams will be used to evaluate student progress in the class. In addition students will be responsible for completing a number of on-line timed quizzes offered throughout the semester via Blackboard. The date of each quiz will be announced one week prior to the time of availability. Each quiz will be available for one week during which time the student can take the quiz as many times as they wish. These are mastery quizzes, so the object is to receive a perfect score. Because each quiz will cover one chapter in Raven, Johnson, Losos, and Singer, the student is responsible for the entire chapter and should have read the chapter before attempting each quiz. Note that quizzes may cover material not discussed in class.

Blackboard can be accessed through VIP (<http://vip.sc.edu>). Refer to the Blackboard handout to for information on accessing and using Blackboard. Login difficulties should be brought to the attention of USC Computer Services (see below). Problems involving the quiz itself should be brought to the attention of the instructor via email and should be taken care of before the quiz goes off line, as quizzes cannot be made available for individuals.

Laboratory: All notes and records from each laboratory exercise should be kept in the student's laboratory notebook. Laboratory notebooks will be turned in at the end of the semester. Other components of the laboratory grade will be from weekly lecture/laboratory exams and a final exam.

Description	Percentage	Comments
Three Hourly Exams	50%	16.67% Each
Final Exam	15%	Comprehensive
Lecture Quizzes	10%	Blackboard
Laboratory Grade	25%	Composed of lab quizzes (15%), one laboratory practical exam (35%), lab notebooks (10%), and lab reports (40%)

Grading		
Three lecture exams	100 points each + double the highest	400 possible points
Final exam	100 points	100 possible points
Ten on-line chapter quizzes	15 points each	150 possible points
Laboratory	(See below for lab grading)	350 possible points
	Total	1000 points
Letter grade ranges: A > 90%; B > 80%; C > 65%; D > 50%; F < 50%		

TENTATIVE LECTURE SCHEDULE

DATE	WEEK	TOPIC	CHAPTERS
Aug 18	1	The Nature of Molecules	2
Aug 23	2	The Nature of Molecules	2
Aug 25		The Chemical Building Blocks of Life	3
Aug 30	3	The Chemical Building Blocks of Life	3
Sep 1		The Chemical Building Block of Life	3
Sep 6	4	Cell Structure	5
Sep 8		Cell Structure	5
Sep 13	5	Membranes	6
Sep 15		Membranes	6
Sep 20	6	<b>Exam 1</b>	2 – 6
Sep 22		Energy and Metabolism	8
Sep 27	7	Energy and Metabolism	8
Sep 29		How Cells Harvest Energy	9
Oct 4	8	How Cells Harvest Energy	9
Oct 6		Midterm How Cells Harvest Energy	9
Oct 11	9	Photosynthesis	10
Oct 13		<b>Fall Break – No Classes</b>	
Oct 18	10	Photosynthesis	10
Oct 20		How Cells Divide	11
Oct 25	11	<b>Exam II</b>	8 – 10
Oct 27		How Cells Divide	11
Nov 1	12	Patterns of Inheritance	13
Nov 3		Patterns of Inheritance	13
Nov 8	13	Patterns of Inheritance	13
Nov 10		DNA: The Genetic Material	14
Nov 15	14	DNA: The Genetic Material	14
Nov 17		DNA: The Genetic Material	14
Nov 22	15	<b>Exam III</b>	11 – 14
Nov 24		<b>Thanksgiving Holiday – No Classes</b>	
Nov 29	16	Genes and How They Work	15
Dec 1		Genes and How They Work	15
Dec 8		<b>FINAL EXAM</b> (Cumulative lecture and laboratory); 8 AM	

## USING BLACKBOARD

### Blackboard Username Lookup/Password Set:

All students at USC Aiken have a password for access to the USC Columbia computer system. Blackboard is maintained through USC Columbia, and provides tools for online testing and assignments. If you do not know your USC Network Username/PW combination (or if you have forgotten your password), follow the instructions below.

**YOUR USC NETWORK USERNAME/PASSWORD IS NOT THE SAME AS THE USC AIKEN NETWORK. IF YOU WANT TO USE THE SAME PASSWORD, YOU WILL HAVE TO SET IT YOURSELF.**

- Login to VIP (<http://vip.sc.edu>) just as if you were going to register for classes. (Forget your PIN? Students should contact the Registrar's Office)
- Click on the **Technology** link
- Click on **Show Me Network Username**. Your USC Network Username will be displayed and you will be prompted to choose your password. You must type in the password twice to verify your choice.
- Click on the **SET PASSWORD** button to set your new password

If you receive errors from VIP (either when looking up your username or setting the password), please carefully record the error message and code and contact the Computer Services HelpDesk, 777-1800 or <https://cshelpdesk.csd.sc.edu> to place a support ticket for problem resolution. Please supply your username and USC ID (SSN) when placing the ticket.

### Password Rules:

Legal passwords can be a minimum of 5 characters and a maximum of 14. They can contain any alphanumeric character (A-Z/0-9) and the \$ sign. Case doesn't matter. Your password will expire every six months.

### Password Security:

If you enter your password incorrectly seven times when attempting to login, you will be locked out of Blackboard temporarily (this is a security feature for your protection). To get back in immediately, just go to VIP and return to the Technology link to re-set your password. **Change your password often to protect yourself.** You can also return to VIP/Technology link if you forget your password and need to re-set it.

### Logging in to Blackboard:

To access your Blackboard account, point your web browser to the web address: <https://blackboard.sc.edu> and login at the screen prompts. After logging in successfully, you will see your classes listed. The system is easy to navigate, and the HELP icon at the top of the screen will take you to detailed documentation on using the system.

If you have trouble logging in, please be sure you have carefully read the system requirements below and have your browser set up properly, then refer to the login problem troubleshooting tips below.

### Login Problem Troubleshooting:

If you have carefully followed the Network Username/Password lookup instructions outlined above, and received affirmative messages from VIP, but get the following message when logging into Blackboard: **“Could not login. The username or password is incorrect.”** you should proceed as follows:

- Be sure you are carefully entering your VIP assigned username and your password. Be sure you are only clicking on the 'LOGIN' icon ONCE. If you still have login problems, your password may have expired (the expiration period is different for different departments on the network). Go to VIP and reset your password as outlined above.
- Wait 20-30 minutes (to allow your password change to register network-wide), and try to login again. If you still have login problems, go to the next step.
- Clear the cache in your browser, logout and retry logging in. If you still experience problems, try quitting your browser completely, launch the browser again, and log back into Blackboard. If you still experience problems, proceed to the next step.

- Call 777-1800 and report the problem. A customer support representative will be able to work with technicians at Computer Services to resolve the problem quickly. Please be prepared to give our services rep your USC USERNAME and USC ID (your SSN) when you call, the exact error message you are receiving, and where you are on the system (VIP Username Lookup, PW set, Blackboard login, etc.) when you experience problems.

**Problems with a Blackboard Session?**

You should also be sure to always use the navigation tools provided in the Blackboard session whenever possible, rather than navigating through your browser using Back/Forward/Refresh, etc.

Also, it is critical to avoid refreshing and resizing your screen when in Blackboard, especially in critical situations like taking a quiz/exam. If you are getting strange responses from Blackboard (buttons won't open, bad information displayed, etc.), always try to clear the cache in your browser; also try logging out of Blackboard and back in, and closing your browser, reopening, and logging back in. If you still experience problems, please contact Computer Services at 777-1800 for assistance.

**Don't See Your Courses in Blackboard?**

Does your enrollment in the course show up in VIP (under Academics)? If so, please note that it may take 48 hours for a course to rollover from VIP (the mainframe database) into Blackboard. If you registered late for a class, it will take time for your course to appear in Blackboard. If it has been over 48 hours since enrollment on VIP, then contact the Computer Services HelpDesk, 777-1800 and please provide your username, USC ID, and the class code and section that you are missing. If the course is not showing up in VIP, you should contact the Registrar's Office (777-5555). If you were able to access your classes on Blackboard, but they have disappeared, first check your enrollment status for this semester under the Academics section on VIP. You may have been dropped from the class by the Registrar's Office for some reason (e.g., a problem with payment). Check on your registration status and call 777-1800 to request to be reinstated in your Blackboard course. If you don't see a problem with your registration, call 777-1800 so we can troubleshoot the problem.

**Don't Forget to Logout:**

Always Logout of a Blackboard session when you are finished. If you are in a public lab, be especially careful to logout, and to quit the browser, too.

**Need More Help?**

Call 777-1800 or go to <https://cshelpdesk.csd.sc.edu> (and create a support ticket) to place a request for assistance. Please relay the exact error message and code and details on the procedure causing problems (problem with username lookup, password set, logging into Blackboard, etc.).

## LABORATORY OUTLINE

Instructor:	<b>Dr. Michele Harmon</b>	<b>Ms. Erin Casey</b>	<b>Dr. William Jackson</b>
Office:	SBDG 221	SBDG 111B	SBDG 201A
Phone:	(803) 641-3607	(803) 641-3349	(803) 641-3601
E-mail:	<a href="mailto:micheleh@usca.edu">micheleh@usca.edu</a>	<a href="mailto:erinc@usca.edu">erinc@usca.edu</a>	<a href="mailto:billj@usca.edu">billj@usca.edu</a>
Lab:	Section 003: 1:00 pm - 3:40 pm, T in SBDG 107 (Dr. Harmon) Section 004: 8 -10:40 am, W in SBDG 108 (Ms. Casey) Section 005: 1:00 pm - 3:40 pm, W in SBDG 107 (Dr. Harmon) Section 006: 9:00 – 11:40 am, M in SBDG 108 (Dr. Jackson)		
Required text:	<b>Biology 101 Laboratory Manual</b> by Jackson and Yates		

**Laboratory Schedule for BIO 101, Sections 003, 004, and 005, Fall 2005**

Date	Topic
Aug. 22-24	Measurement Techniques: Investigation #1
Aug. 29-31	<b>Quiz</b> and in-class lab report for #1
Sept. 5-7	<b>Labor Day Holiday – no lab</b>
Sept. 12-14	Organic Molecules in Cells: Investigation #2
Sept. 19-21	<b>Quiz</b> and in-class lab report for #2
Sept. 26-28	Cells and Microscopy: Investigation #3
Oct. 3-5	<b>Quiz</b> and in-class lab report for #3
Oct. 10-12	<b>Fall Break - no lab</b>
Oct. 17-19	Enzymes: Investigation #4
Oct. 24-26	<b>Quiz</b> and in-class lab report for #4
Oct. 31- Nov. 2	Photosynthesis: Investigation #5
Nov. 7-9	<b>Quiz</b> and in-class lab report for #5
Nov. 14-16	Chi Square and Mendelian Genetics: Investigation #7 & 8
Nov. 21-23	<b>Thanksgiving Holiday - no lab</b>
Nov. 28-30	<b>Quiz</b> and in-class lab report for #7 & 8

**LABORATORY ATTENDANCE:** Because of their nature, **laboratory investigations cannot be made up** – therefore you must make every effort to attend laboratory sessions. If you miss a laboratory investigation, you will not be allowed to take the associated quizzes or turn in a lab report the following week. This also applies if you come in late, leave early, or do not participate fully. You cannot write a report on a laboratory investigation that you did not do. Make-up lab quizzes will be considered **ONLY** for a **documented, excusable** reason.

Laboratory Grading		
Six lab quizzes	20 points each	120 possible points
Six lab write ups	20 points each	120 possible points
Six lab notebook checks	10 points each	60 possible points
One lab final exam	50 points	50 possible points
	<b>Total:</b>	350 possible points