Neural Science Honors Seminar (NEURL-UA.301)
Sample Syllabus

Schedule:

   How to Present Research: Framing the Question and Approach
   Reading: Hailman and Strier, Ch. 1- How to Plan Research

2. Student Oral Presentations of Research Plan
   Each student presents a 5-min research statement, offers feedback for other presenters

3. Exploring the Mentor-Trainee Relationship
   Reading: Macrina, Ch. 1 - Methods, Manners, and the Responsible Conduct of Research
   Ch. 2 - Ethics and the Scientist

4. Science Writing (also: How to Structure Your Thesis)
   Reading: Hailman & Strier, Ch. 3 - How to Write a Research Report
   *Journal Club article selection due

5. Student Journal Club Presentations 1
   *1-page Journal Club link to student's research due

6. Student Journal Club Presentations 2
   *1-page Journal Club link to student's research due

7. Ethical Treatment of Research Subjects
   Reading: Macrina, Ch. 5 - Use of Humans in Biomedical Experiments
   Ch. 6 - Use of Animals in Biomedical Experiments
   *Paper: preliminary Introduction due

8. Authorship and Publication Practices
   Oral Presentation Skills: Best Practices for Posters and Talks
   Reading: Macrina, Ch. 4 - Authorship and Peer Review
   Hailman and Strier, Ch. 4 – How to Present Research

9. Three-Minute Student Research Presentations

10. Data Acquisition, Management, and Analysis
    Reading: Macrina, Ch. 11 - Scientific Record Keeping
    *Paper: preliminary Methods due

11. Responsible Conduct of Research
    Reading: Macrina, Ch. 1 – Methods, Manners, and the Responsible Conduct of Research
    Ch. 2 – Ethics and the Scientist

12. Student Research Presentations and Class Critiques 1
    Each student presents a 10-min presentation on project, offers feedback for other presenters
    *Paper: preliminary Results and Figures due

13. Student Research Presentations and Class Critiques 2
    Each student presents a 10-min presentation on project, offers feedback for other presenters

14. Survival Skills for Research-Inspired Careers
    *Final paper due
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
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%