Psychology 293, Spring 2017
Graduate Seminar on Professional Development

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Class meetings: Tuesdays 10am – Noon, Warner Brown room (3201) in Tolman Hall

Goal: This course focuses on various issues related to professional development. Topics include planning a research program, preparing for qualifying exams, choosing a dissertation committee, presenting work at conferences and in journals, preparing grant proposals, identifying and preparing for various career options, and juggling professional and personal life.

Format: Active discussion among students, professor, and guest speakers

Assigned Readings: A course reader will be available for purchase from Krishna Copies, and additional readings will be shared on bCourses. The reader contains articles, as well as chapters from numerous books.

Additional Resources:
• http://career.berkeley.edu/PhDs/PhDs.stm
• http://grad.berkeley.edu/professional-development/guide/

Grading: Grading is pass/no-pass. You are expected to actively participate in the discussions and complete all assignments. This class is for your benefit; you will get out of it what you put into it.

Poster: This course culminates in a poster presentation that is a requirement of the graduate program. All 2nd-years, as well as 3rd-years who have not already completed this assignment, must present a poster on this day. If you foresee a scheduling conflict, please let me know within the first 2 weeks of class.

Class Schedule

January 17  Introduction; Navigating the graduate program

10-11am: Round of introductions; grad school so far; review program requirements & any concerns; 2nd-year project; suggestions for guest speakers

11-12: Panel with more senior grad students & John Schindel. Preparing for the qualifying exam; what I wish I had known sooner; good classes; little-known resources

Readings for next class: "Grad School", "Student-Advisor Relationship", and “Time Management". Please set aside at least an hour to read the parts that are most relevant to you right now, and come to class prepared to share what you've learned.

January 24  Grad school life

Readings for next class: "Doing Good Science" (Readings on picking a good research topic, and study design) - and "Time Management", if you haven't looked at it yet.
January 31  Picking your research question; Planning a program of research
Developing good ideas and testable hypotheses. Guest: Dacher Keltner

Readings for next class: “Giving Talks” and “Presenting your Data” sections

Assignment: Prepare a brief presentation about your current/planned research

February 7  Student presentations

Readings for next class: Catch up on previously assigned readings, or skip ahead

February 14  Student presentations

Readings for next class: “Grant-writing” section

February 21  Grant-writing & review process

What makes for a good proposal (hint: not a review paper), what a program officer does, what an RFA is, how grants are reviewed, etc.

Assignment: Prepare Specific Aims page, consulting “Grant-Writing” section. Submit online by 11:59pm on March 6th

Readings for next class: “Preparing for a Life in Academia” and “Academic Culture and Ethics”

February 28  Productivity and work/life balance; Academic culture and ethics

The hunt for the elusive work/life balance; underrepresented students, etc. Guest: Rudy Mendoza-Denton

Readings for next class: "Writing", “Getting your Work Published”, "Peer Review"

March 7  Writing & publishing an empirical paper

Tackling a writing project, picking the right journal, addressing reviews

Guest: Oliver John

Assignment: Check your grant assignments online. Evaluate peers’ Specific Aims, using template. Provide only constructive feedback. Bring paper copy of review with you to class.

Readings: Review "Grant-writing" and/or "Peer Review" sections

March 14  Peer review of Specific Aims

Assignment: Update evaluation of peers’ proposals based on the discussion in class, and upload comments to bCourses before March 28th (while still fresh in your mind). Your peers will benefit from having this concrete feedback in writing.

March 21  Peer review of Specific Aims

Assignment: Update evaluation of peers’ proposals based on the discussion in class, and upload comments to bCourses before March 28th

March 28  Spring break

April 4  No class
Focus on research in preparation for poster presentation – or, if you like, self-organize to meet and discuss a topic of interest

Readings for next class: “Next Steps for an Academic Job” section

April 11       Panel: Postdocs, internships, & the academic job search

Readings for next class: “Doing Good Science” (section on Reproducibility), “Engaging with the Public”

April 18       Doing good science

Issues around replication and data collection. Academic fraud (plagiarism, fabrication, falsification, conflict of interest) and scientific misconduct (gift authorship, redundant publication, etc.). Responsible laboratory practices to authorship and publication, societal implications of research, data management, and collaborative science. Guests: Leif Nelson from Haas, Russ Poldrack from Stanford

Assignment: Check your grant assignments online. Evaluate peers’ Specific Aims, using template on bCourses. Provide only constructive feedback. Bring paper copy of review with you to class.

Readings for next class: “Career Options” section

April 25       Panel: Alternatives to academia

Assignment: Prepare & print poster, consulting “Presenting your Data” section

Week of May 8th (date TBD)       Poster session

Professional Development for Graduate Students in Psychology
Psychology 293, Spring 2017 – Professor Silvia Bunge

Course Reader

References

• The Compleat Academic – Darley, Zanna, & Roediger
• Succeeding in Graduate School: The Career Guide for Psychology Students – Walfish & Hess
• The Psychologist's Companion – Sternberg
• Guide to Effective Grant Writing: How to Write an Effective NIH Grant Application – Yang
• Career Paths in Psychology – Sternberg
• Tomorrow’s Professor: Preparing for Academic Careers in Science and Engineering
• The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid
• Harvard Business Review Guide to Getting the Right Work Done
• The Sense of Style: The Thinking Person’s Guide to Writing in the 21st Century! – Steven Pinker
• The Grant Application Writer’s Workbook, NIH Version
• Graph Design for the Eye and Mind – Steve Kosslyn, 2006
• Made to Stick: Why Some Ideas Survive and Others Die – Chip Heath & Dan Heath
Table of Contents

1. Grad School
   • A Guide to PhD Graduate School: How They Keep Score in the Big Leagues (Ch.1, The Compleat Academic)
   • Characteristics of Graduate School Superstars (Appleby, 1990)
   • Graduate School is a Means to a Job (Kelsky, Chronicle of Higher Education)

2. Student-Advisor Relationship
   • The Care and Maintenance of your Advisor (Kearns & Gardiner, *Nature*, 2011)
   • Planet of the Professors (Chronicle of Higher Education)
   • Best Practices for Faculty Mentoring of Graduate Students (Graduate Council, UC Berkeley)
   • Receiving and giving effective feedback (Center for Teaching Excellence, U Waterloo)

3. Time Management
   • Anecdote about work/life balance
   • Organize your Time (p.49-84, Getting the Right Work Done)
   • Take Control of your E-mail (p.153-162)
   • Stress & Stress Mastery in Graduate School (Ch.10, Succeeding in Graduate School)

4. Doing Good Science

   Picking a good research topic
   • How to Choose a Good Scientific Problem (Alon, 2009)
   • Choosing a Research Topic (Reis)
   • The importance of stupidity in scientific research (Schwartz, 2008)

   Study design
   • Minimally Sufficient Research (Peterson, 2009)
   • The strong inference protocol (Hiebert, 2007)
   • Strong inference (Platt, *Science*, 1964)

   Reproducibility
   • Estimating the reproducibility of psychological science (Open Science Collaboration, 2015)
   • *Nature* News Features:
     o First results from psychology’s largest reproducibility test
     o Psychology’s reproducibility problem is exaggerated – say psychologists
     o Scientific method: Statistical errors
     o How scientists fool themselves – and how they can stop
   • The New Statistics: Why and How (Cumming, 2014)

5. Presenting your Data

   Figures and tables
   • Good Design for the Eye and Mind (Ch.2,3,5, Kosslyn):
Choosing a Graph Format
• Creating the Framework, Labels, and Title
• Creating Bar-Graph Variants

• Error Bars in Experimental Psychology (Cumming, Fidler, & Vaux, 2007)

Conferences
• How to Write an Abstract that Will Be Accepted for Presentation at a National Meeting (Pierson, 2004)
• Effective Poster Design for Academic Conferences (Eggart)
• How to Get the Most out of Scientific Conferences (Reis)

6. Giving Talks
• Introduction to Articulate Presentations (Ch.1, Clear and to The Point)
• PowerPoint presentation flaws and failures: a psychological analysis (Kosslyn et al., Frontiers in Psychology, 2012)
• The Craft of Scientific Presentations (Ch.2,5):
  o Speech: The Words You Say
  o Delivery: You, the Room, and the Audience
• Eight speaking tips
• Effective presentations

7. Writing
• Writing the Empirical Journal Article (Ch.10, The Compleat Academic)
• Components of a Research Article (Fischer and Zigmond)
• The Psychologist’s Companion (Ch.1, 3, 4, & 16):
  o Eight Common Misconceptions about Psychology Papers
  o Steps in Writing the Experimental Research Paper
  o Rules for Writing the Psychology Paper
  o Article Writing 101
• The Curse of Knowledge (Prologue & Ch.3, The Sense of Style)
• The Unsuccessful Self-Treatment of a Case of “Writer’s Block” (Upper, 1974)
• Judging the quality of our research: A self-assessment test (Aarssen et al., 2010)
• Writing & Submitting Journal Articles, and the Process of Peer Review (Bunge, 2014)

8. Getting your Work Published
• The Psychologist’s Companion (Ch.10-12):
  o Standards for Evaluating the Psychology Paper
  o Submitting a Paper to a Journal
  o How to Win Acceptances from Psychology Journals: Twenty-Nine Tips for Better Writing
• Publish Like a Pro (Powell, Nature, 2010)
• Ten Simple Rules for the Care and Feeding of Scientific Data (Goodman, 2014)
• A Pragmatic Approach to Getting Published: 35 Tips for Early Career Researchers

9. Peer Review
The peer-review process
- What If Social Scientists Had Reviewed Great Scientific Works of the Past? (Trafimow & Rice, 2009)
- Problems, Pitfalls, and Promise in the Peer-Review Process: Commentary on Trafimow & Rice, 2009 (Cooper, 2009)
- Reproducibility of peer review in clinical neuroscience: Is agreement between reviewers any greater than would be expected by chance? (Rothwell & Martyn, 2000)
- Are reviewers suggested by authors as good as those chosen by editors? Results of a rater-blinded, retrospective study (Wager, Parkin, & Tamber, 2006)

Serving as a reviewer
- Twelve Tips for Reviewers (Roediger, The Academic Observer)
- How to Review a Paper or Grant (Jodi Culham)

10. Grant-Writing
- The Grant Application Writer’s Workbook (Ch.2, 7, 8)
  - How to Develop an Irresistible Idea for your Grant Application
  - Specific Aims Section: Conceptual Overview & Creating a Bullet Outline
  - Writing the Specific Aims Section
- Mistakes that grant proposers make (Bob Levenson)
- Tips on Writing National Research Service Award Predoctoral Fellowship Proposals from Real NRSA Reviewers (Greg Siegle, Sheri Johnson et al.)

11. Academic Culture and Ethics
- Succeeding in Graduate School (Ch.7-8, 11, 14):
  - The Politics of Graduate Programs
  - Students and Faculty: The Growth of Relationships
  - Stresses and Strategies for Underrepresented Students
  - Learning to Become Ethical
- The Compleat Academic (Ch.16-17):
  - Women in Academia
  - Clinical Psychologists in Academia

12. Engaging with the Public
- Stand up for Science (Baron, Nature, 2010)
- 10 Tips for Handling Inquiries, Interviews (Principal Investigator Advisor, 2010)
- What Sticks? (Introduction, Made to Stick)

13. Career Options

Within Academia
- Do I really want to be a professor? (Bunge)
- The Academic Enterprise (Ch.1, Tomorrow’s Professor)
- Varieties of College and University Experiences (Ch.18, Compleat Academic)
- After Graduate School: A Faculty Position or a Postdoctoral Fellowship? (Ch.2, Compleat Academic)
Beyond Academia

- Broadening the Job Search: Jobs Outside of Academia (Ch.4, Compleat Academic)
- Career Paths in Psychology (Ch. 11-12, 14-15):
  - Careers in Public Service: The Intersection of Science and Policy
  - Scientific Careers in Psychology in Government Service
  - Industrial/Organizational Psychology as a Career: Improving Workforce Performance and Retention
  - In the Halls of Business: Consulting Psychology as a Career

14. Next Steps for an Academic Job

- Bloopers to Avoid in Job Interviews (Sternberg, 2013)

Postdoctoral fellowships
- Dear former graduate student (Boninsegni)

Clinical internships
- Ch.12,14 Succeeding in Graduate School:
  - Applying to Professional Psychology Internship Programs
  - The Internship Year: The Transition from Student to Professional

Faculty positions
- The Quick and Relatively Painless Guide to Your Academic Job Search
- The Hiring Process in Academia (Ch.3, Compleat Academic)
- Tomorrow’s Professor (Ch.7-9):
  - Identifying the Possibilities
  - Applying for Positions
  - Getting the Results You Want

15. Preparing for a Life in Academia

- Compleat Academic (Ch. 7, 12, 19-20):
  - Setting up Your Lab and Beginning a Program of Research
  - The Academic Marathon: Controlling One’s Career
  - Managing Your Career: The Long View
  - Power, Politics, and Survival in Academia
- Learning Research as a Lifelong Skill (Ch. 15, Succeeding in Graduate School)

Appendix

- Psychologist's Companion (Ch. 6-7):
  - Commonly Misused Words
  - American Psychological Association Guidelines for Psychology Papers