

UM Department of Research Training and UM Ethics Programs

RST-720 – Research Ethics

CREDIT HOURS: 3.0

FALL 2012 SESSION TIMES: 2:30 p.m. – 3:45 p.m., Tuesdays and Thursdays

FALL 2012 SESSION LOCATION: CRB 665 Conference Room

COURSE INSTRUCTORS

Tom Champney, PhD
Associate Professor, Department of Cell Biology & Anatomy
Faculty Associate, UM Ethics Programs
Office phone: 305-243-6942
E-mail: t.champney@miami.edu

Reid Cushman, PhD
Assistant Professor, Department of Medicine and UM Ethics Programs
Director, RCR Program
Office phone: 305-243-5723
Email: reid.cushman@miami.edu

COURSE DESCRIPTION

This course focuses on topics related to what is sometimes called the “responsible conduct of research” or “RCR.” It covers the landscape of “scientific integrity” – both the principles and day-to-day practicalities of research ethics. It will:

- provide students, through short lectures and discussion of case studies, with the ability to appreciate the dilemmas and pitfalls associated with the responsible conduct of research;
- provide information to students on the regulatory requirements for conducting research including safety issues and the use of humans, animals and radioactive/biohazardous materials;
- discuss current issues in the ethical aspects of research, such as scientists’ obligations (if any) with respect to public policy and advocacy.

The course is inter-disciplinary in its approach. Readings and other materials used as part of the course draw on examples from many academic fields, and are intended to have application to any academic or professional area of study in which research is conducted. The course is presented by instructors and guest speakers with backgrounds in the humanities, social sciences, natural sciences and biomedicine.

PREREQUISITES

The course is open to graduate students and post-doctoral trainees. No particular background in ethics, philosophy or science is assumed. There are no course pre-requisites.

LEARNING OBJECTIVES

Education in research ethics is now considered integral to the preparation of future scientists. The NIH defines responsible conduct of research (RCR) as “the practice of scientific investigation with integrity,

involv[ing] the awareness and application of established professional norms and ethical principles in the performance of all activities related to scientific research.”

The topics of the course mirror the standard subjects of research ethics and RCR. These can include, depending on the needs of the particular student audience:

1. Social responsibilities of researchers and research institutions
2. Principles of ethical conduct, micro- and macro-ethics
3. Mentor/trainee roles and responsibilities
4. Conflicts of interest, commitment and values
5. Data acquisition, management, sharing and ownership
6. Publication practices and responsible authorship
7. Peer review
8. Collaborative science (including relations with industry)
9. International research
10. Human subjects research
11. Research involving animals (sometimes called “animal welfare”)
12. Lab safety, bio-safety, radiation safety, etc.
13. Export controls and national security
14. Research misconduct (and questionable research conduct)
15. Whistle-blowing (allegations, investigations, dispute resolution)
16. Intellectual property (patent, trademark, copyright)
17. Research compliance programs and the role of the “RIO”, including financial oversight

During the course, information is also provided about resources and support services at UM that can assist students when questions or concerns about ethical research conduct arise “in real life” during their professional training. However, the materials of the course are intended to have use in any setting in which students may find themselves involved in research or other scholarly activity.

COURSE FORMAT

The course will be conducted with a combination of lecture, discussion and student presentations. Typically each class will begin with a very short lecture/discussion of the readings for that session, and then spend the majority of class time on discussion of applicable cases. Class sessions are two days per week, for a period of approximately 75 minutes per session (see “Schedule” section below).

Course materials are balanced among theory, history, current events, and applications to cases (both actual and hypothetical). There is a demanding reading load and a responsibility for regular class participation by all students (see “Requirements and Dimensions of Evaluation” section below).

REQUIREMENTS AND DIMENSIONS OF EVALUATION

Course requirements include regular attendance, completion of required readings, and participation in class discussions. Deliverables include two presentations during the semester, generally presented during the last week’s class sessions:

- an individual oral report and slide presentation in class, and an associated short paper, on a research ethics issue or case;
- a group oral report presentation by a two- or three-person group, also on a research ethics issue or case (there is no associated paper, but the slide presentation must be submitted);

Individual presentation and short paper	33%
Group presentation	33%
Class participation	33%

Class sessions may occasionally use “i>clicker” Audience Response System (ARS) devices to facilitate participation, particularly in the context of case discussions. ARS responses are not scored, but are used to indicate whether a student is present and participating. The i>clicker units will be provided for these sessions; they do not need to be purchased individually.

REQUIRED TEXTS

One textbook is required, which may be purchased from Amazon.com or an alternative online source.

Frances L. Macrina, Scientific Integrity: Text and Cases in Responsible Conduct of Research. ASM Press, 2005 (3rd edition). [Amazon.com] [BarnesandNoble.com] **Note: It’s possible that a new edition of this book will be available by mid-summer.**

Additional articles and case readings are required, but will be provided via the course Blackboard site.

SCHEDULE

Date(s)	Topic	Readings	Instructor(s)
1. Thu Aug 23	Introduction to the class	<ul style="list-style-type: none"> Singapore Statement [PDF] 	Champney Cushman
2. Tue Aug 28 3. Thu Aug 30	Ethics and the Scientist	<ul style="list-style-type: none"> Scientific Integrity, chap. 1 Scientific Integrity, chap. 2 	
4. Tue Sep 4 5. Thu Sep 6	Advising and Mentoring	<ul style="list-style-type: none"> Scientific Integrity, chap. 3 	
6. Tue Sep 11 7. Thu Sep 13	Authorship, Publication and Peer Review	<ul style="list-style-type: none"> Scientific Integrity, chap. 4 	
8. Tue Sep 18 9. Thu Sep 20	Collaborative Research	<ul style="list-style-type: none"> Scientific Integrity, chap. 8 	
10. Tue Sep 25 11. Thu Sep 27	International Research	Readings TBA	
12. Tue Oct 2 13. Thu Oct 4	Human Subjects	<ul style="list-style-type: none"> Scientific Integrity, chap. 5 	
14. Tue Oct 9 15. Thu Oct 11	Animal Subjects	<ul style="list-style-type: none"> Scientific Integrity, chap. 6 	
16. Tue Oct 16 17. Thu Oct 18	Data Acquisition, Sharing, Management and Ownership	<ul style="list-style-type: none"> Scientific Integrity, chap. 9 Scientific Integrity, chap. 11 	
18. Tue Oct 23 19. Thu Oct 25	Conflicts of Interest, Commitment and Values	<ul style="list-style-type: none"> Scientific Integrity, chap. 7 	

20. Tue Oct 30 21. Thu Nov 1	Research misconduct, questionable conduct, and whistle-blowing	<ul style="list-style-type: none"> C.K. Gunsalis, “How to Blow the Whistle and Still Have a Career Afterwards” <i>Science and Engineering Ethics</i> 4: 51-64 (1998) [PDF] 	
22. Tue Nov 6 23. Thu Nov 8	Genetic Technologies and their Implications	<ul style="list-style-type: none"> Scientific Integrity, chap. 10 	
24. Tue Nov 13 25. Thu Nov 15	Scientists’ Broader Responsibilities	Readings TBA	
26. Tue Nov 20 27. Thu Nov 22	THANKSGIVING WEEK (no class)	N/A	N/A
28. Tue Nov 27 29. Thu Nov 29	Presentations	<ul style="list-style-type: none"> Presentation text and slides will be available on the course Blackboard site. 	All Students

RELATED “RCR” TRAINING

In response to federal mandates by the National Institutes of Health (NIH) and the National Science Foundation (NSF), UM requires that all graduate students, postdoctoral fellows and other trainees who receive NIH or NSF funding, complete an online course in the Responsible Conduct of Research (RCR) offered by the CITI Program (www.citiprogram.org). This online RCR course is also known locally as RST-401, -501 or -601. For instructions on accessing the CITI course, go to www.miami.edu/rcr and click on the “registering for classes” link.

Persons funded by NIH are also required to complete a face-to-face RCR course. This 6-8 hour classroom-based course carries the Registrar designation RST-402, -502, or -602, or a number assigned by the UM school or college. (UM schools or colleges may construct courses of equivalent or greater duration to replace the 402/502/602 class.)

RST-720, taken for credit, meets the requirements for both NSF and NIH RCR training. Persons who wish to audit the RST-720 class to meet their NIH RCR training requirements may do so, instead of taking RST-402, -502 or -602, but are required to attend no fewer than 12 of the 25 sessions of the RST720 class. (This sums to 15 hours class time, compared to 6 hours for RST 402/502/602.) In either case, completion of CITI RCR modules to complete RST-401/501/601 is required for persons who are auditing RST720. CITI RCR is not required for persons taking RST-720 for credit.

“PEER” FUNDING

The Peer Educators in the Ethics of Research (PEER) program provide funding for advanced graduate students and post-docs to become “research ethics educators.” PEER is based on the [RAISE program](#) at the University of Delaware, and funded for 2012 by a grant from the Arsht Ethics Initiatives. PEER awardees receive a \$2000 stipend for successful completion of RST-720 and participation in at least four scheduled activities related to research ethics.

RST-720 is offered under credit and non-credit options to accommodate PEER awardees at all stages of their graduate education. However, attendance in a non-credit mode must be approved by one of the instructors in advance due to a limited number of course “seats.”