

SYLLABUS - Fall 2017

BIO 501 – Introduction to Science as a Profession (2 cr)

W – 8-9:50 AM, 226 Dobo Hall

Dr. Joseph Pawlik – MG 2333 – office hours by appointment

<u>DATE</u>	<u>TOPIC</u>	<u>Instructor/Guests</u>
16 Aug	Course introduction, philosophy. General info about UNCW, grad program, assignment of Literature Review for Prospectus - Pawlik	
23 Aug	Employment in the Sciences I. Research academic – Pawlik	
30 Aug	Performing Science I. Accessing the scientific literature and generating bibliographies. NOTE: meeting in Randall Library 1022 – Peter Fritzler, Science Librarian	
06 Sep	Communicating Science I. Oral and poster presentations, the Graduate Student Symposium – Pawlik	
13 Sep	Philosophy of Science. What defines science? The importance of critical rationalism; experimental approach and design, ethics, responsible conduct of research – Pawlik	
20 Sep	Communicating Science II. Teaching courses – Dr. Linda Potts, Lecturer, BMB, UNCW	
27 Sep	Employment in the Sciences II. Teaching academic – Jason Rogers, Director of Marine Technology, Instructor, Cape Fear Community College	
04 Oct	Communicating Science III. Journal articles – Pawlik	
11 Oct	Employment in the Sciences III. Federal, State, Local, NGOs – Tara MacPherson, NC Division of Coastal Management and Erin Carey, Coastal Conservation Coordinator, Sierra Club, NC Chapter.	
18 Oct	Communicating Science III. Grant proposals – Pawlik	
25 Oct	Finances in Science. Salaries, start-up funds, research budgets, etc. - Pawlik	
01 Nov	Performing Science II. Laboratory and field safety – Deb Tew and Jason Souza, EH&S, UNCW.	
08 Nov	Criticism in Science. Reviews of journal articles and grant proposals – Pawlik	
15 Nov	Performing Science III. Experimental design and analyses of data – Dr. Fred Scharf	
22 Nov	<i>HOLIDAY</i>	
29 Nov	Sociology of Science. Colleagues, students, staff, the public and outreach – Pawlik	

Grading: This course is primarily graded on attendance and active participation. Roll will be taken, and unexcused absences will reduce your grade. The breakdown is as follows: 40% attendance, 30% participation, 20% completion of literature review for prospectus, 10% completion of CITI Responsible Conduct of Research module, as evidenced by copy of Certificate of Completion.

Goals: This course is intended to focus student attention on career paths at the onset of the graduate school experience. It is NOT intended to teach specific content related to student research topics, analysis of data, literature research, or scientific writing. By the end of this course the student will: (1) understand potential trajectories for employment in the sciences, (2) know what critical rationalism is and the basic concepts of the scientific method and experimental design, (3) understand how to conduct research ethically and safely, (4) know the ways that science is communicated, validated and supported.