RUTGERS
UNIVERSITY | CAMDEN

CURRENT TOPICS IN BIOLOGY (50:120:399: SECTION 02)

COURSE DETAILS (SYLLABUS)

Professor: Dr. Nathan Fried (Nathan.fried@rutgers.edu)
<u>Class Hours</u>: Tuesdays & Thursdays: 9:35 -10:55 AM
<u>Class Location</u>: ATG-124

<u>Fried Office Hours</u>: Monday & Wednesday: 10:00 – 2:00 PM (Appointment required. See below)
<u>Fried Office Location</u>: CNS 222

Course Description:

This is a synthesis course. What does that mean? The ultimate goal is to create a well-written hypothesis-driven final review article about a topic of your interest (your passion) based on current literature. This means that all the assignments and class sessions are designed to bring you closer to that goal. They're not busy work. They all have a purpose. The course has two goals: 1) give you experience pulling the loose threads of your biological understanding together by applying your knowledge to a field and 2) help you think about that next step in your career.

This course is broken into three parts.
1) <u>The Next Step</u>: One way to figure out the best thing to write about is to identify what you think might be your next step after leaving Rutgers. I always like have a strong PURPOSE behind assignments. There's no reason to write a 3,000 word article just to get an "A". Instead, if you're writing it on a topic you're interested in and one you might be going into, then you're writing with PURPOSE. This first part of the course will help us identify our purpose.
2) <u>Inspiration</u>: The second part of the course is all about being inspired by a topic. We'll discuss a TON of recent news in biology to find something that might inspire YOU.
3) <u>Synthesis</u>: This third part is all about taking your direction, interest, and fully fleshing out your idea so you can write a strong paper.

Note from the professor:

Writing is hard. I say that as a faculty member who's main job is to write grants, papers, editorials, etc. I do it all the time, yet I still think it's so INCREDIBLY hard. You'd get the same message from journalists or full-time writers! This is because once you know HOW to write, you pay attention to every little detail so that you can write well. I'm here to help you with this process, but there's no student who can write a good paper quickly. It's just not possible. It recently took me about 18 hours to write a 3,000 word article. That included creating an idea, making an outline, and then writing several drafts. So…if it took me 18 hours to reach that, it's likely it'll take you 2 or 3 times that long! So, get started early!

Assignments:

*All presentations should be conversation starters. We're not looking for perfection. It's okay to be casual, but please put in the effort to come prepared to discuss with the class.

<u>Next Step Presentation:</u> Students should make a five-minute PowerPoint presentation about any potential career trajectory or next step they're interested in pursuing. The presentation should include 1) information about the next step (job, graduate school, gap year, etc) and 2) any information you think is important to know. This isn't about showing off your best idea for the next step. It's about driving conversation and increasing awareness of career options. *Full credit for presenting.

<u>In the News Presentation</u>: Students will prepare a 10 minute presentation (5 minutes present and 5 minutes to discuss) on any research news story from the past two years that was published in www.TheScientist.com. The presentation should provide 1) introduction to the subject, 2) description of what the researchers were asking, 3) description of the research that was conducted, 4) description of the conclusions, 5) description of at least ONE technique used in their research and 6) 2-3 questions to stimulate the audience for discussion. *Full credit for presenting and including all components in your presentation.

> <u>Rules</u>:
> - Students can choose their date for the presentation.
> - Before the day of the presentation, students must submit the URL for both the news article they are covering AND the URL for the primary research the news article references in SAKAI assignments.
> - The news article MUST BE ABOUT A SINGLE publication. It can't be a review of a field. For example, the following article is okay (https://www.the-scientist.com/news-opinion/protein-changes-detected-in-blood-years-before-alzheimers-onset-65347) because it's only about a single recently released publication but the following article is not okay because it's a feature article that covers an entire field and not a single recent publication (https://www.the-scientist.com/features/do-commensal-microbes-stoke-the-fire-of-autoimmunity--65871)

<u>Submit Thesis Statement</u>: Submit a single sentence that describes your thesis. This should be an arguable statement, such as, "Amyloid beta is not involved in Alzheimer's Disease." It should just be a description of something, such as, "The molecular mechanisms of Alzheimer's Disease." Remember, a thesis is NOT just reporting facts. It's proving a point. It's an argument. You then conduct your research to support that argument. *Full credit for submitting.

<u>Thesis Pitch</u>: Each student should prepare a 10-15 minute PowerPoint presentation about their submitted thesis. This talk should generate conversation amongst the class. It's an opportunity for you to discuss your thesis idea and receive feedback from the audience and I. The goal is not to create a perfect presentation. It's to "pitch" your thesis idea. *Full credit for presenting.

<u>Perspectives Thesis Submission Draft</u>: You do not have to submit a draft, but no student has ever received an "A" without submitting a draft before turning in their final paper. You can submit as many drafts as you wish to me via email to receive my feedback. The earlier you submit them, the more time I'll have to give you feedback.

<u>Perspectives Thesis Submission (i.e., final report)</u>: This thesis-based final paper should be between 3000-4000 words, not including citations. This paper should follow the "Perspectives" article type in the journal Nature: https://www.nature.com/nature/for-authors/other-subs. Specific requirements for submission (abstract, title, author, conflicts of interest, etc) can be viewed here: https://www.nature.com/documents/natrev-articleformatguide-review.pdf. You do not have to submit display items (i.e., figures or tables). But, feel free to include them. I suggest using Zotero for your reference management.

Perspectives is a form of a review that argues a specific hypothesis or thesis statement. Thus, it's important to remember you are not just TELLING me about a field or describing a disease. You HAVE TO flesh out an actual thesis statement that you then support through writing. You can see examples of published perspectives here: https://www.nature.com/nature/articles?type=perspective.

I am using the nature guidelines to provide you the opportunity to learn the process researchers undergo to write an article. Thus, diving into these links is a learning opportunity for you.

<u>Exit Exam:</u> An ungraded exit exam will be provided by the end of the semester. Although it is ungraded, it is a requirement to complete this subject-specific exam.

Attendance: Attendance for a course like this is essential so we can learn from each other. Please sign into my www.Socrative.com 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. If you do not have access to a phone or computer to fill it out, please just tell me and I'll sign you in manually.

Reporting Absence: You are allowed to miss 4 days of class for any reason. **I can't reschedule a presentation for you if you miss your presentation day**. Beyond that, I will ONLY accept valid excuses for absences (sickness, emergency, job/grad school interview). For university policy and to submit an absence report, please visit: https://sims.rutgers.edu/ssra/. There is no need to email me of your absence or provide a doctor's note. This system will automatically alert me.

Calculation of Final Grades:

Letter	Percent
A	89.5-100%
B+	84.5-89.4%
B+	79.5-84.49
C+	74.5-79.49
C+	69.5-74.49
D	59.5-69.49
F	0-59.49

Accumulated Points			
Category	pt value	#	Total
Saidel Section			
Next Step Presentation	3	1	3
In the News Presentation	5	1	5
Thesis statement	3	1	3
Thesis Pitch	5	1	5
Attendance	0.5	28	14
Perspective Thesis	70	1	70
		Total	100

FRIED3296

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What is today's Code?

A Apple

B Peach

C Purple

D Plumb

SUBMIT ANSWER

Schedule:

Current Topics			
Week	Day	Date	Class Activity
1	T	1/21	Intro, Dr. Fried's path, Family expectations
1	R	01/23	Family expectations, what do you REALLY want to do?
2	T	1/28	Future Plans Talk
2	R	1/30	Future Plans Talk
3	T	2/04	no class - Dr. Fried at Dentist
3	R	2/05	Future Plans Talk
4	T	2/11	Future Plans Talk
4	R	2/13	In the news presentations
5	T	2/18	In the news presentations
5	R	2/20	In the news presentations
6	T	2/25	In the news presentations
6	R	2/27	In the news presentations
7	T	3/3	In the news presentations
7	R	3/5	In the news presentations
8	T	3/10	In the news presentations
8	R	3/12	In the news presentations
9	T	3/17	**Spring Break - no class**
9	R	3/19	**Spring Break - no class**
10	T	3/24	Thesis Pitch Presentations
10	R	3/26	Thesis Pitch Presentations
11	T	3/31	Thesis Pitch Presentations
11	R	4/2	Thesis Pitch Presentations
12	T	4/7	Thesis Pitch Presentations
12	R	4/9	Thesis Pitch Presentations
13	T	4/14	Thesis Pitch Presentations
13	R	4/16	Thesis Pitch Presentations
14	T	4/21	Thesis Pitch Presentations
14	R	4/23	Thesis Pitch Presentations
15	T	4/28	Thesis Pitch Presentations
15	R	4/30	Thesis Pitch Presentations
16	T	5/5	**Reading Days - no class**
16	R	5/7	**Reading Days - no class**
Finals			**final paper due**