

Neural Science Honors Seminar — Spring 2015

NEURL-UA.301

Time: Tuesdays 2:00 – 4:00

Location: Meyer Hall, Room 815

Jan 27	1. Research Foundations: Experimental Design, and Scientific Epistemology <i>Reading: Hailman and Strier, Ch. 1 - How to Plan Research</i>	Louie
Feb 3	2. Student Oral Presentations of Research Plan <i>Each student presents a 5-min research statement, and offers feedback for other presenters</i>	Louie
Feb 10	3. Exploring the Mentor-Trainee Relationship Discussion: What are the benefits and challenges of collaboration in science? <i>Reading: Macrina, Ch. 8 - Collaborative Research</i>	Louie
Feb 17	4. Ethical Treatment of Research Subjects <i>Reading: Macrina, Ch. 5 - Use of Humans in Biomedical Experimentation; and Ch. 6 - Use of Animals in Biomedical Experimentation</i>	Louie
Feb 24	5. Responsible Conduct of Research — Research Misconduct <i>Reading: Macrina, Ch. 1 - Methods, Manners and the Responsible Conduct of Research Ch. 2 - Ethics and the Scientist.</i>	Semple
Mar 3	6. Authorship and Publication Practices <i>Reading: Macrina, Ch. 4 - Authorship and Peer Review</i>	Semple
Mar 10	7. Data Acquisition, Management, and Analysis <i>Reading: Macrina, Ch. 11 - Scientific Record Keeping</i>	Semple
Mar 17	8. SPRING BREAK	
Mar 24	9. Student Journal club presentations I <i>*1-page link to research due</i>	Louie
Mar 31	10. Student Journal club presentations II <i>*1-page link to research due</i>	Louie
Apr 8	11. Science Writing <i>Reading: Hailman & Strier, Ch. 3 - How to Write a Research Report</i>	Louie
Apr 14	12. Three-Minute Student Research Presentations Best Practices for Posters and Talks <i>Reading: Hailman and Strier, Ch. 4 - How to Present Research</i>	Louie
Apr 21	13. Student Research Presentations and Class Critiques I	Semple
Apr 28	14. Student Research Presentations and Class Critiques II	Semple
May 5	15. Survival Skills for Research-Inspired Careers <i>*Final Paper due</i>	Semple

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 5%

Research oral presentation (3 mins) 5%
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 35%

To be submitted electronically no later than 5pm, May 6, 2014.

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

TOTAL:..... 100%

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