RESPONSIBLE CONDUCT OF RESEARCH

Course Director: Julie Harris-Wai, Ph.D., M.P.H.
Senior Course Advisor: Barbara A. Koenig, Ph.D.

Course Manager: Asha Robertson

Course Description:

Responsible Conduct of Research helps people, especially those starting their research careers, learn how to address the ethical issues that inevitably arise in research. It meets the requirements of the National Institutes for Health for trainees to learn about ethical issues in human subjects research and research misconduct. This RCR course was initially developed by Dr. Bernard Lo at UCSF for the CTSI.

Course Objectives:

1. Identify common ethical issues that clinical and translational researchers commonly face and the ethical guidelines for addressing these issues.
2. Explain key elements of the federal regulations for research with human subjects.
3. Analyze the ethical issues in a research protocol, identify where it does not meet regulatory and ethical standards, and suggest how to address those problems.
4. Provide constructive feedback on colleagues' ideas regarding ethical issues in research.
5. Describe the ethical guidelines and federal regulations pertaining to research misconduct and conflicts of interest in research.

Faculty:

Julie Harris-Wai, Ph.D., M.P.H., is an Assistant Professor in the Department of Social and Behavioral Sciences and the Program on Bioethics at UCSF. She received her Ph.D. in Public Health Genomics at the University of Washington, followed by a fellowship in population health sciences with the Robert Wood Johnson Foundation's Health and Society Scholars Program. Dr. Harris-Wai is currently conducting research on multiple projects examining the ethical and social implications of big data and genomic technologies in pediatric and prenatal populations. She also collaborates on multiple research projects, where she specializes in using stakeholder and community engagement strategies to inform research governance and public health policy. The goal of her work is to identify methods for incorporating community perspectives into research and clinical programs in order to improve the appropriate translation of research into clinical care. Dr. Harris-Wai has helped to lead the Responsible Conduct of Research course for the past four years.

Barbara A. Koenig, Ph.D., is a medical anthropologist who works in the interdisciplinary field of biomedical ethics. She is a Professor in the Department of Social and Behavioral Sciences, Institute for Health and Aging, at UCSF. Previously she led biomedical ethics research programs at Stanford University and the Mayo Clinic. She co-chairs the "Responsible Conduct of Research" committee for the UCSF campus. She has pioneered the use of empirical social science methods in the study of ethical questions in science, medicine, and health; her research program has been funded by NIH for over two decades. Currently, she is studying return of incidental findings in genomic biobanks and using the techniques of deliberative democracy to engage communities. She is a fellow of the Hastings Center.

Course Dates:

Start date: July 16, 2018. End date: August 31, 2018.

Course textbook:

Ethical issues in clinical research: A practical guide **by Bernard Lo, MD** (Philadelphia: Lippincott Williams & Wilkins, 2010). This text is on 2-hour reserve at the UCSF library (R853.C55L6 2010). It is also available in paperback at online outlets, both new and used. See Module 1 for links.

Other course materials:

Other required readings, podcasts, and videos are included with selected modules and can be accessed from the course website. We have also selected supplemental materials for each module that you may wish to review. These recommended resources highlight current topics and controversies.

You may also want to download **45 CFR 46** (The Common Rule and subparts on research with special populations), the federal regulations with which all UCSF research must comply. As specific issues come up in your projects, it is always useful to go back to see what the regulations require.
http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html

The website for the **UCSF Institutional Review Board** **(IRB)** gives helpful guidance on how federal regulations are interpreted at UCSF and how to complete IRB applications. http://irb.ucsf.edu/

Online Class Discussion:

Your primary responsibility in this course is to **participate actively**. You will be assigned to a small group of about 15-20 fellow students for discussion of a weekly case study. This gives you an opportunity to think through issues raised by current or recent real world cases and to articulate your ideas. You are expected to **POST** an initial

response to each case study on the weekly course discussion forum, and then to read the responses of all the students in your small group. To access the discussion blog, click on the "case study" link. Later each week, you will join your fellow students in a live discussion during a one-hour online discussion session (see below). Please adhere to this schedule so that we have adequate time for robust dialogue.:

1. **POST** your initial response to the discussion forum by **MIDNIGHT TUESDAY** each week**.**
2. **DISCUSS** the week's topic and case study with your fellow students during your scheduled small group discussion session.

How the discussion forum will work: You may **Read, Post, and Reply** within your assigned group. You may **Read Only** in other groups if you are interested in seeing the dialogue beyond your own group. Moodle automatically places you in your assigned group – you need do nothing beyond entering the discussion forum. If you would like to enter other groups, you may do so by clicking the drop-down menu at the upper left side of the screen and then click on any group.

The faculty and teaching fellows monitor the ongoing dialogue throughout each week and use it in guiding small group discussions in weekly discussion sessions.

Forum Discussion Hints:

We look forward to your thoughtful and significant posts to the forum. Responses that amount to "virtual head-nodding" ("I agree", "Good idea", "Interesting") are nice preambles to your fully developed ideas, but do not count for participation credit.

Your replies might build on, challenge, question, reinforce, debate, probe, appreciate, acknowledge, argue respectfully—in order to advance and stimulate the collective exploration of the case in a compelling manner. Look to add something new or an interesting twist.

Your posts to the forum should be mostly YOUR OWN IDEAS. We are not looking for "correct" or "textbook answers" but rather for critical thinking and weighing of the ethical issues, alternatives, and consequences.

Please think about how your own thinking is developing within each discussion.

- Does the conversation challenge you to reconsider your views?
- Do you have new information that you had not initially considered?
- Did you change your mind?

You are welcome to share helpful materials—articles, news items, online resources, etc.—with proper attribution. Moodle allows you to upload files to the discussion forums.

Weekly discussion sessions:

Each week (except for week 1), your small group will meet with a Teaching Fellow for a one-hour sync session, in which you will discuss the readings and case study for the week. **YOU ARE REQUIRED TO ATTEND A DISCUSSION SESSION EACH WEEK.** (If an unexpected conflict makes it impossible for you to attend a discussion session, please contact your session leader for help in attending a different session or making up one week's discussion. A make-up assignment to substitute for one—and ONLY one—week's discussion will be allowed in special circumstances. Missing more than one weekly discussion will result in failure of the course.) Live discussion is a requirement of Responsible Conduct of Research training, per NIH guidelines. If you are unable to meet this requirement, you should plan to take this course at a later date.

Before the course starts, you will be contacted to sign up for a preferred discussion session time. If you are unable to attend any of the times offered, please contact the Course Manager, Asha Robertson, to see if special arrangements can be made. We cannot guarantee that such arrangements will be available.

Discussion sessions will be conducted using Zoom. You may log in through an Internet-connected computer that has a microphone and speakers, or is connected to two-way earphones. You may also use the Zoom app on your telephone or tablet to connect to the discussion session.

A Note about Privacy and Confidentiality:
You are strongly encouraged to express your ideas, opinions, and beliefs within the Responsible Conduct of Research discussion forums and in the discussion sessions. In order to protect your ability to express yourself authentically and honestly, we ask that the dialogue be confined to this course site. ***Keep this space safe for dialogue: do not share specific things said by other students outside of this course.*** *While you may discuss general themes with others beyond this course, we ask that you protect the privacy and confidentiality of all members of this course by adhering to strict non-attribution practice. Only people officially enrolled in this course may access the course site and content.*

COURSE SCHEDULE 2018

MODULE 1: July 16 -20

Course Introduction (NO discussion session this week)

Objectives:

1. Obtain access to required course materials.
2. Fulfill basic human subjects training requirements for researchers.
3. Familiarize yourself with and introduce yourself to the course, the instructors, and your fellow students.

Assignments:

Get the required textbook: *Ethical Issues in Clinical Research: A Practical Guide*, by Bernard Lo, MD.	Access 2-hour reserve copy at Parnassus Library Buy @ Amazon: $52 new Buy Kindle version: $75 Buy @ Barnes & Noble: $69 new, $21 & up used Buy Nook version: $75 Buy @ Half Price Books: $22 & up used Buy @ Textbooks.com: $22 & up used Buy @ Better World Books: $82 new, $28 & up used
Review the syllabus and expectations for the course.	https://courses.ucsf.edu/course/view.php?id=5525 (login required)
Complete the following by MIDNIGHT Tuesday:	
Complete your Learner Contract.	https://courses.ucsf.edu/mod/questionnaire/view.php?id=454082 (login required)
Meet your Course Director and Teaching Fellows	https://courses.ucsf.edu/mod/choice/view.php?id=454080 (login required)
➡ ***Post*** your introduction to the Module 1 discussion forum.	https://courses.ucsf.edu/mod/forum/view.php?id=454079 (login required)
Complete the CITI Human Subjects Protection Training. This online module is required for key personnel in any study protocol submitted to the IRB at UCSF. You will be asked to designate the type of research you are doing and will be directed to the appropriate modules. ***Note: If your CITI human subjects training is current (you have completed CITI human subjects protection training within the past 3 years), you are excused from this activity.***	See the **UCSF IRB page on CITI training** for full instructions on registering and completing CITI training. If you are not from UCSF, register through your own institution and complete the modules your IRB requires.
Complete the Research Aspects of HIPAA online tutorial.	**Research Aspects of HIPAA Tutorial**

MODULE 2: July 23-27

Overview of Clinical Research Regulations

Objectives:

1. Identify the key features of the federal regulations for human subjects research.
2. Identify the types of research that are subject to the Common Rule.
3. List six criteria that must be satisfied for IRB approval prior to a study.
4. Describe how you would evaluate and optimize risks and benefits for a study in your research area.
5. Identify five important ways to discuss benefits and risks with study participants.

NOTE: From this week forward, you must post a response to the online discussion forum **EACH WEEK** by midnight Tuesday, and attend the live online discussion session **EACH WEEK**. Log onto the course website (https://courses.ucsf.edu/course/view.php?id=5525) to access the discussion forum and link to your weekly live discussion session.

Assignments:

Attend your first weekly online discussion.	Check the schedule, here.
Complete the following by MIDNIGHT Tuesday:	
Read Chapters 3 & 5 of Lo textbook.	
Read Gregory Kaebnick, "Ongoing controversy over SUPPORT," *Hastings Center Report.*	http://onlinelibrary.wiley.com/doi/10.1002/hast.405/full
Read Hodge & Gostin, "Revamping the US Federal Common Rule," *JAMA*	https://courses.ucsf.edu/course/view.php?id=5525&section=2 (login required)
Watch video: Human Experimentation: The Good, The Bad, and the Ugly (SciShow)	https://www.youtube.com/watch?v=hRwWxELXakA
Watch video: Practical Issues in IRB Reviews (Bernard Lo)	https://courses.ucsf.edu/course/view.php?id=5525&section=2 (login required)
Watch video: Principles of Research Ethics (Deborah Grady, M.D., MPH & Winston Chiong, M.D., Ph.D.)	https://courses.ucsf.edu/course/view.php?id=5525&section=2 (login required)
Post a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=2 (login required)

MODULE 3: July 30 – August 3

Informed Consent and Related Issues

Objectives:

1. Define informed consent.
2. List six information elements researchers must disclose to participants.
3. Describe at least three examples of vulnerable populations or participants.
4. Define the HIPAA Health Privacy Rule.
5. Discuss an ethical rationale for exceptions to consent.

Assignments:

Complete the following by MIDNIGHT Tuesday:	
Read Chapter 6 of Lo textbook.	
Read Jukema et.al, "Research ethics needs fine tuning, not rigidity" ***European Heart Journal***	https://www.ncbi.nlm.nih.gov/pubmed/26224079
Read sample informed consent documents.	https://courses.ucsf.edu/course/view.php?id=5525&section=3 (login required)
Watch video: Institutional Review and Informed Consent. Deborah Grady, MD, MPH and Winston Chiong, MD, PhD	https://courses.ucsf.edu/course/view.php?id=5525&section=3 (login required)
Post a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=3 (login required)

MODULE 4: August 6 – 10

Conflicts of Interest and Reproducibility

Objectives:

1. Define conflicts of interest.
2. Discuss the association between conflicts of interest and bias in research projects.
3. Discuss how and under what circumstances disclosure, management, and prohibition are appropriate responses to conflicts of interest.
4. List some strategies to reduce bias in research and enhance reproducibility.

Assignments:

Complete the following by MIDNIGHT Tuesday:	
Read Chapter 15 of Lo textbook.	
Read Regina Nuzzo, "How scientists fool themselves – and how they can stop," *Nature*	http://www.nature.com/news/how-scientists-fool-themselves-and-how-they-can-stop-1.18517
Read Carl Elliott, "University of Minnesota blasted for deadly clinical trial," *Mother Jones*	http://www.motherjones.com/environment/2015/04/dan-markingson-university-minnesota-clinical-trials-astrazeneca/
Read Lisa Rosenbaum, "Beyond moral outrage — weighing the trade-offs of COI regulation," *New England Journal of Medicine*	http://www.nejm.org/doi/full/10.1056/NEJMms1502498
Watch video: Overview of NIH/NSF conflict of interest guidelines (National Council of University Research Administrators)	https://www.youtube.com/watch?v=B3TpcrckBWk
Watch video: Beware conflicts of interest (Dan Ariely, TED Talk)	https://www.ted.com/talks/dan_ariely_beware_conflicts_of_interest
➡ ***Post*** a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=4 (login required)

MODULE 5: August 13 – 17

Authorship and Research Misconduct

Objectives:

1. Describe the purpose of authorship.
2. Explain how disputes over authorship might be resolved.
3. Discuss ways that community-based research can share authorship and knowledge dissemination.
4. Define the federal standards for research misconduct.
5. Describe at least three warning signs of research misconduct.

Assignments:

Complete the following by MIDNIGHT Tuesday:	
Read Chapters 12 & 13 of Lo textbook.	
Read C.K. Gunsalus & Drummond Rennie, "If you think it's rude to ask to look at your co-authors' data, you're not doing science," RetractionWatch.com	http://retractionwatch.com/2015/06/18/if-you-think-its-rude-to-ask-to-look-at-your-co-authors-data-youre-not-doing-science-guest-post/
Watch video: Research in low-resource settings: Authorship matters (Anita Ho, Ph.D. & Marsha Michie, Ph.D.)	https://courses.ucsf.edu/course/view.php?id=5525&section=5 (login required)
Post a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=5 (login required)

MODULE 6: August 20 – 24

Research Ethics in Big Data and "Precision Medicine"

Objectives:

1. Discuss potential ethical opportunities and challenges in "precision medicine" and data sharing.
2. Discuss authors' ethical obligations regarding sharing research materials and data.
3. Discuss the issues of balancing consent and governance in Big Data research.
4. Describe the Ten Simple Rules regarding responsible conduct of research in Big Data research.
5. Discuss researchers' ethical obligations regarding the return of results to participants.

Assignments:

Complete the following by MIDNIGHT Tuesday:	
Read Chapter 27 of Lo textbook.	
Read Zook M et al. "Ten simple rules for responsible big data research." ***PLoS Comput Biol.***	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5373508/

Read Joshua D. Smith et al., "Immortal life of the Common Rule: Ethics, consent, and the future of cancer research," *Journal of Clinical Oncology*	PDF at https://courses.ucsf.edu/course/view.php?id=5525&section=6 (login required)
Read Ida Sim, "Two ways of knowing: Big data and evidence-based medicine," *Annals of Internal Medicine*	PDF at https://courses.ucsf.edu/course/view.php?id=5525&section=6 (login required)
Watch: Ethical Dimensions of "Big Data" Research, Barbara A. Koenig, Ph.D.	https://courses.ucsf.edu/course/view.php?id=5525&section=6 (login required)
Watch: 10 Simple Rules, Barbara A. Koenig, Ph.D.	https://courses.ucsf.edu/course/view.php?id=5525&section=6 (login required)
Post a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=6 (login required)

MODULE 7: August 27 – 31

Research in Resource-Poor Environments

Objectives:

1. Describe how research in resource-poor countries differs from research in the U.S.
2. Explain why use of placebos in clinical trials may be unethical in developing countries.
3. Discuss issues related to provision of background and ancillary care, informed consent, access to the study intervention after the trial, and collaboration with host-country stakeholders.

Assignments:

Complete the following by MIDNIGHT Tuesday:	
Read Chapter 22 of Lo textbook.	
Read Saad B. Omer & Richard H. Beigi, "Pregnancy in the time of Zika: Addressing barriers for developing vaccines and other measures for pregnant women," *JAMA*	http://jamanetwork.com/journals/jama/fullarticle/2498484
Read Arthur Caplan, Carolyn Plunkett & Bruce Levin, "Selecting the right tool for the job," *American Journal of Bioethics*	http://www.tandfonline.com/doi/full/10.1080/15265161.2015.1010993
Watch video lecture: Research in resource-poor settings: Navigating ethical challenges (Anita Ho, Ph.D.)	https://courses.ucsf.edu/course/view.php?id=5525&section=7 (login required)

➡ ***Post*** a response to this week's Case Study.	https://courses.ucsf.edu/course/view.php?id=5525&section=7 (login required)

COURSE EVALUATION

Please take a few minutes to fill out the course evaluation. As we strive to improve our online educational program, we need and value your input. Many of the changes in our program have been ones suggested by prior trainees. *The content of your course evaluation is anonymous, but the system will record that you completed it.*