

## EXPLORING CAREERS IN BIOLOGY (ECB)

### COURSE DETAILS

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**Instructor:**

Nathan T. Fried, PhD  
Assistant Teaching Professor  
Department of Biology  
Office: 233-Science Building  
Office hours: M & W: 11:00 am -1:00 pm  
Email: nathan.fried@rutgers.edu

**Co-Instructor:**

Cheryl Hallman  
Assistant Dean  
Director of Career Center  
Email: challman@camden.rutgers.edu

**Course number:** 50:120:199, 1 credit

**Course location:** CNS Building 101

**Course time:** Tuesdays 9:35 AM - 10:35 AM

**Office hours:** M & W: 11:00 am -1:00 pm

These are hours set aside for my students to come and chat with me about anything under the sun (class or non-class material). However, I ask that you email me beforehand so I can carve out time during these hours specifically for you. Don't rely on just popping in.

**Overview:**

When I first started college, I had no idea of the range of jobs I could get with a BS in Biology. This course was designed to help you put your finger not just on Plan A, but also Plan B in your career. Throughout the course, we'll learn about different career directions in biological sciences and the tools you need to get there. This is your opportunity to learn, ask questions, and make connections. We'll cover five major career paths: Teaching, Research, Medicine/Public Health, Environmental/non-profit, Entrepreneurship/for-profit.

**Expected Learning Outcomes:**

1. Students will identify needs in society and their vocational calling in the biological sciences discipline.
2. Students will have experiential learning opportunities by participating community service for Camden.
3. Students will evaluate their experiences through critical reflections.

**Note from the professor:**

I was trained as both a chronic pain scientist and biology educator, but along the way, I've had experience in graphic design, web development, acting, science writing, science policy, and many others. I may not have experience in every biology career, but there's a strong chance I know someone in them. My goal here is to help you find that right career opportunity for you so consider me a resource as you embark on this journey we call college.



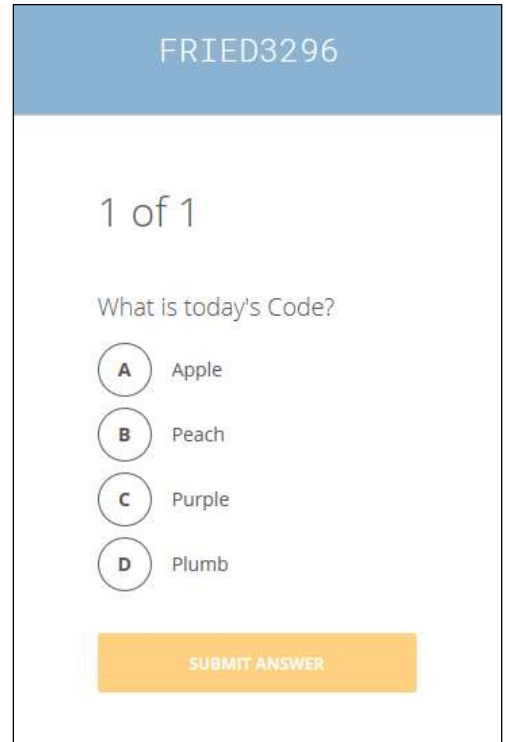
**Attendance**

Each class is worth 3% points. You will therefore lose 3% points for every class you miss. These are easy points to get, so **DON'T MISS CLASS!** When a student has a university-approved reason for missing a class, the student should fill out the self-reporting absence here: <https://sims.rutgers.edu/ssra/>.

Dr. Fried will take attendance using the online SOCRATIVE app to ask a question at some point during the class (beginning, middle, or end). This helps prevent students from showing up, signing in, and leaving early. Students who do not have their cell phone or laptop can come up at the end of class to inform the instructor of their attendance manually.

Please sign into my Socrative classroom (FRIED3296) as soon as you arrive each day so that you can access the day's attendance question. ENTER YOUR NETID (letters & numbers – pts deducted if you don't enter this in). Then choose the correct code to prove you are here.

The topic/guest speaker for every week will be under the SAKAI calendar. Take a look to prepare for the class!



**Field trips:**

There are field trips scheduled during the semester. These are optional. Each trip has a limited number of seats.

There will be a **2% deduction** from your final grade if you sign up for a trip but don't show up, so PLEASE ONLY SIGN UP IF YOU KNOW YOU CAN MAKE IT! Check the schedule for more information.

**Community Service: (Due Date: December 17 at 9am)**

One community service activity in the City of Camden during the semester is required and other opportunities are optional. Community service opportunities will be available throughout the semester, usually on the weekend. Dr. Fried will be at many, but not all, of these volunteer events.

To provide evidence that you participated in the community service event, please print, fill out, and have the community service leader sign the Community Service Record in SAKAI resources.

\*\*\*In addition to the record, you MUST take a selfie of you doing the work and post it to your LinkedIn profile with the hashtag #RutgersCamdenBioHelps. Feel free to write a description. Get your name out there!

**Signing up for Community Service and Field Trips:**

You can sign up for community service events starting 1 week prior to the event and up to 1 day before the event. So mark your calendars and be sure to sign up the week before. I'm doing it like this so that we don't sign up and forget!!!

For Field trips, you can sign up immediately and up to 1 days before the event. Check your schedules and sign up fast. We run out of room quickly! Sign up happens on SAKAI in Trip/Service Sign up.

**Critical reflection reports: (Due one week after every class)**

After each class, students will submit a critical reflection (see rubric below). This reflection is simply for you to reflect on the lecture's content. It's basically a journal entry. Each reflection is worth 2% of your grade. Submit it on SAKAI. The assignment is due a week after each class on Tuesday at 9am.

**Critical Reflection Rubric:**

A rubric is a guide for my grading of your work. Below are the things you must answer in your reflection to receive full credit. But feel free to write more! I read each and every one of these.

(1 point) What did I learn?

(1 point) Why does it matter to learn this?

(1 point) How will I/can I apply what I have learned to improving myself, my education, and/or my future career plans?

**Final Critical Reflection (Due Date: December 17 at 9am)**

Final Reflection is a minimum one-page reflection that summarizes all the semester-long critical reflections.

**Career Research Worksheet: (Due Date: 9am on the Tuesday, September 17)**

You must fill in the Career Research Worksheet and submit it in SAKAI. We encourage students to use <http://www.bls.gov/ooh/>

**Resume & LinkedIn Account: (Due Date: 9am on the Tuesday, September 24)**

LinkedIn is essential for your career. You are required to create a LinkedIn account and include the link on your resume.

Students should submit a one-page written Resume via SAKAI assignments. The resume should include the student's LinkedIn Account; <https://www.linkedin.com/>. Students must create a linkedin account.

Here is a useful website: <https://cc.camden.rutgers.edu/sites/careercenter/files/PreparingResumeCoverLetters.pdf>

The grading rubric for the resume and a LinkedIn profile checklist is in SAKAI resources.

**Meeting with an advisor (Due Date: December 3 at 9am):**

Students are required to have at least one meeting during the semester for creating the course plan that aligns with the career goals of the student. After meeting with an advisor, the advisor will report the meeting to the instructor by signing off the online form (The form is in SAKAI resources. Print it, bring it with you, have the advisor sign it, and return it to me. I will then mark your assignment complete online.). Students should meet with an advisor before Dec 1<sup>st</sup>.

**Francis Clark (student last names A-M)**

Assistant Dean

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**Kyle Jenkins (student last names N-Z)**

Assistant Dean

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(856) 225-6043

**Honor's college students**

ECB students who are in the Honors College are asked to schedule a meeting with the Honors Advisors in the month of October (announcement to be made via email; advising sign up instruction will be included at that time) to plan for Spring 2020 courses; this meeting will fulfill the requirement for ECB. In the meantime, if you'd like to contact an Honors College advisor, please email; [hcollege@camden.rutgers.edu](mailto:hcollege@camden.rutgers.edu) or call 856-225-6670.

**Extra-credit Opportunities:**

Students have two options. Each option is worth 5% extra credit. Students can only choose a single option.

**1) Extra Credit Critical Reflections (Due Date: December 17 at 9am)**

Students can earn 1% extra credit for writing a critical reflection after attending a field trip, community service project, and/or weekly research seminars for a maximum of 5% extra credit. These seminars occur in the Science Building main auditorium during Tuesday and Thursday free periods. Submit these on SAKAI under the proper assignment folder.

**2) Extra Credit Survey for Research Study**

Students can be a part of a research study by filling out two online survey for 5% extra credit. Survey 1 is available from Monday, September 9, 2019 at 9am to Friday, September 13, 2019 at 9pm. Survey 2 is available Monday, December 2, 2019 at 9am to Friday, December 6, 2019 at 9pm. Students must complete both surveys to receive the 5% extra credit and each survey will take between 45-60 minutes to complete. Details will be provided in class.

**RESEARCH SHADOWING (NOT MANDATORY, BUT HIGHLY RECOMMENDED)**

Research shadowing is when you shadow a members of a research lab on campus. You don't get credits for it, but it's an amazing opportunity for you to meet a faculty member, learn about their research, and learn how research works. This year, we have 11 laboratories available for you. After a successful interview with the faculty member, students will spend a few hours per week (1-4 hours depending on the agreement between the student and the professor) in the lab during October and November. Students are not expected to perform experiments or lab chores (e.g. dish washing). If the professor permits, students may assist simple tasks on a project.

**Time table:**

Application window: 9 am September 24 (Tues) – 5 pm September 27 (Fri).

Application Link: <https://biology.camden.rutgers.edu/research-shadowing-fall/>

Required materials:

1. Resume (1-page) \*MUST BE in .pdf FORMAT!!!
  - Include your LinkedIn account link in the resume
2. Cover Letter/Personal Statement (max 1 page). \*MUST BE in .pdf FORMAT!!!
  - Spell check the text and ask a couple of people to proofread your application package.

Interview: If selected for an interview, faculty will contact you to set up interviews between Oct 1 (Tues) – Oct 4 (Fri)

Final Selection: If selected to shadow, faculty will contact you by Monday, October 7 and you will start immediately.

Research Labs:

**Lab 1 with John Dighton (lab is in pine barrens)**

Areas of Interest: Soil nutrient dynamics; forestry; mycorrhizae, fungi, environmental pollution

Email: [dighton@marine.rutgers.edu](mailto:dighton@marine.rutgers.edu)

Website: [pinelands.camden.rutgers.edu/](http://pinelands.camden.rutgers.edu/)

**Lab 6 with Julianne Gripenburg**

Areas of Interest: coagulation of polysaccharides w/ proteins to design bio-based medical films

Email: [jg1151@scarletmail.rutgers.edu](mailto:jg1151@scarletmail.rutgers.edu)

Website: [physics.camden.rutgers.edu/faculty/ /](http://physics.camden.rutgers.edu/faculty/)

**Lab 2 with Andrey Grigoriev (lab is computer-based)**

Areas of Interest: Genome organization, evolution and manifestation; cancer

Email: [agrigoriev@camden.rutgers.edu](mailto:agrigoriev@camden.rutgers.edu)

Website: [grigoriev.rutgers.edu/](http://grigoriev.rutgers.edu/)

**Lab 7 with David Salas-De La Cruz**

Areas of Interest: coagulation of polysaccharides w/ proteins to design bio-based medical films

Email: [david.salas@rutgers.edu](mailto:david.salas@rutgers.edu)

Website: [dsalas.camden.rutgers.edu/](http://dsalas.camden.rutgers.edu/)

**Lab 3 with Eric Klein**

Areas of Interest: Bacterial pathogenesis and microbial adhesion

Email: [eric.a.klein@rutgers.edu](mailto:eric.a.klein@rutgers.edu)

Website: [ericklein.rutgers.edu/](http://ericklein.rutgers.edu/)

**Lab 8 with Amy Savage**

Areas of Interest: community/population/urban ecology, global change biology, species interactions.

Email: [amy.savage@rutgers.edu](mailto:amy.savage@rutgers.edu)

Website: <http://amysavage.camden.rutgers.edu>

**Lab 4 with Joseph V. Martin**

Areas of Interest: Hormonal regulation of GABA<sub>A</sub> receptor, brain activity and sleep

Email: [joe.martin@camden.rutgers.edu](mailto:joe.martin@camden.rutgers.edu)

Website: [joemartin.rutgers.edu/](http://joemartin.rutgers.edu/)

**Lab 9 with Daniel Shain**

Areas of Interest: Annelid development and evolution

Email: [dshain@camden.rutgers.edu](mailto:dshain@camden.rutgers.edu)

Website: [biology.camden.rutgers.edu/faculty/daniel-shain/](http://biology.camden.rutgers.edu/faculty/daniel-shain/)

**Lab 5 with Kimberlee Moran**

Areas of Interest: human remains, forensic entomology, crime scene investigation, bioarchaeology

E-mail: [k.moran@camden.rutgers.edu](mailto:k.moran@camden.rutgers.edu)

Websites: [kimberleemoran.camden.rutgers.edu](http://kimberleemoran.camden.rutgers.edu)

**Lab 10 with Nir Yakoby**

Areas of Interest: Developmental genetics

Email: [yakoby@camden.rutgers.edu](mailto:yakoby@camden.rutgers.edu)

Website: <http://yakoby.rutgers.edu/>

**Lab 11 with Kwangwon Lee**

Areas of Interest: fungal & fly circadian rhythms

Email: [kwangwon.lee@rutgers.edu](mailto:kwangwon.lee@rutgers.edu)

Website: [kwangwonlee.camden.rutgers.edu](http://kwangwonlee.camden.rutgers.edu)

**Breakdown of points**

- Attendance (15 class sessions): 45%
- Resume: 2.5%
- Career Research Worksheet: 2.5%
- Meeting w/ an advisor: 2.5%
- Community Service Activity: 2.5%
- Weekly Critical Reflections (15 in total): 30%
- Final Critical Reflection: 15%

**COURSE POLICIES**

**Food Policy:** Feel free to bring food or drink to the classroom, but please be respectful of your fellow students.

**Students with Disabilities Statement:** Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form at <https://webapps.rutgers.edu/student-ods/forms/registration>.

**University Academic Integrity Statement:** The college regards academic dishonesty on the part of the students as unacceptable behavior that could result in dismissal. Every incident of academic dishonesty is required to be reported to the provost. These incidents will be kept in a confidential file by the provost so that a record of the infractions is available when reports are made.

**Definitions:**

**Academic Dishonesty** – includes, but is not limited to, plagiarism, cribbing, or cheating on exams.

**Plagiarism** – unacknowledged borrowing or duplication of an author's words or ideas whether intentional or not.

Common forms:

- a. Text without quotation marks or proper documentation,
- b. With documentation but without quotation marks or correct quotation format,
- c. In paraphrase without proper documentation.

**Email policy:** I get a lot of emails every day. To use my time most efficiently, I try to take care of all email matters in the morning. If you email me at night, you can expect a response within 24-48 hours. However, if I don't respond after 48 hours, feel free to "reply" to your own email to "ping me" again. Sometimes the flood of emails might bury yours. This is common practice in academia. Always feel free to remind someone of your email. Often, if they don't respond, it's just because they missed it; not because they are ignoring you.

**Seating policy:** This is a big lecture hall. Guest speakers don't like having to shout. Let's be respectful and sit up front. Other students not in the class may even come to the talk. They will sit in the back.