BIOL731 Proposal Preparation for External Funding (grant writing)

Instructor & coordinator: Dr. Phillip Barden
E-mail: barden@njit.edu
Office: CKB 428B
Office Hours: Mon, Weds: 1:00-2:00pm

Course Website: http://canvas.njit.edu
Course Schedule: Mon, Weds 11:30-12:50pm
Course Location: CKB 316

Course description: This course is intended for doctoral students in their first or second year who intend to apply for external funding for their research. The course is hands-on and students are required to identify sources of funding and to write and submit a grant proposal. Topics covered include developing research questions and hypotheses, organization of specific aims, components of the proposal, including significance, innovation, expected outcomes, potential pitfalls and broader impact. The course also emphasizes practices of good grantsmanship and provides an overview of how proposals are reviewed at NSF and NIH.

Learning objectives

Grant writing is a fundamental component of maintaining a modern research program. This course will expose students to the grant writing process, from project formulation and planning to drafting and peer review. At the end of the course students will be able to:

- Evaluate grant proposals on a comparative basis
- Identify appropriate funding sources
- Develop a strategic plan for the proposal drafting process
- Clearly and concisely articulate project goals and impact
- Draft proposals with clear flow and structure
- Articulate credible objectives

Prerequisites: BIOL 630 – Critical Thinking
Required Materials: None.

Recommended books:

1. *The Elements of Style, Fourth Edition* (or any edition) by Strunk & White
2. *Several Short Sentences About Writing* by Klinkenborg
3. *How to Write a Lot: A Practical Guide to Productive Academic Writing* by Silvia

Class participation: Students are expected to attend every class meeting, participate in discussions, and provide feedback and constructive criticism.

Grading Policy: Grades will be determined by scores from participation, individual assignments, and the final proposal. Individual assignments will together comprise 33% of your final grade. Weekly participation and the submission of your final proposal will each account for the additional 33% of you grade.

Grading Scale	
A	90 – 100
B+	85 – 90
B	80 – 85
C+	75 – 80
C	70 – 75
D	60 – 70
F	0 – 60

Participation (coming to each class and speaking)	33%
Individual assignments	33%
Final Proposal	33%

Assignments: Assignments posted to Canvas are due by the beginning of class. If you do not have assignments ready during class you may email them to barden@njit.edu the same day for 50% credit.

Academic integrity: Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: NJIT Academic Integrity Code.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu

Canvas: We will be using Canvas for our class website (http://canvas.njit.edu). To use Canvas students must have an NJIT UCID. If you are matriculated at NJIT you should already have a UCID. If you are a Rutgers student you may already have one. You can check by following the directions here: https://ist.njit.edu/ucid/. If you do not have one you can request one at the same page or call the NJIT helpdesk for assistance (973 596 2900).

Generative 'AI': All text in assignments should be the product of your own thinking and writing. Any assignments that are found to comprise generative AI text, either entirely or in part, will receive no credit and be reported to the Dean of Students. Moreover, this course will require in-class writing and participation that will reveal disjunct quality, tone, and content that may be the result of reliance of generative AI.

Key Dates:
Jan 21: First day of classes
Jan 27: Last day to add/drop a class
Feb 3: Last day to withdraw with 90% refund
Apr 7: Last day to withdraw
May 7: Last day of classes

Date	Topic	Due in class
Wed, Jan 22	***Introduction***	
Mon, Jan 27	**In-class review panel** *Straw poll*	Assignment: what proposals get funded?
Wed, Jan 29	***In-class review panel*** *Rubrics and reporting*	
Mon, Feb 3	**In-class review panel** *Consensus*	Proposal review summaries
Wed, Feb 5	**In-class review panel** *Retrospective*	
Mon, Feb 10	**Effective proposals**	Assignment: what worked, what didn't
Wed, Feb 12	**Grant planning**	
Mon, Feb 17	**Writing clearly**	Bring four sentences
Wed, Feb 19	**Writing clearly**	
Mon, Feb 24	**Flow**	Bring an outline
Wed, Feb 26	**Flow**	
Mon, Mar 3	**Figures**	Bring a drawing
Wed, Mar 5	**Clarity** *Goals*	
Mon, Mar 10	**Clarity** *Hypotheses, assessment*	Bring a hypothesis
Wed, Mar 12	**Credibility**	
Mon, Mar 17	***Spring Break***	
Wed, Mar 19		
Mon, Mar 24	**Compelling**	
Wed, Mar 26	**Supporting documents are sales pitches**	Bring a budget
Mon, Mar 31	**Draft feedback**	Bring a draft
Wed, Apr 2	**Draft feedback**	
Mon, Apr 7	**Draft feedback**	Draft revision
Wed, Apr 9	**Draft feedback**	
Mon, Apr 14	**Draft feedback**	Draft revision
Wed, Apr 16	**Draft feedback**	
Mon, Apr 21	**Mock Panels**	Final draft

Date	Topic	Due in class
Wed, Apr 23	**Mock Panels**	
Mon, Apr 28	**Mock Panels**	
Wed, Apr 30	**Mock Panels**	
Mon, May 5	**Mock Panels**	

*Course schedule is tentative and subject to change. Please see Canvas and emails for updates.