ADVANCED TRAINING FOR CAREERS IN PSYCHOLOGICAL SCIENCE
PSYCH-GA.3404.001
FALL 2017 | Wednesday 12-2pm | Meyer 465

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Office Hours: By appointment
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Office Hours: By appointment
Twitter: @jayvanbavel

Course Website: available on NYU Classes (via your NYU Home account)

Readings: You are responsible for the assigned readings each week (not the additional readings). Most of them will be available on the course website. All journal articles will be posted on the course web site. However, you should buy a copy of The Compleat Academic ($32 new on Amazon.com). The other books are highly recommended reference books for professional issues (e.g., doing high impact research and navigating professional issues).


![The Compleat Academic book](image1)

![How to Publish High-Quality Research book](image2)

![The Professor is in book](image3)
Course Description

The goal of this course is to provide hands-on methodological and professional training for psychology PhD students who are interested in a career in psychological science. We will cover skills and requirements for a career in psychology that complement the depth and breadth requirements of the PhD program. The course will include but will not be limited to the following topics: advanced methods, professional ethics, scientific writing, grant writing, reviewing papers, and writing personal statements. Although the course is focused on the best practices underlying the production of rigorous and impactful scientific discoveries, it will require students to produce concrete materials that should help advance their careers as scientists. For example, students can write a formal grant proposal to be submitted for funding. The grant writing process encapsulates many of the key activities involved in conducting psychological science, including identifying important scientific questions, devising rigorous tests of hypotheses, developing a research strategy to achieve the aims of the grant, and considering broader impacts of the research. Tessa and Jay will provide concrete feedback on these materials throughout the course.

Course format and grades

Participation (10%): Each student is expected to read the assigned articles each week and participate in discussion of those readings during the class meeting. Students are graded on their ability to understand and integrate the material. We are especially interested in your ability to add to the dialogue, such as by building on a discussion, thinking critically about the materials, or challenging an expressed view. In addition to critical perspectives on the course material, we are looking for evidence that you understand the historical and contemporary value of the discussed work in the broader literature. You will also be graded on your contribution to your classmates.

Leading discussion (10%): Each student will serve as a discussion leader for one class meeting (there will occasionally be two leaders on a given week). Each week, the discussions leaders will solicit questions from every student in the class and present them to Tessa and Jay during class. Discussion leaders will identify core themes in the questions and distribute a list of the most important questions to the class at least 24 hours before the class meeting. The questions can focus on articles or themes that connect the articles or expand upon them.

Research Proposal - Generating ideas (10%): In addition to generating identifying important scientific questions, part of the challenge of grant-writing is finding the right agency for your research. One effective strategy is to pitch potential ideas to grant officers before submitting, to get a feel for their interest in your work. For this assignment, find two to three targeted sources (e.g., NIH, NSF, SPSSI, APS, APA), and propose three ideas for these sources. You can pitch a different idea to each source, or three ideas to the same source. These should be “broad strokes” paragraphs that
emphasize the overarching research ideas and why they are important and relevant to the agency’s funding mission. Each idea should be no more than a 250 words (please provide a work count).

**Research Proposal - Theoretical aims (10%):** You will be putting together a final research grant proposal for this class. Your research proposal will be broken into several parts. For this assignment, you will articulate the aims of your research. We would like you to provide an overview of your theoretical model, your hypotheses, and a short review of background literature. Make sure you emphasize what is new and innovative about the proposed project, how it will move science forward, etc. No more than 1500 words.

**Research Proposal - Methods and Pilot studies (10%):** The success of grants often depends on your ability to show initial evidence for some key components of your proposed model. For this assignment, we would like you to include an overview of what pilot studies you plan to collect for this proposal. If you have already collected data that would be appropriate, a brief description of these studies is appropriate. You will be graded on your ability to make clear how these pilot studies map onto the theoretical model you proposed. No more than 1000 words.

**Research Proposal - Broader Impacts (10%):** The success of grants often depends on the potential impact of the research, inside and outside of the scientific community. For this assignment, we would like you to draft a short description of the broader impacts of your research. The “broader impacts” statement makes clear how your work will benefit society at large. No more than 500 words.

**Research Proposal - Mentoring plan (5%):** Federal granting agencies often evaluate your capacity to lead a research team and mentor younger scientists. For this assignment, you will articulate you teaching and mentoring plan. This should express your scientific values and how you plan to pass them to the next generation. You will write a succinct teaching and mentoring plan, describing your teaching and mentoring philosophy, experiences, and future plans. No more than 500 words.

**Research Proposal - BioSketch (5%):** The success of grants often depends on the capacity of the scientist to effectively execute the proposed research. For this assignment, we would like you to provide your CV along with a succinct biographical research statement, describing your educational and methodological training, program of research, and future research plans. The statement must be no more than 500 words.

**Research Proposal - Presentation (10%):** Many grant agencies require finalists to present a final proposal to a panel of experts. Imagine that the class is a panel overseeing the granting process. For this assignment, you should briefly present your grant proposal (10-15 minutes) during the last class meeting. These presentations should be clear and concise, with a description of the relevance to the funding
agency's mission, and a focus on your theoretical hypothesis and proposed methodological approach. Standard presentation format involves Keynote/PowerPoint, but you are free to use any format necessary to communicate your proposal. You will be graded on your ability to clearly and elegantly communicate the main points of the theory or research proposal.

**Research Proposal - Full proposal (10%):** For the final proposal assignment, you will submit a finished product that contains all the components of the grant described above, along with a reference section, a budget, and a budget justification. For the proposed studies, you must include a power analysis, an analysis plan for each study (e.g., data will be analyzed using ANOVA...), and hypothesized results. The budget and budget justification will outline all costs associated with the proposal (e.g., participant costs, computers, software) and why they are necessary for the research. The final proposal must be no more than 6,000 words and is due exactly one week after the presentation.

**Mock Review (10%):** You will review a paper that was submitted for publication (we will provide this paper). You will provide a detailed review of all of the studies in the paper, along with a recommended editor decision. We will grade you based on the quality of your review (not on how positive or negative you are about the paper).

**Late assignments will be deducted 5% for every day they are late.** Please contact us at least a week before the due date if you require an extension due to an anticipated conflict or delay.

**GRADING SCHEME**

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<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Participation</td>
<td>10</td>
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<tr>
<td>Leading Discussion</td>
<td>10</td>
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<tr>
<td>Proposal - Generating Ideas</td>
<td>10</td>
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<tr>
<td>Proposal - Theoretical Aims</td>
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<td>Proposal - Methods and Pilot studies</td>
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<td>Proposal - Broader Impacts</td>
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<tr>
<td>Proposal - Mentoring Plan</td>
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<td>Proposal - BioSketch</td>
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<td>Proposal - Presentation</td>
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<tr>
<td>Proposal - Full Proposal</td>
<td>10 Points</td>
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<td>Mock Review</td>
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<td><strong>Total</strong></td>
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<tr>
<td>A</td>
<td>93-100</td>
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<td>73-76</td>
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<td>A-</td>
<td>90-92</td>
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<td>87-89</td>
<td>D+</td>
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<td>83-86</td>
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<td>C+</td>
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If you have questions or concerns about your grades you should meet with either instructor after class to discuss them.

### Topic and Assignment Schedule

#### Calendar At a Glance

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Sept. 6</td>
<td>Welcome and overview</td>
</tr>
<tr>
<td>Sept. 13</td>
<td>Thinking like a psychological scientist</td>
</tr>
<tr>
<td>Sept. 20</td>
<td>Generating ideas and writing grants (Dr. Donald Edmondson)</td>
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<td></td>
<td>Generating ideas due</td>
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<tr>
<td>Sept. 27</td>
<td>Collaboration and professionalism (Dr. June Gruber)</td>
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<tr>
<td>Oct. 4</td>
<td>Research ethics and questionable practices</td>
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<td></td>
<td>Theoretical aims due</td>
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<tr>
<td>Oct. 11</td>
<td>MOVIE DAY! “Naturally Obsessed: The making of a scientist”</td>
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<td>Oct. 18</td>
<td>Best research practices</td>
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<td></td>
<td>Methods and Pilot studies due</td>
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<td>Oct. 25</td>
<td>The new statistics and scientific writing</td>
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<td>Nov. 1</td>
<td>Reviewing</td>
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<td>Mock Review Due</td>
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<td>Nov. 8</td>
<td>Broader impacts &amp; disseminating research</td>
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<tr>
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<td>Broader Impacts Due</td>
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<tr>
<td>Nov. 15</td>
<td>Becoming a faculty member (PI)</td>
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<td>BioSketch Due</td>
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<tr>
<td>Nov. 22</td>
<td>No class due to due Thanksgiving Break</td>
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<tr>
<td>Nov. 29</td>
<td>Teaching &amp; Mentoring</td>
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<td>Mentoring plan Due</td>
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<tr>
<td>Dec. 6</td>
<td>Starting a lab &amp; Managing a career</td>
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<tr>
<td>Dec. 13</td>
<td>Class Presentations</td>
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<td></td>
<td>Presentation Due</td>
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<tr>
<td>Dec. 13</td>
<td>No class</td>
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<td></td>
<td>Full proposal Due</td>
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September 6: Welcome and overview


A number of useful resources for graduate students on writing, conducting research, and achieving career success: [http://psych-your-mind.blogspot.com/2014/02/pyms-graduate-student-guide-blog.html](http://psych-your-mind.blogspot.com/2014/02/pyms-graduate-student-guide-blog.html)

September 13: Thinking like a psychological scientist


Additional reading


September 20: Generating ideas and writing grants (Donald Edmondson)


**Additional reading**


**September 27: Collaboration and professionalism (June Gruber)**


See the APA Authorship Determination Scorecard as a concrete tool for determining authorship


**Additional reading**


**October 4: Research ethics and questionable practices**


**Additional reading**


**October 11: MOVIE DAY! “Naturally Obsessed: The making of a scientist”**

Jay and Tessa are gone this week. Please use class time to watch the PBS documentary “Naturally Obsessed: The Making of a Scientist”. This documentary delves into the lab of professor Dr. Lawrence Shapiro, and follows three irrepressible graduate students on their determined pursuit of a PhD and scientific success. As if the pressure of scientific discovery isn’t enough, the students are also competing in a worldwide race to be the first to publish their findings. Their road to success: years of trial and error, unflinching dedication, rock-climbing, rumors of pickle juice, and the music of The Flaming Lips. Although the research is outside psychology, many of the lessons are the same. We will discuss the following week.

**October 18: Best research practices**


Bastian, H. (2017) Bias in Open Science Advocacy: The Case of Article Badges for Data Sharing. (also read the comments on this blog).

October 25: The new statistics and scientific writing


Additional reading

Crandall, Leach, Robinson & West (2017). *PSPB Editorial*


November 1: Reviewing


Critically reading journal articles.

Hilten. (2015). 3 tips for responding to reviewer comments on your manuscript


Additional reading

 Peer review: The nuts and bolts

November 8: Broader impacts and disseminating research

Gargouri et al., (2010). Self-selected or mandated, open access increases citation impact for higher quality research. PLoS ONE.


Additional reading


You suck at powerpoint: 5 shocking design mistakes you need to avoid.

Here is a great resource for presenting your research: TED Talks: The official TED Guide to Public Speaking

November 15: Securing a faculty position.


**Additional reading**


**November 22: NO CLASS due to Thanksgiving Break**

**November 29: Teaching & Mentoring**


December 6: Starting a lab & Managing a career


Additional reading


How to set up a cutting-edge research lab.

December 13: Class Presentations

December 20: Full Proposals due

Course website

Log in and you should see this course. If you don’t, please let us know. Readings, grades, assignments and handouts will be posted online. There is also a discussion board for questions. If you have a question you can email, or post it online. If several people email a similar question we will post it on the website. Please treat the website as a collective resource to ask questions of common interest and share ideas.
with one another. If you have a dispute or concern with another member of the class, please email us directly and do not try to deal with it on the course website.

**Academic Conduct**

All work must be your own. NYU uses *Turnitin*, which can automatically detect plagiarism. If you cheat, you will be caught. Cheating or plagiarism will be reported through official university channels, and the consequences will be severe. If you are unwise enough to plagiarize, the minimum punishment is usually failure in the course. If the case of plagiarism or cheating is especially blatant, you may be expelled from the university. The papers and assignments are designed for what you can do based on what we are covering in this class and the skills you have already learned.