

# BIOLOGY 102 Lecture

WINTER 2013  
Dr. Christianson  
TR 10:30 – Noon

DATE	TOPIC	READING	LABORATORY
T 08 Jan	Introduction; Overview of Vertebrates	Chapter 31	Tissues
R 10 Jan	Overview, con't.; Homeostasis		
F 11 JAN	LAST DAY TO ADD CLASSES W/O INSTRUCTOR SIGNATURE		
T 15 Jan	Digestive System & Digestion	Chapter 34	Digestion
R 17 Jan	Digestion, con't.		
T 22 Jan	Blood and circulation	Chapter 32	Mammalian Heart Structure
R 24 Jan	Circulation and Lymphatic Systems		
T 29 Jan	Circulation, con't.		Mammalian Heart Function
R 31 Jan	First Midterm Exam (thru Circulation and lab exercises 1 – 3)		
F 01 FEB	LAST DAY TO DROP W/O WD		
T 05 Feb	Circulation, con't.; Respiration	Chapter 33	Pig Dissection
R 07 Feb	Respiration, con't.; Urinary System	Chapter 35	
T 12 Feb	Urinary System		Pig Dissection, Con't.
R 14 Feb	Immune System	Chapter 36	
T 19 Feb	Immune System, con't.		Pig Practical Exam
R 21 Feb	Second Midterm Exam (thru Immune System and labs 4 – 6)		
F 22 FEB	LAST DAY TO CHANGE GRADE METHOD		
T 26 Feb	Internal Communication: Hormones & Nerves	Chapter 38	Meiosis & Gamete Formation (text, Chapter 11)
R 28 Feb	Nerves, Con't.		
T 05 Mar	Finish Nerves; Meiosis	Chapters 39 & 9 (pp 162 – 166)	Fertilization & Embryo Development
R 07 Mar	Meiosis and Gamete Formation; Male Reproductive System	Chapter 41	
T 12 Mar	Male & Female Reproductive Systems		Pregnancy & Fetal Development
M 11 MAR	LAST DAY TO W/D FROM COURSES is MONDAY, 28 FEB		
R 14 Mar	Female Reproductive System, Con't.; Fertilization & Early Development	Chapter 42	

**Text for the class:** Audesirk, Audesirk and Byers, Biology: Life On Earth WITH PHYSIOLOGY (9<sup>th</sup> edition, 2011).

**Lecture notes:** Christianson, Biology 102 Lecture Notes, 20<sup>th</sup> ed. (2012).

**Laboratory exercises:** Laboratory Manual for General Biology: Organisms (2013).

**Final Exam:** Thursday, 21 March at 10:30 a.m. in Sc 118.

# BIOLOGY 102 INFORMATION

DR. ROGER CHRISTIANSON

TR 10:30 – NOON

SC 118

WINTER 2013

**Office:** Sc 163

**Office Hours:** M 9:30 am; Tu 8:30 am; W 3:30 pm; R 12:30 pm

**Phone Numbers:** 552-6747 (office)  
488-0223 (home—before 9 p.m.)  
552-6415 (fax—be sure to put my name in an obvious place on first page!)

**E-mail:** rchristi@sou.edu

**Dr. Christianson's Personal Web Page:** [www.sou.edu/biology/faculty/christianson.html](http://www.sou.edu/biology/faculty/christianson.html) (then click on “Dr. Christianson's home page”)

**Bi 102 Home Page:** [webpages.sou.edu/~rchristi/courses/genbi/bi102.html](http://webpages.sou.edu/~rchristi/courses/genbi/bi102.html)

**Course Information:** [webpages.sou.edu/~rchristi/courses/genbi/rc/102LecMatIndex.html](http://webpages.sou.edu/~rchristi/courses/genbi/rc/102LecMatIndex.html)  
(links to syllabus, lecture schedule, lecture assignments, review index)

**Lecture Reviews:** [webpages.sou.edu/~rchristi/courses/genbi/rc/102revue.html](http://webpages.sou.edu/~rchristi/courses/genbi/rc/102revue.html)  
(links to lecture reviews, audio files of lectures, and some YouTube videos)

**Grading:**

**600 points from lecture, as follows:**  
2 midterm exams @ 100 points each = 200 points  
1 final exam @ 200 points  
exams will be primarily multiple choice and matching but may have some short answer;  
questions from lab exercises as well as lecture assignments will be included on each exam.  
In- and out-of-lecture assignments = 100 points  
Creative Assignment = 100 points

**200 points from lab, as explained by lab instructor.**

A = 90% or better of top score in class  
B+, B, B- = 87%, 83%, 80% respectively of top score in class  
C+, C, C- = 75.5%; 69.5%, 65% respectively of top score in class  
D+, D, D- = 60.5%, 54.5%, 50% respectively of top score in class  
F = less than 50% of top score in class

Letter grade and pass/no pass options available.

**Texts:** Audesirk, Audesirk and Byers, Biology: Life On Earth WITH PHYSIOLOGY (9<sup>th</sup> edition, 2011)  
Christianson, Biology 102 Lecture Notes, 20<sup>th</sup> edition (2012).  
Christianson, General Biology: Organisms Laboratory Manual (2013).

**COURSE POLICIES  
FOR  
DR. CHRISTIANSON’S BI 102 LECTURE**

**Homework assignments:** Homework assignments are posted as PDF files on Moodle. It is your responsibility to check often for new assignments and to have them turned in on time. Late assignments turned in after the bulk have been graded, returned, and the key posted *will not be graded*.

When e-mailing assignments, be sure to keep a copy in a “sent” folder or address a copy to yourself and archive it! That way, if there is a problem with the e-mail you can forward to me this copy, which should be automatically date and time-stamped, as proof that it was turned in on time. In these circumstances, and assuming that the assignment was turned in on time, the assignment will be graded even if it’s late.

Unless otherwise indicated in the instructions for an assignment, you are to work on your own. Copying answers or allowing someone to copy from you is cheating and will be handled according to SOU policies. Links to various sections of the Code of Student Conduct can be found on this web page: [http://arcweb.sos.state.or.us/pages/rules/oars\\_500/oar\\_573/573\\_076.html](http://arcweb.sos.state.or.us/pages/rules/oars_500/oar_573/573_076.html). Please pay special attention to Prohibited Conduct, Section 573-076-0130 of the Code of Conduct.

**In-class assignments:** Most in-class assignments will require that you discuss something with other classmates in a small group and turn in written answers. Small groups consist of 3 – 5 students. Fewer than three people and more than five people in a group will result in no credit being given for the assignment. In order to receive credit for these assignments, each member of the group must inscribe a LEGIBLE signature on the paper turned in. If you find it difficult to write a legible signature, you may print your name next to your signature. If I can’t read your name, you will not receive credit for the assignment!

**Writing:** I expect university students to write in complete sentences and construct coherent paragraphs. I expect you to know the difference in usage between words such as there and their; to, two, and too; its and it’s; and your and you’re, and to use them correctly! When formulating an answer to a question, assume that the reader is an intelligent but uninformed individual. Make sure your answers contain all of the information needed for this individual to understand the answers *as they relate to the questions*. Be aware that I read literally what you write. I don’t try to interpret and find meaning when confronted with poor or confusing grammar and spelling.

Be sure to supply complete citations for any material quoted. A complete citation for a book or journal (magazine) includes name of author(s), name of book (or journal or magazine), publisher (if a book, and includes city), volume and number (if a journal or magazine), edition (if a book), date of publication and page number(s). A complete citation for the Internet is the *complete* URL that takes me *directly* to the page on which the referenced material is found and includes the date on which the reference was viewed.

**Students for whom English is a second language:** Translation dictionaries are not allowed on exams. Please don’t ask at the start of an exam if you can use one. If this poses a significant problem for you, please come by my office well in advance of exams to discuss options.

**Reading assignments:** Following is a comprehensive reading assignment list. You should read the entire chapters and then concentrate on the sections identified here. I expect you to know the material in these sections. Additional material will come in lecture.

Chapter	Sections	Chapter	Sections
9	7-9	36	all
31	all	37	1, 2
32	1a, 2-5	38	1-4a,
33	1, 3	39	1, 2, 4,5
34	1, 2a, 3	41	1a, 2, 3
35	1, 3-6	42	1, 3-5

**Students with disabilities:** “If you are in need of support because of a documented disability (whether it be learning, mobility, psychiatric, health-related, or sensory) you may be eligible for academic or other accommodations through Disability Resources. Call Academic Support Programs at 541-552-6213 to schedule an intake appointment with Disability Resources. The Academic Support Programs office is located in the Stevenson Union, lower level.

“(See the Disability Resources webpage at [www.SOU.EDU/ACCESS/DSS](http://www.SOU.EDU/ACCESS/DSS) for more information.)”

<http://www.sou.edu/access/dss/facstaffhome.shtml> – 18 December 2012

## class assignment #1

Answer the following questions (in the box below) by reviewing the Biology 102 and associated web pages. Be sure to include your name with your answers so I know who gets the points! 12 points.

E-mail your answers to me no later than 1:30 p.m. on Friday, 13 Jan. You can send them earlier! The SUBJECT of the e-mail for this assignment should be 102#1<space>YourFirstName<space>YourLastName (see example below). Correctly entering the subject line will assure that you receive an auto-reply confirmation of my receipt of your e-mail. E-mail is date and time stamped. You have three days to complete this first assignment. Answers received after papers are returned and the answer key is posted will not be graded.

If you need help with any aspect of the class, e-mail me using the subject HELP and I will reply as soon as possible. You may also stop by my office or call (see course information).

Future assignments will be distributed as PDF downloads from Moodle. Be sure to check Moodle frequently! Assignments will generally be due on Fridays, but you can turn them in early!

### questions for assignment #1

1. A variety of resources other than your text that you might find useful in helping you learn the material in Bi 102 are available. One of these is a web site called the **Online Biology Book**. From the Biology 102 home page (get web address from course syllabus), scroll down and click on the **Online Biology Book**. + 1 pt each = 2 pts total
  - a. What is the title of Chapter 26?
  - b. What is the name of the person that wrote Chapter 26?
2. The lecture review sheets that are projected at the beginning of each lecture are available for downloading and printing from this web page: <http://webpages.sou.edu/~rchristi/courses/genbi/RC/102revue.html>. Audio files of the lectures and also assorted YouTube videos are also available here. Go to this web page and 1) bookmark the page so you can return easily to it and 2) download the review for Lecture 1, save it, and attach it to your emailing for this first assignment. +2 pts for correct attachment
3. We will spend some time this term learning about our immune system and how it functions to, for the most part, to protect us from disease causing invaders, parasites, etc. The **Centers for Disease Control and Prevention (CDC)** is a governmental organization that “works with states and other partners to provide a system of health surveillance to monitor and prevent disease outbreaks (including bioterrorism), implement disease prevention strategies, and maintain national health statistics” (<http://www.cdc.gov/about/history/ourstory.htm>, 12/18/12). Access the CDC web site (link on the Bi 102 home page). Go to the CDC History page, “Our History – Our Story,” to answer questions a – d. + 1 pt each answer = 4 pts total
  - a. From what wartime agency is the CDC descended? (Give the full name, not the initials!)
  - b. On what date did the CDC come into being?
  - c. What was the CDC seeking to eradicate when the organization was first formed?
  - d. What was the “primary weapon” the CDC used in order to eradicate this disease?Now visit the CDC Timeline webpage to answer questions e and f. +1 pt each answer = 2 pts total
  - e. On what date was the diagnosis of AIDS first described in MMWR (*Morbidity and Mortality Weekly Report*)?
  - f. What dominated CDC activity in 2009?
4. The **National Prevention Information Network (NPIN)** is an arm of the CDC that “collects and disseminates data and materials to support the work of prevention organizations and workers in international, national, state, and local settings” (<http://www.cdcpin.org/scripts/about/index.asp> 12/18/12). Go to the CDC NPIN web site (again, the link will be found near the bottom of the Bi 102 home page) and list the four diseases/types of diseases for which the NPIN collects and provides information (clickable boxes on left of page). + 0.5 pt each = 2 pts total

### Some e-mail advice for this class:

Make sure you enter my e-mail address correctly! If you are relying on an auto-fill to complete the e-mail address, make sure the address that fills in is the correct one!

Make sure you save a copy of the e-mail you send in case there is a problem. If your e-mail program doesn't already place copies into a “sent” folder, you can do this by entering your own e-mail address in the “CC:” or “BC:” box, which will result in you receiving a copy of what you send. Having a copy of your e-mail is especially useful if your e-mail gets “lost” somewhere in cyberspace and never reaches me, which does happen from time to time! In that case, I will ask you to forward to me the copy of the original you saved and, assuming it was sent within the correct time frame, it will be graded as if I had received it earlier. Without this, lost e-mailings will not be graded!

Make sure you enter 102#1, followed by your name, in the “Subject:” box. Future assignments will use 102#2, 102#3, etc.

I prefer that you answer the questions in the body of the e-mail. However, if you can't control your urge to use your word processor and attach the document to the e-mail, know that I accept only Microsoft Word (.doc or .docx) or rich text (.rtf) files. If you are using a non-Word word processor, be sure to save the file as a .rtf file before you attach it. And I know this probably sounds silly, but be sure to put your name at the top of the attached file! You wouldn't believe how many students e-mail assignments that, once printed, have no name on them. I find this pretty irritating because of the extra time it takes to figure out to whom the paper belongs!

# CREATIVE PROJECT FOR DR. CHRISTIANSON'S BI 102 LECTURE

**Note:** Special thanks to Dr. Christine Oswald, Professor of Biology, Southern Oregon University, for giving permission to modify and use this project in Biology 102.

**Purpose:** Most students acquire a great deal of experience taking tests, writing papers, and completing lab reports in their classes. These evaluation tools help to assess a student's knowledge and understanding, but provide little room for creativity. In addition, the type of writing done by scientists to communicate their experimental results is just one mode of communication of ideas. It works well for its intended purpose, but doesn't work particularly well for other purposes, such as exciting young children about science or informing the general public about a topic. Science professionals work as park naturalists, museum curators, documentary film makers, science journalists, elementary school teachers, and in many other capacities requiring a range of communication styles.

In this project, you will demonstrate your knowledge about biology in a creative way, allowing you to display a deeper understanding of your chosen topic than might be shown on an exam. The project is very open-ended, and will require significant creativity and effort. It may take the form of creative writing, poetry, sketching, painting, play writing, the invention of a game, or some other imaginative activity. Regardless of the format you chose, *all projects must include significant factual and conceptual biological content related to either 1) overview of vertebrates, homeostasis, the digestive system, and/or the circulatory system (first third of class) or 2) the respiratory system, the urinary system and/or the immune system (second third of class).*

**The Assignment:** Choose a topic or topics covered in this class from either the first third (overview of vertebrates, homeostasis, the digestive system, and/or the circulatory system) or the second third (the respiratory system, the urinary system and/or the immune system) of the term. Check the syllabus to see what will be covered. Present your topic(s) in a creative format that clearly demonstrates significant understanding of the facts, terminology, and concepts of that topic. There **MUST BE SIGNIFICANT BIOLOGICAL CONTENT** in the project, and it may **NOT** be presented simply as a standard paper summarizing the information. Some examples of formats that students have used in the past include:

- collection of poems
- newsletter
- marketing flyer and brochure
- restaurant menu
- play, complete with stage directions
- comic book or collections of cartoons
- short story
- games
- original song (performed)
- short videos of newscasts, melodramas
- illustrated children's books

Should you choose, you may include one or two other students in the class in your project, for a group size of no more than three students.

Note that this project is worth 100 points, just like a midterm exam. Therefore, I expect that the time and effort required will be substantial, and have set my standards accordingly.

**Due Date:** This project is due EITHER Thursday, 7 February at 10:30 a.m. if your project relates to the first third of the class or Thursday, 28 February at 10:30 a.m. if your project relates to the second third of the class. A project turned in after these specified dates will be considered late and lose 25% of its value for each actual day late. Projects may be turned in before the due date if you choose.

If your project has a significant written component (poems, short stories, plays, song lyrics, etc.), the written portion must be turned in via turnitin. If your project is essentially non-written in its nature (sculptures, comics, games, etc.), then turn it in the old-fashioned way, to me directly. Some projects may have both a written and a non-written component, such as song lyrics that should be turned in via turnitin, and a CD of the song performance, which should be turned in to me.

**Grading:** I will grade the project on these three factors:

- **Content.** (40 points) The project must include substantial information about the topic. It should present the audience with important concepts and specifics about the science behind the topic. Remember that I'm using this as an indication of how much you know about and understand the topic, If you include only minimal or general information, I'll assume that's all you know.

- **Creativity.** (30 points) The information must be conveyed in a fun, interesting, novel, unusual, or esthetically pleasing way. The written materials and illustrations typically found in a textbook or on a web page are not appropriate for this assignment. For example, a diagram of a heart and its chambers would not be suitable. Likewise, a project that amounts to little more than a quiz is also not suitable (see below for a note on games).
- **Execution.** (30 points) Whatever format the project takes, it should be done well. I will be judging the care and attention to detail that went into the project, whether written, performed, illustrated, or otherwise. Grammar, neatness, appearance, esthetics, and overall quality will contribute to this portion of the grade.

**Special note on games:** In the past, students have created elaborate, detailed, beautifully constructed, content-filled games in which the objective and rules were fully integrated with biology (e.g., the object of the game was to grow the most biomass of plants and the rules of the game were based on plant physiology). On the other hand, some students created games that were nothing more than a series of quiz questions on cards where the objective was simply to accumulate the most correct answers. The former scored high in all three areas, while the latter scored poorly in creativity and execution, and so-so in content.

**Presentations:** Students whose projects involve performance (e.g. plays, songs) are encouraged to share them with the rest of the class in lecture or perhaps lab, but this is not required.