

## **Microbial Pathogenesis in Neurodegenerative Protein Conformational Diseases**

**MCB7922: Journal Club**

**1 credit**

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### **Course Description**

**UF Catalog:** This asynchronous, online journal club course engages students in the critical evaluation of primary research literature at the intersection of microbiology, immunology, and neuroscience. The course examines how microbes—through infection, dysbiosis, microbial metabolites, and host–microbe interactions—contribute to the pathogenesis of neurodegenerative protein conformational diseases, including Alzheimer’s disease (AD), Parkinson’s disease (PD), and amyotrophic lateral sclerosis (ALS). Rather than focusing solely on descriptive microbiome associations, students analyze mechanism-driven studies that test causality, biological directionality, and host responses such as proteostasis collapse and innate immune activation. Engagement occurs through structured Canvas discussions and Perusall-based collaborative annotation of peer-reviewed literature. The course is designed to strengthen students’ ability to critically evaluate experimental design, distinguish correlation from causation, and synthesize interdisciplinary evidence while developing skills in scientific inquiry, analytical writing, and scholarly discussion.

### **Time and Location**

Asynchronous Canvas course.

### **Instructor**

Dr. Daniel Czyż (*chysz*)  
Department of Microbiology and Cell Science  
1355 Museum Drive  
Office: Room 1004, Building 981  
Phone: 352-392-0237  
Email: [dczyz@ufl.edu](mailto:dczyz@ufl.edu)  
Twitter: [@360Science](https://twitter.com/360Science)

**Virtual Office hours:** By appointment via Zoom or a phone call

*To request an office hours appointment, send an e-mail directly to the instructor with three suggested dates/times.*

### **Instructor's Teaching Philosophy**

*"Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work" - Steve Jobs*

You embrace education; devote your time to pursue your goals, strive for success, and do your best, but sometimes you are just hitting obstacles that prevent you from moving forward. That's

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when you wish you would have a good mentor. I've helped people who hit obstacles get right back on track, but more importantly, I help my mentees and students avoid hitting obstacles in the first place. I always make sure I am available for my students and my colleagues, whether it's in a classroom or in a laboratory setting. As a scientist, I put a lot of time and emphasis on my trainees providing them with the right personalized support plan to guide them towards their short and long-term goals, as their success is my success. As an educator, my primary objectives are to retain students' attention, promote creativity and teamwork, and encourage out-of-classroom learning.

I find science to be the most fascinating and exciting subject to teach, mostly because it is never fully explored and with the ongoing new discoveries, teaching becomes learning. Science can be found in our everyday life and I believe that relating new information to practical application in daily lives focuses students' attention and enhances learning. For that reason, I link my lecture material to everyday applications as much as possible.

I encourage and expect students to employ out-of-textbooks material, including public databases, online tools, and primary literature. While independent projects are important, in science, single-person projects are nearly nonexistent. I strongly believe that assigning students to group projects strengthens their team-building core, helps to develop essential communication skills, and exposes students to conflicts and teaches them how to deal with them. Most importantly, an assignment might seem difficult for an individual student but becomes trivial when done as a team.

Finally, I put emphasis on mentorship and participation in extracurricular activities. My students are expected to mentor each other because it will help them develop essential skills in their future careers. It's never too early to become a mentor. Finally, I truly believe that building a career is not solely attained during classroom education. Participation in community outreach events, conferences, seminars, and symposia is just as important as classroom-based learning. These extracurricular activities build leadership and improve communication skills and I strongly encourage my students to participate in such activities.

### **Course Level & Prerequisites**

The course is designed for graduate students.

The course requires graduate students to have a Bachelor's degree in biology or a related field.

### **Course Goals**

By the end of this course, students will be able to critically evaluate primary scientific literature at the intersection of microbiology and neuroscience, with an emphasis on microbial pathogenesis in neurodegenerative protein conformational diseases. Students will assess experimental design, methodologies, data interpretation, and conclusions presented in peer-reviewed manuscripts. Through engagement with cutting-edge research and structured discussions, students will enhance their scientific literacy and develop the ability to synthesize interdisciplinary perspectives. The course further aims to foster collaborative scholarly discourse, equipping students with the skills necessary to critically assess, communicate, and contribute to ongoing research addressing complex challenges in microbiology, host–microbe interactions, and neurodegenerative disease.

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### **Learning Assessment\***

Grades are used to assess your learning progress. The vast extent of the information covered by this course should not discourage students. This course is designed to teach you and not fail you. If you encounter any learning difficulties that will affect your grades/learning progress, contact the professor as soon as possible.

\*all learning assessments are subject to change at the discretion of the instructor

#### *GRADING SCALE*

#### *WRITTEN ASSIGNMENTS (50 pts):*

Students will complete one written assignment in the form of a concise, commentary-style reflection synthesizing what they have learned throughout the course. Rather than a traditional abstract, this assignment will require students to summarize key themes, concepts, and findings from the primary literature discussed during the semester and reflect on how these studies collectively inform our understanding of microbial pathogenesis in neurodegenerative protein conformational diseases. Students should also address where they believe the field is moving, identifying emerging questions, methodological gaps, or future research directions based on the papers analyzed.

Grade	Percentage
A	>93.4
A-	93.3-90.0
B+	89.9-86.6
B	86.5-83.4
B-	83.3-80.0
C+	79.9-76.5
C	76.4-73.3
C-	73.2-70.0
D+	69.9-66.6
D	66.5-63.3
D-	63.2-60.0
E	<60.0

The written commentary must not exceed 500 words. Adherence to this word limit is required, and points will be deducted for submissions exceeding this limit. The assignment will be evaluated on clarity, depth of synthesis, critical insight, and adherence to the Golden Rules of Scientific Writing provided by the instructor, including precision, logical flow, nomenclature, references, clarity of argument, and appropriate scientific tone. This format mirrors professional scientific commentary and perspective pieces, emphasizing concise, thoughtful analysis and clear communication.

#### *DISCUSSIONS (120 pts):*

There will be 12 graded discussions (10 points each, 120 points total). The discussions will be facilitated using Perusall – a social learning platform where you will engage in discussing reading materials.

#### *COURSE PARTICIPATION (30 pts):*

Course participation is assessed based on consistent and professional engagement throughout the semester. This includes timely participation in Canvas discussion forums, responsiveness to instructor prompts, constructive interaction with peers, and adherence to course expectations for academic discourse. Participation points reflect the quality, consistency, and thoughtfulness of contributions rather than quantity alone.

### **Grades and Grade Points**

For information on current UF policies for assigning grade points, see

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.>

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### **Late Submission**

Graduate students who submit late writing assignments will be penalized 10% of the total score for each day late, up to a maximum of three days. After three days, no late submissions will be accepted. Students with special medical or family problems should contact the instructor directly.

### **Attendance and Make-Up Work**

Requirements for class attendance and make-up assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

### **Website**

Course material can be accessed through Canvas.

<https://ufl.instructure.com/>

*Technical issues related to the course can be addressed to UF helpdesk*

*<http://helpdesk.ufl.edu>, 352-393-4357, helpdesk@ufl.edu*

### **Canvas Technology Requirements**

**Computers, Internet, and Web browsers:** Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser. It is recommended to use a computer less than five years old with at least 1GB of RAM. It is recommended to have a minimum Internet speed of 512kbps. It is **strongly recommended** to not use a wireless connection, phone, tablet, or notepad for critical course tasks such as exams and discussions.

Canvas currently supports the following browsers: Chrome, Safari, Firefox, Edge. Canvas supports the last two versions of most browsers. It is **highly recommend** updating to the **newest version** of whatever browser you are using. Note that your computer's operating system may affect browser function. Failure to use one of these browsers will cause problems.

For more information on approved computers and browsers please visit:

<https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66> On this web page there is an area titled “Is My Browser up to Date?” Use it to check each computer and browser you may use in this course. There is another important area on “Browser Privacy Settings.” Read the section(s) for any browser intended for use. For example, **Note that:** In browsers such as Safari, insecure content will never be displayed in the browser. Return to the page to check for updates on technology issues in Canvas.

If you encounter technical difficulties in this course, **contact the UF Computing Help Desk** right away to troubleshoot. <https://helpdesk.ufl.edu/> or (352) 392-HELP. If the problem cannot be fixed immediately, **notify your instructor, and provide them with the Help Desk ticket number.**

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## **Communication**

**Discussion Board:** Available through Canvas. Postings and answers are monitored by the instructor

**Twitter:** Follow and share science news related to the course using #AMR\_UF

**Email:** dczyz@ufl.edu

**IMPORTANT:** Please familiarize yourself with [netiquette](#) (cyber behavior guidelines). See below "Netiquette guide for online courses".

## **Course Material**

**Required material:** There is no textbook for this course. This course is based on peer-reviewed publications that will be provided by the instructor. The required reading material will be posted under "Assignments" in Canvas.

**Recommended reading and other material:** Additional reading material, links to videos, and other online resources will be posted under "Files" in Canvas.

## **In-Class Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

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### **Services for Students with Disabilities**

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

### **Campus Helping Resources**

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

These resources include:

#### *Health & Wellness*

- **U Matter, We Care**: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or tel. 352-392-1575 so that a team member can reach out to the student.  
<http://www.umatter.ufl.edu/>
- University **Counseling and Wellness Center**: Provides counseling services to students 3190 Radio Road. Tel. 352-392-1575. <https://counseling.ufl.edu/>
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Wellness Coaching
- **Sexual Assault Recovery Services** (SARS): Provides services related to sexual violence. Tel. 352-392-5648. [http://www.umatter.ufl.edu/sexual\\_violence](http://www.umatter.ufl.edu/sexual_violence)
- **Student Health Care Center**: Student health-related services. Tel. 352-392-1161. <https://shcc.ufl.edu/>
- **Gator Career Closet**: Serves as a lending closet for students to borrow professional clothing and accessories free of charge. This service is available to all UF students with a valid UF ID. Tel. 352-392-1601. <https://career.ufl.edu/careercloset/>
- **Food Pantry**: Offers non-perishable food, toiletries, and fresh vegetables. This service is provided to current students, staff, and faculty at the University of Florida. Gator 1 ID is required, but no proof of need is required.

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*For emergencies call the [University Police Department](#) at 352-392-1111 (or 911).*

### **Academic Resources**

[E-learning technical support](#): Tel. 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

[Career Connection Center](#), First Floor JWRU: Career assistance and counseling. Tel. 352-392-1601. <https://career.ufl.edu/>.

[Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources. Text 813-463-2283 or Tel. 866-281-6309. <http://cms.uflib.ufl.edu/ask>

[Teaching Center](#), Broward Hall: General study skills and tutoring. Tel. 352-392-2010 or 352-392-6420. <http://teachingcenter.ufl.edu/>

[Writing Studio](#), 302 Tigert Hall: Help brainstorming, formatting, and writing papers. Tel. 352-846-1138. <http://writing.ufl.edu/writing-studio/>

### **Online Course Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

### **Setting up VPN**

To access UF resources and journal articles off-campus, please set up a Virtual Private Network (VPN). VPN allows you to remotely connect to UF services (i.e. library, UF servers). For detailed instructions on how to set up VPN visit: <https://it.clas.ufl.edu/kb/category/vpn/>

### **Netiquette guide for online courses**

It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors.

These guidelines for online behavior and interaction are known as netiquette.

<http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

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### **Academic Honesty**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment.*" It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://policy.ufl.edu/regulation/4-040/>. If you have any questions or concerns, please consult with the instructor. Additional policies on academic integrity can be found in the [Orange Book](#).

### **Software Use**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal enalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

#### **Microsoft Office 365 Software is free for UF students**

<http://www.it.ufl.edu/gatorcloud/free-office-365-downloads/>

#### **Other free software is available at:**

<http://www.software.ufl.edu/>

To check for availability of the media and technical requirements, contact the UF Computing Help Desk at (352)392-HELP(4357).

### **University of Florida Complaints Policy and Student Complaint Process**

The University of Florida and most instructors believe strongly in the ability of students to express concerns regarding their experiences at the University. Most problems, questions and concerns about the course will be resolved by professionally communicating with the instructor. Please try to meet your instructor in person, make an appointment to call, or try to set up a remote meeting through Skype or other media. The University encourages its students who still wish to file a written complaint to submit that complaint directly to the department that manages that policy. For more information visit:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

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Professionalism is a two-way street. Unprofessional behavior of students includes, among other things: lack of communication, blaming other people or external factors, lying, affecting others negatively in a group or in the class, not accepting criticism and not being proactive in solving problems or seeking help. Furthermore, faculty often have family and other obligations to tend to. Over the weekend, replies to your inquiries or questions may be delayed. If a student is lacking professionalism repeatedly, the instructor has the right to file a formal complaint against the student through the Dean of Student office.

### **Academic Calendar**

Students should familiarize themselves with important academic dates and deadlines available at <https://catalog.ufl.edu/UGRD/dates-deadlines/>