

Syllabus
Responsible Conduct of Research
BMR 644
Spring 2022

Course Director

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Course Objectives

The goal of this course is to train students in the practice of scientific investigation with integrity. The responsible conduct of research involves the awareness and application of established professional norms and ethical principles in the performance of all activities related to scientific research.

Upon completion of this course, the student should have a sound basis for making ethical decisions concerning the proposing, performing, reviewing and reporting of scientific research.

As part of this process, the student should gain knowledge about the following main areas:

1. The Marshall University Policy on Integrity in Scientific Research
2. Research involving human subjects and live vertebrate animals
3. Conflict of interest: personal, professional and financial
4. Peer review
5. Mentor/mentee responsibilities and relationships
6. The scientist as a responsible member of society, ethical issues in research, and the environmental and societal impacts of scientific research
7. Responsible authorship and publication, e.g. copyright issues concerning insertion of published articles as part of dissertation
8. Collaborative research, including that with other scientists and with industry
9. Data acquisition and laboratory tools: management, sharing and ownership
10. Research misconduct and policies for handling misconduct

<u>Student Learning Outcomes</u>	<u>How Outcome will be practiced</u>	<u>How Outcome will be assessed</u>
Know Marshall University Policy on Integrity in Scientific Research	In-class discussion	Participation in class discussion
Understand guidelines for research involving human subjects and live vertebrate animals	In-class discussion	Participation in class discussion
Know guidelines and rules governing conflict of interest	In-class discussion	Participation in class discussion
Understand the process of peer review	In-class discussion	Participation in class discussion
Understand mentor/mentee responsibilities and relationships	In-class discussion	Participation in class discussion
Know ethical issues in research and their environmental and societal impacts	In-class discussion	Participation in class discussion
Understand guidelines for authorship and publication	In-class discussion	Participation in class discussion
Know ethical issues in collaborative research	In-class discussion	Participation in class discussion
Understand data acquisition and sharing of data	In-class discussion	Participation in class discussion
Know policies for research misconduct	In-class discussion	Participation in class discussion

Required Textbook

On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition (2009), by the Committee on Science, Engineering and Public Policy, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine of the National Academies. (Available free on-line at:

<https://www.nap.edu/catalog/12192/on-being-a-scientist-a-guide-to-responsible-conduct-in>

Classes

BMS 644 is a 1 credit hour course. Classes will be held from 12:00 noon to 1 pm on Thursday in Room 102 at the Byrd Biotechnology Science Center (BBSC). Attendance is required for all class sessions. Completion of the course is required for all BMS graduate students.

Grades

Grades (Credit/No Credit) will be based on attendance, completion of reading and written assignments and class participation. **A student who is missing more than two sessions should not expect to pass the course.**

On-line Resources

The NIH Office of Research Integrity - The Office of Research Integrity (ORI) has a website with a number of valuable resources. The main web page includes links to Misconduct Case Summaries, Actions taken by the NIH in Cases of Misconduct, a Newsletter about Research Integrity and Comments on Social Media.

The link to the ORI main page is <https://ori.hhs.gov/>

Class Policies

University policies can be viewed at: <http://www.marshall.edu/academic-affairs/forms-policies/>

Academic Dishonesty

Academic dishonesty will not be tolerated. See above link to University policies.

Inclement Weather

The authoritatively correct statement of the University's condition (Huntington) is stipulated to be the message on the main page of the website at: <http://www.marshall.edu/>.

Students with Disabilities Policy

The link describing this policy is <http://www.marshall.edu/disabled>.

University Computing Services Acceptable Use Policy This policy is described in the following document: <https://www.marshall.edu/board/files/MUBOG-IT-1-IT-Acceptable-Use-proposed-2019-10.pdf>

Course Schedule
Regular Meetings Thursdays 12:00 – 1:00 pm
Room 102, BBSC

Date	Topic	Faculty
January 13	Overview of responsible conduct of research	Dr. Sasha Zill
January 20	The scientist as a responsible member of society, ethical issues in research, and the environmental and societal impacts of scientific research	Dr. Todd Green
January 27	Peer review	Dr. Gary Rankin
February 3	Research involving human subjects and live vertebrate animals	Dr. Todd Green
February 10	Responsible authorship and publication, e.g. copyright issues concerning insertion of published articles as part of dissertation	Dr. Maria Serrat
February 17	Conflict of interest: personal, professional and financial	Dr. Tracy LeGrow
February 24	Mentor/mentee responsibilities and relationships	Dr. Larry Grover
March 3	Collaborative research, including that with other scientists and with industry	Dr. Vincent Sollars
March 10	Research misconduct and policies for handling misconduct	Dr. Emine C. Koc
March 17	Data acquisition and laboratory tools: management, sharing and ownership	Dr. Jung Han Kim