

## **BSC3911 – Entering Research in Biology (Principles of Undergraduate Research)**

### **Syllabus – Fall 2024**

**Class Meetings:** Wednesday period 6 (12:50 PM - 1:40 PM) BAR 211

**Credit Hours:** 1

**Instructors:** Dr. Teresa Mutahi

**Office:** Bartram Hall 214B

**Office Hours:** by appointment and immediately before class (11:00-12:00am)

**Email:** [tmutahi@ufl.edu](mailto:tmutahi@ufl.edu)

### **Course Description:**

This course is designed to enhance the undergraduate research experience by focusing on critical communication skills for success in research, and broadly transferable professional skills. Students will become part of a community of scholars in the Department of biology. The course is suitable for students interested in undergraduate research, as well as students completing their second or later semesters of research.

### **Course objectives - professional development and communicating about research:**

Students without a research project/lab will use skills gained in class to successfully apply, interview, secure a research position/lab, and write a one-page research proposal for their project. Students will develop roles in a community of undergraduate student, graduate student, and faculty scholars.

Students will recognize and be able to describe ethical conduct in research.

Students will build an annotated bibliography of sources related to their research.

Students will write and improve a research proposal and summary of results and findings. One-page research proposal and the end of semester report currently required of all students registered for research credit).

Students will be able to verbally describe their research in both formal and informal settings.

Students will discuss expectations of this course and collaborate with the mentor on course assignments.

Students will discuss and reflect upon their research experiences and discuss conflict management and be able to work in a group / teamwork.

### **Additional professional development opportunities for students enrolled in this course:**

Through optional seminars, workshops, and events,

Students will create a list of resources regarding resume and CV writing, applying to professional and graduate schools, and interviewing.

Students will complete a career plan.

Students will outline the major ways in which scientific research is funded in the US and will explore the funding opportunities available to them on campus.

Students will write a funding proposal for an on-campus resource for research or travel.

Students will present their results at a formal venue.

### **Required assignments**

#### *1. Initial presentation*

In collaboration with your mentor, you wrote a one-page proposal for the research you would complete this semester in order to enroll for research credit. In this talk, you will present your proposed work, including the hypotheses you will test, your experimental design and predictions, what data you will gather, and any preliminary results you may have early in the semester. Those looking for a research project/lab, can give a talk on their research interests and projects of interest. This talk is informal and should be about 5-8 minutes long.

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### **2. *Annotated bibliography***

The annotated bibliography is a list of published papers that you have read and have used to inform your research project. An annotated bibliography includes short paragraphs with each citation, outlining how the paper is relevant and why.

- a.  $\geq 10$  sources
- b. one paragraph summary of each source
- c. alphabetical order

### **3. *Final presentation***

In this talk, you will summarize your research for the semester, including hypotheses tested, experimental design, data gathered, results, and a discussion of your findings. If still looking for a research project, choose an interesting topic or article in your area of interest and make a presentation. This talk is formal and should be about 6-10 minutes long.

### **4. *End of semester report***

This is the end of semester report already required at the end of each semester of enrolled research. The report should be similar to the final presentation, in formal written style, with references from your annotated bibliography cited properly.

### **5. Submit a career plan and a CV.**

## **Required events**

### **1. *Seminars***

The following seminars, which meet during the regularly scheduled class period, are required:

- a. Expectations from you and your research mentor. If still looking for a research lab, use this time to narrow down and send emails to labs with scientists you are interested in working with.
- b. Using the library (presented by a science Librarian, Marston Science Library faculty)
- c. Ethics in research
- d. Biology Careers
- e. Initial presentations (all)
- f. Final presentations (all)
- g. Expert Guest Lectures

### **2. *Additional opportunities for professional development***

You must participate in the following events, seminars, or workshops:

- a. Workshop - Writing a resume or CV and interviewing skills. Takes place at the Career Connections formerly Career Resource Center.
- b. Workshop – Applying to Professional school Medical School (Guest).
- c. Workshop - Applying to graduate school/funding (Guest).
- d. Attend an exit seminar, talk, poster presentation or conference.

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### Grading

Assignment	Points	Percentage
Initial presentation	50	10%
Annotated bibliography	50	10%
Final presentation	100	20%
End of semester report	50	10%
Career plan	50	10%
Attendance and participation - required seminars	100	20%
Attendance –symposium/seminar/conference	50	10%
Participation in additional opportunities	50	10%
<b>Total</b>	<b>500</b>	<b>100%</b>

**Grading scale:**  
90 – 100% = A  
80 – 89.9% = B  
70 – 79.9% = C  
60 – 69.9% = D  
below 60% =

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### Course Schedule:

Week	Topic	Assignment
Aug 28	I will meet individual students looking for research spots in BAR 214B directly across our class BAR 211 for a tailored advisory session. Email interested labs this week if still looking for a research lab/project (even for the future). More to follow via email. Class meeting not required if you already have a research project. Meeting with your mentor this week is required to plan research for the semester or if you have questions, come to BAR 221 during class time if still looking for a research project and you have specific questions.	
Sep 4	Expectations from you, and from your mentor. Literature review in lieu of research project	
Sep 11	Using the library (Presented by Marston Science Library faculty- more details to be shared in class)	
Sep 18	Ethics in Research	
Sep 25	Initial Presentations	
Oct 2	Initial Presentations	Start working on research report: Introduction, literature review, methods
Oct 9	Biology Careers	
Oct 16	Careers Guest Speakers- Beyond UF by Career Connections Advisors	Submit a career plan beyond UF
Oct 23	ADDITIONAL OPPORTUNITY - Workshop: Applying to Professional Schools-Medical Pharmacy, Dental Schools etc.	
Oct 30	ADDITIONAL OPPORTUNITY -Workshop: Applying to Graduate School/Funding (Guest- Graduate Admissions Coordinator)	
Nov 6	ADDITIONAL OPPORTUNITY - Workshop: CV and resume writing, interviewing skills (Book an appointment & visit the Career Resource Center)	Submit your CV. Mentor checks your results, work on final presentation
Semester Activity	Communication Skills assignment: Attend a Graduate exit Seminar/ Symposium/poster/Talk/Presentation	Submit summary of what was learned
Nov 13	Final Presentations	
Nov 20	Final Presentations	
Nov27wk	Final Presentations -Recording submissions that holiday week	Annotated bibliography due
Dec 4	Final Presentations. End of Research/literature review Report	Report Due

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### **Course attendance:**

Attendance is required and essential for success in this course and is a component of your participation grade. I understand that absences happen, but if you make this a habit, you are guaranteed to perform poorly. Attendance is a component of your class participation grade.

### **Make up policy:**

If you have a valid documented excuse and notify me in advance, you may be able to make up missed discussion assignments. I will determine this on an as-needed basis.

### **Academic Honesty Policy:**

All students registered at the University of Florida have agreed to comply with the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.” In addition, on all work submitted for credit the following pledge is either required or implied: “On my honor I have neither given nor received unauthorized aid in doing this assignment.” If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: <https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx#honesty>. Plagiarism is a violation of the Academic Honesty Policy. It will not be tolerated. Please review how to define plagiarism and how to avoid it: <http://web.uflib.ufl.edu/msl/07b/studentplagiarism.html>

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### **Accommodations for students with disabilities:**

Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: <http://www.dso.ufl.edu/drc/>. Note that the student should provide documentation of a requirement for accommodation by the second week of classes. No accommodations are available to students who lack this documentation. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

### **Attendance and make-ups**

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Refer to the above link for more information on the university's attendance policy.

### **Course Evaluations**

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 [gatorevals.ua.ufl.edu/students/](http://gatorevals.ua.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 [ufl.bluera.com/ufl/](http://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students at [gatorevals.ua.ufl.edu/public-results/](http://gatorevals.ua.ufl.edu/public-results/).

### **Academic Integrity**

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Click here to read the Conduct Code. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### **In person 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

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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.

### **Campus Resources:**

- Health and Wellness U Matter, We Care:** If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.
- Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.
- University Police Department:** Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).
- UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.
- GatorWell Health Promotion Services:** For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273- 4450.

### **Academic Resources:**

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

Career Connections Center: Reitz Union Suite 1300, 352-392- 1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources. Call 866-281-6309 or email [ask@ufl.libanswers.com](mailto:ask@ufl.libanswers.com) for more information.

Teaching Center: 1317 Turlington Hall, 352-392-2010 or to make an appointment 352- 392-6420.

General study skills and tutoring. Writing Studio: Daytime (9:30am-3:30pm): 2215 Turlington Hall, 352-846-1138 | Evening (5:00pm-7:00pm): 1545 W University Avenue (Library West, Rm. 339). Help brainstorming, formatting, and writing papers.

Academic Complaints: Office of the Ombuds; Visit the Complaint Portal webpage for more information.

Enrollment Management Complaints (Registrar, Financial Aid, Admissions): View the Student Complaint Procedure webpage for more information.

### **Procedure for Conflict Resolution**

Any classroom issues, disagreements or grade disputes should be discussed first between the instructor and the student. If the problem cannot be resolved, please contact the undergraduate Coordinator or the Department Chair. Be prepared to provide documentation of the problem, as well as all graded materials for the semester. Issues that cannot be resolved departmentally will be referred to the University Ombuds Office (<http://www.ombuds.ufl.edu>; 392-1308) or the Dean of Students Office (<http://www.dso.ufl.edu>; 392-1261). For further information refer to [https://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf) (for residential classes) or <http://www.distance.ufl.edu/student-complaintprocess> (for online classes).