

Neural Science Honors Seminar (NEURL-UA.301) — Fall 2017

Time: Tuesdays 2:00 – 4:00

Location: Meyer Hall, Room 760

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| Sep 5 | 1. Research Foundations: Experimental Design, and Scientific Epistemology
Exploring the Mentor-Trainee Relationship
<i>Reading: Hailman and Strier, Ch. 1- How to Plan Research</i> |
| Sep 12 | 2. Student Oral Presentations of Research Plan
Presenting Research: Organization and Presentation Skills
<i>Each student presents a 5-min research statement, offers feedback for other presenters</i> |
| Sep 19 | 3. Science Writing (also: How to Structure Your Thesis)
<i>Reading: Hailman & Strier, Ch. 3 - How to Write a Research Report</i> |
| Sep 26 | 4. Responsible Conduct of Research
<i>Reading: Macrina, Ch. 1 - Methods, Manners, and the Responsible Conduct of Research</i>
<i>Ch. 2 - Ethics and the Scientist</i> |
| Oct 3 | 5. Authorship and Publication Practices
<i>Reading: Macrina, Ch. 4 - Authorship and Peer Review</i>
<i>*Journal Club article selection due</i>
<i>*Paper: preliminary Introduction due</i> |
| Oct 10 | 6. Student Journal Club Presentations 1
<i>*1-page Journal Club link to student's research due</i> |
| Oct 17 | 7. Student Journal Club Presentations 2
<i>*1-page Journal Club link to student's research due</i> |
| Oct 24 | 8. Ethical Treatment of Research Subjects
<i>Reading: Macrina, Ch. 5 - Use of Humans in Biomedical Experiments</i>
<i>Ch. 6 - Use of Animals in Biomedical Experiments</i>
<i>*Paper: preliminary Methods due</i> |
| Oct 31 | 8. Three-Minute Student Research Presentations |
| Nov 7 | 9. Data Acquisition, Management, and Analysis
<i>Reading: Macrina, Ch. 11 - Scientific Record Keeping</i>
<i>*Final paper: preliminary Results and Figures due</i> |
| Nov 14 | ** NO CLASS - SFN CONFERENCE ** |
| Nov 21 | 10. Student Research Presentations 1 and Class Critiques
<i>Each student presents a 10-min presentation on project, offers feedback for other presenters</i> |
| Nov 28 | 11. Student Research Presentations 2 and Class Critiques
<i>Each student presents a 10-min presentation on project, offers feedback for other presenters</i> |
| Dec 5 | 12. Survival Skills for Research-Inspired Careers
<i>*Final paper due</i> |
| Dec 12 | ** NO CLASS – NYU MONDAY SCHEDULE ** |

Text: Hailman, J.P. and Strier, K.B. Planning, Proposing, and Presenting Science Effectively. Cambridge University Press, Cambridge, 2006.
 Macrina, F.L. Scientific Integrity, 3rd Ed., ASM Press, Washington, 2005

Grading: **Preliminary statement and review of research goals** 5%
Each student presents a 5-min research statement, and offers feedback for other presenters.

Journal club

Each student chooses an effective research article, and leads a presentation. Class members provide constructive feedback, and discuss the implications of the article. The presenter must manage all of this within 15 mins.

Student submits one-page summary of how the article is relevant to his/her research.

Individual oral presentation 10%
 Class participation 10%
 1-page written account of link to student's research 4%

Research oral presentation (3 mins) 10%

Each student gives a 3-min presentation of his/her laboratory research, with just one slide, and offers feedback for other presenters.

Research oral presentation (10 mins)

Each student gives a 10-min presentation of his/her laboratory research.

Class members ask questions, and critique the presentation (5 mins).

Individual presentation 20%
 Class participation 10%

Final research paper

To be submitted electronically no later than 5pm, Dec 13, 2016.

The paper may serve as a preliminary draft of the Honors Thesis; further details in class.

Preliminary Introduction..... 2%
 Preliminary Methods..... 2%
 Preliminary Results and Figures 2%
 Final paper 25%

TOTAL:..... 100%

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