



## Research Ethics Courses Offered at UW-Madison

Below is a listing of research ethics courses that cover components of Responsible Conduct of Research (RCR).

RCR Topics as described by the Office of Research Integrity and accepted by the National Institutes of Health.

1. Animal welfare
2. Collaborative science
3. Conflict of interest and commitment
4. Data acquisition, management, sharing and ownership
5. Protection of Human subjects
6. Mentor/trainee responsibilities
7. Publication practices, responsible authorship
8. Peer review
9. Research misconduct

Course #	Course Title	RCR Topics Addressed								
		1	2	3	4	5	6	7	8	9
468	Introduction to Engineering Research		X		X			X	X	X
544	Introduction to Clinical Trials 2		X	X	X	X				X
545	Ethical and Regulatory Issues in Clinical Investigation					X				
559	Human Experimentation Course			X		X		X		X
565	The Ethics of Modern Biotechnology	X		X	X					
610	Regenerative Medicine: Ethical and Social Issues		X		X	X				
675	Appropriate Conduct of Science	X	X	X	X	X	X	X	X	X
728	Bioethics and Society		X		X	X		X		
802	Ethics and the Responsible Conduct of Research	X	X	X	X	X	X	X	X	X
812	Research Ethics and Career Development	X	X	X	X	X	X	X	X	X
901	Advanced Seminar: Responsible Conduct of Research	X	X	X	X	X	X	X	X	X
905	Bioethics and the Law			X		X				X
906	Law, Science, and Biotechnology		X	X	X	X		X		X
999	Research Ethics	X	X	X	X	X	X	X	X	X

**School/College:** COLLEGE OF ENGINEERING  
**Department:** (347) ENGINEERING PHYSICS  
**Course:** (468) Introduction to Engineering Research  
**Instructor:** Wendy Crone  
**Credits:** 1 credit

**Description:** An introduction to the conduct of engineering research: The scientific method, ethics in research, documentation and treatment of research data, publication practices, and the structure of the broader research community are covered.

**School/College:** COLLEGE OF LETTERS AND SCIENCE (cross-listed with SCHOOL OF MEDICINE AND PUBLIC HEALTH: BIostatistics AND MEDICAL INFORMATICS)

**Department:** (932) STATISTICS  
**Course:** (544) Introduction to Clinical Trials 2  
**Instructor:** Marian Fisher  
**Credits:** 3 credits

**Description:** Intended for biomedical researchers, with a focus on the design, implementation, and conduct of clinical trials. Topics include: regulatory requirements for clinical trials; data collection strategies; data quality and management; budget development and justification; federal, institutional, and sponsor-defined requirements; establishment of research infrastructures for safety and success; preparation of investigator-INDs; recruitment, consent, and retention of special populations; investigator responsibilities in Phase I-IV trials. Development of data collection and data management systems and a budget for the protocol developed in 542 are required components of this course.



## Research Ethics Courses Offered at UW-Madison

**School/College:** SCHOOL OF MEDICINE AND PUBLIC HEALTH  
**Department:** (452) MEDICAL HISTORY AND BIOETHICS  
**Course:** (545) Ethical and Regulatory Issues in Clinical Investigation  
**Instructor:** Norm Fost  
**Credits:** 1 credit (Fall)

**Description:** This course will explore and examine the ethical issues central to clinical research, and the regulations governing clinical investigation. Topics include history, consent, randomized clinical trials, special subjects, medical records and database research, genetic studies, cultural issues, and research in developing countries.

**School/College:** SCHOOL OF MEDICINE AND PUBLIC HEALTH  
**Department:** (452) MEDICAL HISTORY AND BIOETHICS  
**Course:** (559) Topics in Ethics and History of Medicine: Human Experimentation Course  
**Instructor:** Linda Hogle  
**Credits:** 3 credits

**Description:** A survey of ethical and social issues in medical ethics and history of medicine. Cooperating faculty may be drawn from philosophy, law, medical ethics, history, political science, public health, economics, education, and communication, as well as medicine and the biological sciences.

**School/College:** SCHOOL OF MEDICINE AND PUBLIC HEALTH  
**(cross-listed with Agronomy, Philosophy, and Rural Sociology)**  
**Department:** (452) Medical History and Bioethics  
**Course:** (565) The Ethics of Modern Biotechnology  
**Instructor:** Rob Streiffer  
**Credits:** 3 credits (Spring)

**Description:** Study of ethical and science policy issues arising from the application of modern biotechnology to microorganisms, crops, animals, and humans. Readings cover ethical theory, technology studies, political philosophy, the science used in biotechnology, and current regulations governing its use.

**School/College:** SCHOOL OF MEDICINE AND PUBLIC HEALTH  
**Department:** (452) MEDICAL HISTORY AND BIOETHICS  
**Course:** (610) Regenerative Medicine: Ethical and Social Issues  
**Instructor:** Linda Hogle  
**Credits:** 2 credits

**Description:** Regenerative medicine (RM), an umbrella term for emerging fields including stem cells, tissue engineering and nanobiotechnology, and involves the combination of biology, chemistry and engineering with the aim of repairing or replacing tissues. As with any novel technology or medical therapy, both hopes and concerns are raised. RM will be a growing area of scientific inquiry for the coming decades, transforming not only biological assumptions about tissue function and regeneration, but challenging existing social and ethical understandings of human biology and what constitutes "life" as well. Questions arise about the rights and needs to pursue certain directions of research as well as who should have a say in how such technologies are shaped. This course explores the powerful new RM techniques within social contexts, paying attention to historical, political and economic conditions. Topics include: history of the embryo (moral status, representations, legal protections), regulatory approaches to cellular therapies (including state, federal & international governance structures), cell & tissue donation issues, patenting and IP for cells as therapies & research tools, the public arena (controversies, religious and political debates, cultural concerns), clinical and patient care issues, and research issues (research ethics & organizational structures specific to regenerative medicine). Materials will include original papers from RM journals as well as analyses from bioethicists, social scientists and others. Occasionally, guest speakers may be invited to present on their work in RM clinical trials, legal/regulatory, basic stem cell research or other aspects of the course content.

The course is appropriate for science and engineering students interested in RM-related research, as well as students in public health, medicine, health professions, law, or the social sciences. The course is designed as part of a broader plan to enhance stem cell and regenerative medicine education at the University of Wisconsin, as a leader in the RM field. Specifically, it is meant to follow Anatomy 675, Stem Cell Fundamentals (fall semesters-- a course which introduces concepts in SC biology and engineering), and will allow for a deeper understanding of the concepts of ethics and policy briefly introduced in 675. With the growing interest in RM-related research in many life and physical sciences (as well as study in law and the social sciences), there is a need to understand in greater depth the social, ethical and regulatory contexts in which research is taking place, and into which therapeutic, diagnostic and research products will go.



## Research Ethics Courses Offered at UW-Madison

*School/College:* **SCHOOL OF MEDICINE AND PUBLIC HEALTH**

*Department:* **(700) ONCOLOGY**

*Course:* **(675) Appropriate Conduct of Science**

*Instructor:* **Janet Mertz and Gary Roberts**

*Credits:* **1 credit** (Spring)

*Description:* A review and discussion of ethical issues in science.

*School/College:* **SCHOOL OF MEDICINE AND PUBLIC HEALTH**

*Department:* **(452) MEDICAL HISTORY AND BIOETHICS**

*Course:* **(728) Bioethics and Society (cross-listed as 106 Social Work)**

*Instructor:* **Linda Hogle**

*Credits:* **3 credits**

*Description:* The aims of this course are to provide understandings of the broader social, cultural and political contexts in which bioethical debates and medical practice occur, to explore social science perspectives on medicine and bioethics and to examine the use of qualitative and interdisciplinary methods to conduct research in these areas. Readings and discussion will draw upon research using ethnographic, life history, content, visual and narrative analysis. The course will cover issues in both clinical and public health settings (US & international), and may emphasize one or the other depending on the interests of enrolled students. It is designed for the needs of graduate students in the social sciences and humanities, population health sciences, health policy, law, medicine, and health professions. Instructor consent required.

*School/College:* **SCHOOL OF NURSING**

*Department:* **(692) NURSING**

*Course:* **(802) Ethics and the Responsible Conduct of Research**

*Instructor:* **Audrey Tluczek**

*Credits:* **1 credit** (Spring)

*Description:* Ethical issues in the design, conduct and reporting of research are examined in the context of the nature of the scientific endeavor, the structure of the research community, and professional and federal guidelines for supporting scientific integrity and controlling misconduct.

*School/College:* **SCHOOL OF VETERINARY MEDICINE**

*Department:* **(938) SURGICAL SCIENCES**

*Course:* **(812) Research Ethics and Career Development**

*Instructor:* **Dale Bjorling**

*Credits:* **2 credits** (Fall)

*Description:* The purpose of this seminar series is to provide trainees with information that will be useful in their development as scientists and will provide a frame of reference as they struggle with issues of authorship, plagiarism, scientific misconduct or fraud, mentoring, starting their career, developing a research program, and writing.

*School/College:* **COLLEGE OF AGRICULTURAL AND LIFE SCIENCES**

*Department:* **(192) BACTERIOLOGY**

*Course:* **(901) Advanced Seminar: Responsible Conduct of Research**

*Instructor:* **Tim Donohue**

*Credits:* **1 credit**

*Description:* This is a discussion-based course that will discuss issues for which there will often be quite legitimate, but different, perspectives. Topics will be introduced in this course largely through the use of case studies that focus on one or more ethical issues.

*School/College:* **SCHOOL OF MEDICINE AND PUBLIC HEALTH**

*Department:* **(452) MEDICAL HISTORY AND BIOETHICS**

*Course:* **(905) Bioethics and the Law**

*Instructor:* **Alan Weisbard**

*Credits:* **4 credits**

*Description:* Introduction to the legal, ethical and public policy dimensions of modern medicine and biomedical research. Informed consent, human experimentation, death and dying, organ transplantation, allocation of scarce resources. May cover reproductive and genetic issues in some years.



## Research Ethics Courses Offered at UW-Madison

*School/College:* **SCHOOL OF MEDICINE AND PUBLIC HEALTH**

*Department:* **(452) MEDICAL HISTORY AND BIOETHICS**

*Course:* **(906) Law, Science, and Biotechnology**

*Instructor:* **Pilar Ossorio**

*Credits:* **4 credits**

*Description:* Legal, ethical, social and public policy questions raised by developments in medical and agricultural biotechnology. This course focuses particularly on the governance and regulation of biotechnology research.

*School/College:* **SCHOOL OF MEDICINE AND PUBLIC HEALTH**

*Department:* **(452) MEDICAL HISTORY AND BIOETHICS**

*Course:* **(999) Research Ethics**

*Instructor:* **Rob Streiffer, Jim Coors, Sara Patterson**

*Credits:* **1 credit (Spring)**

*Description:* The course objective is to enable students to understand the policies regulating research at land grant universities and the moral principles on which these policies are based. After completing the course, students should have the ability to explain (1) the research mission of land grant universities, (2) the ethical principles supporting research policies, (3) the policies that regulate research on such issues as mentoring and under-represented minorities and women in research, research misconduct, authorship and peer review, intellectual property, conflicts of interest and commitment, proper experimental design, data collection, and statistical interpretation, (4) discipline-specific issues chosen on the basis of current enrollment, and (5) the importance of life-long learning in research ethics and how to find updated information.