

**Biology 116, General Biology Laboratory  
Course Syllabus: Spring, 2016**

**Prelab Meets: Monday 2:30-3:20, Newton 202  
Lab Meets: Tues-Thurs, ISC 101 and ISC 103**

**INSTRUCTOR INFORMATION:**

**Dr. Robert Feissner**

Office: ISC 356

Phone: 245-5022

e-mail: [feissner@geneseo.edu](mailto:feissner@geneseo.edu)

Office hours: Tuesday, Thursday,  
10:30-12:00, and by appointment.

Office hours: Monday 12:30-2:00,  
Tuesday & Thursday 8:00-9:30,  
Wednesday 9:30-11:00

**Dr. Hristina Nedelkovska**

Office: ISC 139B

Phone: 245-6396

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Office hours: Monday 3:30-5:00,  
Wednesday 11:30-1:00, Thursday  
11:00-12:00

**Regina Clinton**

Office: ISC 139A

Phone: 245-6051

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**Required Materials**

You will be REQUIRED to come to each laboratory meeting with:

- 1) **Lab notebook** containing the laboratory printout (which you can obtain from MyCourses\*), plain notebook paper, pencil and pen.
- 2) **Laptop computer.** Each group (lab bench) must have at least one laptop to use during the lab. The group is responsible for providing the laptop. Until lab groups are assigned, please bring your own laptop.
- 3) **Personal Safety Equipment**
  - a. **Goggles** will be required for the Diffusion laboratory. Each individual is responsible for providing their own goggles. You will not be able to perform this laboratory without goggles. (Goggles are available at the bookstore).
  - b. **Lab coat.** While it is *advised* that you wear a lab coat during the lab since we will be working with some nasty stuff, we will allow you to wear long pants and long-sleeved shirts. If you show up wearing shorts and/or shirts that expose your midriff you will be required to also have a lab coat for that lab. This lab coat will not be given to you but must be provided by you. (Lab coats are available at the bookstore).
  - c. **Shoes with closed toes.** You must wear closed toe shoes at all times since dropping chemicals on your feet can only be prevented by wearing closed toe shoes. This means that if you show up in open toed shoes you will not be able to participate in lab.

#### **4) REQUIRED Textbooks:**

- a. "A Student Handbook for Writing in Biology, third OR fourth edition", Karin Knisely, Sinauer Freeman Publ, (3<sup>rd</sup> edition ISBN 978-1-4292-3491-7 OR 4<sup>th</sup> edition ISBN 978-1-4641-5076-0). This book is available from the bookstore is a wonderful resource on how to write lab reports as well as how to use Microsoft Word and Microsoft Excel. This text provides important information for writing in upper-level biology courses, so you should hold onto it even after this semester is over.
- b. "A Primer in Biological Data Analysis and Visualization Using R", Gregg Hartvigsen, Columbia University Press., (ISBN 978-0231166997). This book will help you understand statistical analysis and how to use the statistical software 'R'. You will use this textbook in Ecology next year and possibly in other advanced level biology classes so hold onto it.

### **Course Goals & Content**

General Biology Laboratory (Biol 116) may be very different from your previous Biology laboratory courses in that it stresses the scientific process in Biology more than facts and details. Our main goal is to help you employ the scientific method to understanding problems in biology so that you can apply the scientific method to your upper level biology courses. The specific goals of General Biology Laboratory are threefold; 1) to understand experimental design and how to interpret results, 2) to introduce some of the techniques and equipment used in experimental biology, and 3) to illustrate some important biological concepts and information and the interrelatedness of these topics.

Since the approach of this laboratory stresses scientific process it is important to understand that *how* you do the laboratory can often be as critical as the results you obtain. If you come in unprepared and work haphazardly it will be difficult to analyze your data and answer the questions asked in the laboratory manual. This approach is not meant to make the laboratory difficult, but to give you a closer approximation of experimental laboratory science. It also gives you more control over your grade in the laboratory since your understanding of, and care in executing the lab experiments and activities should enhance your grade. The content of the laboratory course will rarely match-up with the material taught in the lecture class, so expect new content to be introduced in lab. For this reason, attendance is crucial to your understanding of the laboratory content.

### **Instructional Team and Course Structure**

The Biology 116 Laboratory course is a very large class (greater than 220 students every semester) requiring the cooperation of a teaching team, rather than a single instructor, to provide the best educational experience for all students. The Biol 116 teaching team consists of one faculty course leader (Dr.

Feissner), faculty lab instructors, experienced undergraduate lab instructors (ULIs), and volunteer undergraduate lab assistants (ULAs). The roles and duties of each team member are described below.

**Course Leaders:** Dr. Feissner is the coordinator of Biol 116 and teaches the Monday afternoon Prelab Lectures. The course leader oversees all labs and works closely with the ULIs and ULAs in preparing and teaching all labs.

**Faculty Instructors:** Faculty instructors are full-time faculty in the Biology Department that oversee concurrent lab sections. Due to the size of the Biol 116 class, two labs sections are held together in adjoining lab rooms. The Faculty instructor will work with both sections during the lab period, and therefore will be in your section *at most* half of the time. This semester Regina Clinton (Sections 1, 2, 3, 4, 5, and 6), and Dr. Hristina Nedelkovska (Sections 7 and 8) will be the faculty instructors for lab.

**Undergraduate Lab Instructors (ULIs):** ULIs are the primary instructional personnel in each lab section (each section has one assigned ULI). ULIs are exceptional upper-class students that have previously taken Biol 116 as well as volunteered as a ULA. Your ULI is your lab instructor and is in charge of your section. It is important to keep in mind that your ULI is your go-to person for all questions regarding the lab, especially during the times the Faculty Instructor is working with the other lab section.

**Undergraduate Lab Assistants (ULAs):** Undergraduate Lab Assistants (ULAs) are volunteers that have taken Biol 116 and are valuable resource for information and help in the lab.

### **Monday evening Prelab lecture:**

**Each week** there will be a short quiz that includes questions on the current lab (20 to 30%) and previous weeks' labs (70 – 80%). Quizzes will be administered online and must be completed outside of class within a limited window of time. Instructions for online quizzes will be provided in advance, and a practice quiz will be administered prior to the start of graded quizzes to iron out any technical problems you might face. If you cannot attend one of the lab lectures for excusable reasons (see below) you must get in touch with Dr. Feissner as soon as possible. Arrangements will then be made to allow you to get the information you need for the coming week's lab, and you *may* be excused from the lab quiz for that week.

### **Lab Meetings:**

Students will be assigned to laboratory groups the first laboratory period. Each lab bench will work as a group. Your groups *will* change during the semester so it is helpful to note things that worked well with your group to share in your new groups.

You must attend the lab session for which you registered each week. Unless approved in advance, showing up to lab later than 30 minutes after the designated start time is considered an absence and will receive no participation grade for the day. If you miss more than two labs for any reason (including lates) it is extremely important that you go see your laboratory supervising faculty ASAP. **If you miss three lab sessions for any reason (including excused absences and late arrival) you will not pass the course.**

If you can't attend your lab section for excusable reasons, you will need to attend another lab section AFTER obtaining permission from BOTH the faculty and lab instructor of the section you normally attend, and the faculty and lab instructor of the section you wish to attend. Lab and contact information for all faculty supervisors and ULIs are listed at the end of this syllabus. Excusable reasons for missing a lab include, but are not limited to personal illness, death or serious illness in the family, representing the college, religious observance, or military obligations. In each of these cases you must have appropriate documentation such as a doctor's excuse or release from the Student Health Center. Any unforeseen exceptions must be discussed in advance with Dr. Feissner.

## **Course Requirements**

### **Quizzes:**

Each quiz will be on material from the previous week(s) as well as the current week's lab. Quizzes will stress *application of principles learned and interpretation of data* as well as essential concepts. The most common types of questions require you to make observations, formulate a hypothesis, interpret data or predict the outcome of an experiment. Some of your quiz questions will come from the prelab questions and thus reading the lab and making sure you can answer the prelab questions before coming to the Monday afternoon lecture will not only enhance your laboratory experience but also be beneficial to your grade. Quizzes will only be administered online Monday evening after the Prelab for a single 24 hour period. **No makeup quizzes will be given.** If you miss a quiz you must have a valid excuse to be excused from the grade (see attendance policy).

### Online Quiz Notes:

- 1) Quizzes consist of random questions pulled from a pool of similar questions. Therefore, every student will get a different quiz with different questions and different answers. Collaboration is not permitted.
- 2) Previewing the quiz online is not permitted. Questions are displayed one at a time and must be answered before you can move on to the next question. **You may NOT return to a previous question.** Please answer carefully as credit will not be awarded for skipped questions.

- 3) Quiz answers will be available to review one week after the quiz was administered. A review period of 7 days will be provided in which you may ask to have a quiz regraded. **After 7 days, no quiz grades will be changed.** All quizzes will be reopened for review at the end of the semester to study for the final exam. If you did not complete a quiz, you will NOT have access to the quiz for review.

### **Lab Final:**

A laboratory final will be given during the last lab meeting and during the final Prelab lecture period. Rather than stressing detailed information about particular labs, this exam will emphasize scientific processes and principles of experimental design. The best preparation for this test is active participation during all of the earlier labs and understanding of material on quizzes.

### **Written Assignments:**

The written assignments will include brief reports in written or poster formats stressing different aspects of scientific processes. **Most of these will be group assignments.** Your final grade on some of the written assignments will be weighted by your group members' assessment of your contribution to the final product.

### **Oral Reports:**

The ability to communicate effectively is essential for scientists. Brief reports will allow you to improve your ability to communicate complex ideas to others. During at least 2 labs, your lab group will have to make a short report on your progress or results (which will include some form of visual aid, usually a Powerpoint presentation).

### **Participation:**

During most class periods, members of your instructional team will assess your participation. This may be done through examining your data, checking answers to discussion questions, asking you to answer questions about concepts or experimental design, or observation of your interactions during the lab. We will assume that a typical student will receive a grade of 85% (a B) for participation; points will be added or subtracted based on observations of your performance. **To receive full credit for participation will require extra effort, enthusiasm, perseverance and creativity beyond making a conscientious effort to attend and complete the lab.**

### **Peer Review:**

Peer review is a part of science and collaborative projects, so you can expect to give and receive criticism as part of the lab as part of every assignment handed in for grading. Group members will all receive the same base grade on group assignments, but individual modifiers will be applied based on your peer's evaluation of your personal contribution. Therefore, every student is not guaranteed to receive the same final grade.

## **Professionalism:**

Your choices can affect the learning experiences of other students in the class as well as your own. Please arrive on time, stay through class, turn off your cell phone (including vibration mode), and use laptops and other technology only for class-related activities. It is understood that the continuing development of new technology can be beneficial to the process of education. For this reason, laptops and smartphones are permitted for note-taking and viewing classroom materials such as weekly lab handouts. Unacceptable classroom use of technology includes, but is not limited to social media websites, e-mail, and cell phone photography. Students that are viewed as distracting or disruptive may be asked to leave the classroom and forfeit that week's quiz or participation grade.

If you have an emergency for which you need your cell phone to be turned on, talk to Dr. Feissner before the beginning of the lecture and to be excused from this rule. Only then will you not be asked to leave if your cell phone rings/vibrates during the pre-lab lecture period.

## **Grading**

### **Grades:**

Grades will follow the following point distribution:

>92%, A;	77-79%, C+
90-92%, A-	73-77%, C
87-89%, B+	70-72%, C-
83-86%, B	60-69%, D
80-82%, B-	<60%, E

Under most circumstances, there will be no adjustment to your grades. Some adjustment may be made for extreme variation among sections only after ULIs and faculty supervisors have consulted with the course coordinator. There is no quota for particular letter grades. Helping your classmates in the lab (not to be confused with cheating) will not hurt your grade, and is instead more likely to improve your grade. Final grades will be rounded at the end of the semester, while grades for assignments themselves will NOT be rounded.

Grades will be based on the following two-part system:

### **Individual component:**

1. Quizzes/GREAT Day	30%
2. Lab Final Exam	15%
3. Participation	5%
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Total	50%

### **Group component:**

1. Written Assignments	40%
2. Oral Reports	10%
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Total	50%

Based on the collaborative nature of group assignments, grades from the group component will usually raise a student's overall grade. However, the group grade

may not raise the overall grade by more than one letter grade above the individual grade. In other words, in order to earn an A grade, the individual grade cannot be below a B, and for a B grade, the individual grade cannot be below a C, etc. This prevents individual students from “riding the coat-tails” of their group partners and ensures that all students strive to achieve personally, as well as part of a group.

## **Some Important Policies**

### **Accommodations:**

SUNY Geneseo and the instructor of this course will make reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities. Accommodations will also be made for medical conditions related to pregnancy or parenting. Students should contact Dean Buggie-Hunt in the Office of Disability Services ([tbuggieh@geneseo.edu](mailto:tbuggieh@geneseo.edu) or [585-245-5112](tel:585-245-5112)) and their faculty to discuss needed accommodations as early as possible in the semester.

### **Communication:**

Check your e-mail daily in order to ensure that you receive reminders of what to bring to class, as changes in schedule are sometimes necessary. E-mail is also usually the fastest way to get in touch with us. Because our jobs require that we deal with many students, please include your name and Biol. 116 in all e-mails sent to us.

### **Academic dishonesty and plagiarism:**

Academic dishonesty includes both cheating on exams and plagiarism. Cheating here refers to violating the conditions of the take-home portion of the exam, most notably communicating with other students. Plagiarism is defined here as any form of misrepresentation of the authorship or originality of your work. Plagiarism includes (but is not limited to) copying others' work directly (including internet sources), paraphrasing minimally the work of others, presenting ideas without citing the original sources, turning in a paper written by another person, and turning in the same work in more than one course without prior approval. The penalty for cheating or plagiarism will be to redo the exam or project under new conditions, and may also include a grade reduction. Placing someone's name on a group project without their having contributed substantially to the project also constitutes a misrepresentation of the authorship. For group projects, all members of a group share responsibility for ensuring that high ethical standards are maintained. Because cheating and plagiarism are defined in detail here, claiming ignorance cannot serve as an excuse!

### **Library Research Help:**

If you need assistance finding information for this assignment, Milne Librarians may be able to help. You can speak with the reference librarian on duty between 10am and closing time most days (ask for help at the service desk) or chat with a librarian online by clicking the "I'm a Librarian" button on the library website (<http://www.geneseo.edu/library>). You can also contact Milne Library's

Science Librarian, Bonnie Swoger, by emailing her ([swoger@geneseo.edu](mailto:swoger@geneseo.edu)) or requesting an in-person meeting (<http://bit.ly/milnerresearchconsultation>).

**Exceptions:**

Policies can have exceptions! When problems arise in completing class work, please make an appointment to talk with us. Sometimes it is possible to identify additional options or solutions that do not appear here.

**A note regarding MyCourses Gradebook Grades:**

The gradebook in MyCourses is NOT capable of calculating a running final grade for this course. Mid-semester and Final grades are calculated outside of MyCourses. You may use the “reports tab” to get a detailed look at the grades received for assignments, but the final grade calculation will NOT be correct. MyCourses cannot drop a quiz grade, account for individual vs. group grading, or manage exemptions. Please do not write to the teaching team to question your MyCourses calculated grade for this reason, although inquiries regarding individual assignments are permitted.

# Instructional Teams

Dr. Robert Feissner [feissner@geneseo.edu](mailto:feissner@geneseo.edu)

Hristina Nedelkovska  
[nedelkovska@geneseo.edu](mailto:nedelkovska@geneseo.edu)

Regina Clinton  
[clinton@geneseo.edu](mailto:clinton@geneseo.edu)

Lab sections	Undergraduate Laboratory Instructor (ULI)	Undergraduate Laboratory Assistant (ULA)
Tuesday, 10:30 <b>Section 01</b> Rm 101	Michael Custance <a href="mailto:mfc7@geneseo.edu">mfc7@geneseo.edu</a>	Caitlin Whalen <a href="mailto:caw11@geneseo.edu">caw11@geneseo.edu</a>
Tuesday, 10:30 <b>Section 02</b> Rm 103	Mary Colaneri <a href="mailto:mc36@geneseo.edu">mc36@geneseo.edu</a>	Madeline Staiger <a href="mailto:mhs5@geneseo.edu">mhs5@geneseo.edu</a>
Tuesday, 2:30 <b>Section 03</b> Rm 101	Merin Varghese <a href="mailto:mv15@geneseo.edu">mv15@geneseo.edu</a>	Madison Wayland <a href="mailto:mcw8@geneseo.edu">mcw8@geneseo.edu</a>
Tuesday, 2:30 <b>Section 04</b> Rm 103	Cynthia Converso <a href="mailto:cac28@geneseo.edu">cac28@geneseo.edu</a>	Rebecca Brien <a href="mailto:rb16@geneseo.edu">rb16@geneseo.edu</a>
Wednesday, 1:30 <b>Section 05</b> Rm 101	Christine Toufexis <a href="mailto:cat11@geneseo.edu">cat11@geneseo.edu</a>	Yezhong Lu <a href="mailto:yl14@geneseo.edu">yl14@geneseo.edu</a>
Wednesday, 1:30 <b>Section 06</b> Rm 103	Sufyan Ahmad <a href="mailto:sa13@geneseo.edu">sa13@geneseo.edu</a>	Brittany Brown <a href="mailto:bpb4@geneseo.edu">bpb4@geneseo.edu</a>
Thursday, 2:30 <b>Section 07</b> Rm 101	Chiamaka Okorie <a href="mailto:clo3@geneseo.edu">clo3@geneseo.edu</a>	Kailey Suhr <a href="mailto:krs13@geneseo.edu">krs13@geneseo.edu</a>
Thursday, 2:30 <b>Section 18</b> Rm 103	Sharon Luu <a href="mailto:sl35@geneseo.edu">sl35@geneseo.edu</a>	Kaitlyn DiResta <a href="mailto:kmd29@geneseo.edu">kmd29@geneseo.edu</a>

**BIOL 116: General Biology Laboratory**
**Spring, 2016 - Laboratory schedule:**

Week #	Date	Laboratory	Important Notes
-	January 18	No Lab This week	<ul style="list-style-type: none"> <li>• <b>No Lab or Prelab Meeting This Week</b></li> </ul>
1	January 25	Intro to Biol 116 <ul style="list-style-type: none"> <li>• Dichotomous key and scavenger hunt.</li> </ul>	<ul style="list-style-type: none"> <li>• First week of your weekly lab meeting and Monday Prelab. Go to the lab to which you are assigned</li> <li>• Practice Quiz</li> </ul>
2	February 1	Diversity and Taxonomy Part I (Skulls)	<ul style="list-style-type: none"> <li>• QUIZ #1 (instructions in lab)</li> <li>• Read Chapter 1 (Scientific Method) &amp; 8 (Oral Presentations) from <i>Writing in Biology</i> by K. Knisely. from <i>Writing in Biology</i> by K. Knisely for Feb 15</li> </ul>
3	February 8	Diversity and Taxonomy Part II & Introduction to Data Analysis using R	<ul style="list-style-type: none"> <li>• QUIZ #2</li> </ul>
4	February 15	Termite Lab	<ul style="list-style-type: none"> <li>• QUIZ #3</li> </ul>
5	February 22	Introduction to Biostatistics	<ul style="list-style-type: none"> <li>• QUIZ #4</li> </ul>
6	February 29	Diffusion Lab Part I Read pp 56-72 (3 <sup>rd</sup> ) or 55-76 (4 <sup>th</sup> ) from <i>Writing in Biology</i> .	<ul style="list-style-type: none"> <li>• <b>**BRING GOGGLES TO LAB THIS WEEK**</b></li> <li>• QUIZ #5</li> </ul>
7	March 7	Diffusion Lab Part II	<ul style="list-style-type: none"> <li>• <b>**BRING GOGGLES TO LAB THIS WEEK**</b></li> <li>• QUIZ #6</li> </ul>
-	March 14	<b>Spring Break</b> – no lecture or labs	<ul style="list-style-type: none"> <li>• <b>No Monday evening lecture or labs this week</b></li> </ul>
8	March 21	Daphnia Lab Part I	<ul style="list-style-type: none"> <li>• QUIZ #7</li> </ul>
9	March 28	Daphnia Lab Part II	<ul style="list-style-type: none"> <li>• QUIZ #8</li> </ul>
10	April 4	<ul style="list-style-type: none"> <li>• Yeast Lab Part I– Designing an Assay</li> <li>• Rate of Metabolism</li> </ul>	<ul style="list-style-type: none"> <li>• QUIZ #9</li> <li>• Read Chapter 7 “Poster Presentations” from <i>Writing in Biology</i>.</li> </ul>
11	April 11	<ul style="list-style-type: none"> <li>• Yeast Part II – run your experiment</li> <li>• Review Chapter 7 from <i>Writing in Biology</i></li> </ul>	<ul style="list-style-type: none"> <li>• QUIZ #10</li> <li>• Oral Poster Presentation in lab week of April 25<sup>th</sup></li> </ul>
	April 18	<ul style="list-style-type: none"> <li>• <b>Week of Great Day</b> – no labs this week</li> </ul>	<ul style="list-style-type: none"> <li>• <b>No Monday evening lecture or labs this week</b></li> </ul>
12	April 25	<ul style="list-style-type: none"> <li>• Poster Session</li> <li>• Lab Final Part I (Practical)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>LAB FINAL PART I IN Lab</i></li> </ul>
13	May 2	<ul style="list-style-type: none"> <li>• Lab Final Part II (Written)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>LAB FINAL PART II IN PRELAB LECTURE</i></li> </ul>

### ASSIGNMENTS AND DUE DATES

Week #	Due Date Week of...	Assignments Due: Assignments are due in your assigned lab section. <i>Assignments in italics are individual assignments</i>
-	Jan. 18	<b><u>Nothing Due</u></b>
1	Jan. 25	<b><u>Nothing Due</u></b>
2	Feb. 1	<ul style="list-style-type: none"> <li>• <i>Curriculum vitae – 30 pts. (instructions can be found on MyCourses)</i></li> </ul>
3	Feb. 8	<b><u>Nothing Due</u></b>
4	Feb. 15	<ul style="list-style-type: none"> <li>• Diversity, Taxonomy &amp; R Lab Written Assignment – 60 pts.</li> </ul>
5	Feb. 22	<ul style="list-style-type: none"> <li>• Termite Lab Written Assignment – 60 pts.</li> <li>• Oral Presentation of Termite Results (prepared in lab) – 40 pts.</li> </ul>
6	Feb. 29	<ul style="list-style-type: none"> <li>• Diffusion Lab Part I Written Assignment</li> <li>• Oral Presentation of Diffusion Results – 40 pts.</li> </ul>
7	Mar. 7	<ul style="list-style-type: none"> <li>• Diffusion Lab Part II Written Assignment – 60 pts.</li> </ul>
-	Mar. 14	<b><u>Nothing Due – Spring Break</u></b>
8	Mar. 21	<ul style="list-style-type: none"> <li>• Biostatistics Problem Set – 50 pts.</li> </ul>
9	Mar. 28	<ul style="list-style-type: none"> <li>• Daphnia Lab Part I Written Assignment. – 40 pts.</li> </ul>
10	Apr. 4	<b><u>Nothing Due</u></b>
11	Apr. 11	<ul style="list-style-type: none"> <li>• Daphnia Lab Part II Written Assignment. – 60 pts.</li> </ul>
-	Apr. 18	<b><u>Nothing Due – Great Day Week</u></b>
12	Apr. 25	<ul style="list-style-type: none"> <li>• <u>Lab Final Part I – IN LAB</u> - 75 pts.</li> <li>• Yeast Lab Poster presentation – 60 pts.</li> <li>• <i>Great Day written assignment due – 30 pts (individual).</i></li> </ul>
13	May 2	<ul style="list-style-type: none"> <li>• <u>Lab Final Part II – IN PRELAB ON May 2<sup>nd</sup></u> - 75 pts.</li> </ul>