

Course description: Responsible Conduct in Science

Department of Brain and Cognitive Sciences

IAP 2020

9.S911

Coordinator: Matthew Wilson. 46-5233, x3-2046, mwilson@mit.edu

Location, Time, Dates:

Room 46-3015

2-5pm

M 1/13/20 – F 1/17/20

Attendance is mandatory and will be recorded.

Purpose:

To provide instruction and dialog on practical ethical issues relating to the responsible conduct of human and animal research in the brain and cognitive sciences. Specific emphasis will be placed on topics relevant to young researchers including data handling, animal and human subjects, misconduct, mentoring, intellectual property, and publication.

Format:

Assigned readings will be taken from the text “Scientific Integrity” by Francis L. Macrina (4th edition) or from relevant handouts, to be completed prior to each class. Sessions will begin with a lecture by faculty to introduce each topic. The class will then be divided into smaller discussion groups of 4-5 students each. Case studies prepared for each class will be evaluated and 2 groups will be selected to present each case for discussion by the entire group. Faculty will be available to facilitate and guide discussion. Each student will submit a short written summary of the discussions at the end of each class.

Tests:

A short quiz on readings from the text will be given at the end of the final class.

Grading for the class is Pass/D/Fail.

- conflict of interest – personal, professional, and financial
- policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices
- mentor/mentee responsibilities and relationships
- collaborative research including collaborations with industry
- peer review
- data acquisition and laboratory tools; management, sharing and ownership
- research misconduct and policies for handling misconduct
- responsible authorship and publication
- the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research

Schedule:

Monday, January 13

Topic: Mentoring, authorship, collaboration

Lecturer: Nancy Kanwisher

Faculty support: Elly Nedivi

Text chapters:

Ch 3 – Mentoring

Ch 4 – Authorship and peer review

Ch 8 – Collaboration

Tuesday, January 14

Topics: Intellectual property, patents, conflict of interest, the scientist as a responsible member of society

Lecturer: Ed Boyden

Faculty support: Mark Bear

Text chapters:

Ch 9 – Intellectual property

Ch 7 – Conflict of interest

Ch 11 – Science, Technology, and Society

Wednesday, January 15

Topic: Human interactions (12-2 lunch served)

Lecturer: Sarah Rankin

Topic: Human subjects (2-5pm)

Lecturer: John Gabrieli

Faculty support: Ev Fedorenko

Text chapters:

Ch 5 – Human experimentation

Thursday, January 16

Topic: Animal Care and Use

Lecturer: Susan Erdman

Faculty support: Bob Desimone

Text chapters:

Ch 6 – Animal experimentation

Friday, January 17

Topics: Scientific misconduct, record keeping, reporting results, and data selection

Lecturer: Matt Wilson

Faculty support: Steve Flavell

Text chapters:

Ch 1 - Misconduct

Ch 2 – Ethics

Ch 10 – Record keeping