Research Integrity and the Responsible Conduct of Research - Checklist for Research Students and their Mentors at the University of California, Riverside*

Introduction

This checklist, structured in relation to different aspects of research integrity, is designed to assist mentors and students to engage in a broader dialogue about research integrity and the responsible conduct of research.

In working through this list, mentors and trainees can discuss:

- What research integrity means to them, to the University, to researchers and the community
- What the University requires of its staff and students
- Relevant `subject' or `discipline'-specific codes
- Project-specific requirements (eg. human subjects approvals, animal subjects approvals, laboratory notebooks, overseas-based research etc.)

It is recommended that supervisors and their students use this checklist at the start of a student's research, discuss it periodically throughout the student's career and review it ***at least annually***.

** Checklist adapted from University of Oxford, with generous permission*.

Aspect of research integrity	Suggested action	Resources / web links (these are not meant to be the entirety of resources for each topic, but simply suggestions for good ways to start the conversation; you can contact Dena Plemmons in the Research Ethics Education Program for additional resources)	Comments (eg. when discussed, completed or follow-up actions)
Introduction to the responsible conduct of research	At the start of the research, provide student with information about University and other resources available.	UCR's Institutional Plan for RCR training: https://research.ucr.edu/media/31934/rcr-institutionalplan.pdf On Being A Scientist: an introduction to the responsible conduct of research from the National Academy of Sciences. NIH RCR policy regarding training in the responsible conduct of research: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html NSF RCR policy regarding training in the responsible conduct of research: http://www.nsf.gov/bfa/dias/policy/rcr.jsp NIFA/USDA RCR policy regarding training in the responsible conduct of research: https://nifa.usda.gov/responsible-and-ethical-conduct-research CITI online – an online course, used by UCR, designed to give an introduction to good practice in research.	

Subject-specific and local policies/guidelines	Discuss any relevant discipline-specific, funder-specific (i.e., NIH or NSF) or professional codes of conduct, particularly as they work in practice. Provide student with any external funding terms and conditions. Provide student with any faculty, departmental or divisional policy documents relating to the conduct of his/her research.		
Authorship	Discuss, in general, requirements for a person to be listed as an author of a publication. Discuss what the publication strategy will be for the student's project, including criteria for authorship. Discuss authorship throughout the project, especially prior to work being prepared or submitted for publication. Agree on authorship and attribution for each publication.	DHHS Office of Research Integrity - http://ori.hhs.gov/preempting-discord-prenuptial-agreements-scientists International Committee of Medical Journal Editors: http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html Contributor Role Taxonomy https://docs.google.com/document/d/1aJxrQXYHW5U6By3KEAHrx1Iho6ioeh3ohNsRMwsoGPM/edit	

Conflict of interest	Discuss with the student the concept of 'conflict of interest' in research. Provide student with copy of federal and University policy and discuss how any potential conflicts associated with their research might be declared and managed.	Public Health Service (PHS) Financial Conflict of Interest Policy UCR Policy on Conflict of Interest https://research.ucr.edu/ORI/committees/pro.aspx	
Regulatory Requirements	If the student's research will use animals, discuss the University's procedures for ethical review. If the student's research involves human participants or personal data or materials, discuss the University's procedures for ethical review.	https://research.ucr.edu/ORI.aspx	

Licences and permissions	Discuss whether any licences and permissions are required before the research project commences (including any relevant training which might be necessary): - Import licences for materials - Licences to use certain materials - Agreements necessary to use materials, for example through a material transfer agreement (MTA) - Permissions from communities or government agencies NB. This should include projects involving fieldwork overseas.	UCR policies for: Export control: https://research.ucr.edu/spa/export-controls.aspx Materials Transfer Agreement: https://research.ucr.edu/otc/material-transfer-agreement.aspx Office of Technology Commercialization: https://research.ucr.edu/OTC.aspx	

Research data and records management	Discuss how research data and records generated will be collected, stored, and managed. Consider the following general areas: - Where these will be stored and how they will be identified - How to keep data and records secure and protected from damage/destruction - Accessibility - Confidentiality/privacy issues - Archival/long-term value. Other areas may specifically apply: - If the research is externally-funded, are there terms and conditions relating to how data is collected and stored? - Laboratory notebooks - Research involving human participants (incl. consent forms, questionnaires).	https://dmp.cdlib.org/ DHHS Office of Research Integrity - http://ori.hhs.gov/preempting-discord-prenuptial-agreements-scientists NSF Data Management Plan Requirements https://www.nsf.gov/bfa/dias/policy/dmp.jsp NIH Data Sharing Requirements https://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm	

Intellectual property	Discuss what intellectual property (IP) may be generated in the course of the project.	Office of Technology Commercialization: https://research.ucr.edu/OTC.aspx	
Advice and concerns about research conduct	Discuss where advice may be sought and the procedures for dealing with queries, concerns or complaints about the research.	https://research.ucr.edu/WebDocs/RI/Forms/RM/How-to-Blow-the-Whistle-and-Still-Have-a-Career-Afterwards.pdf UCR Office of the Ombuds - The OO is a confidential, impartial, informal and independent resource that assists UCR community members, including students, faculty and staff, in addressing or resolving a dispute or on-going conflict. https://research.ucr.edu/WebDocs/RI/Forms/RM/RM-handout.pdf UCR Policy and Procedures for Responding to Allegations of Research Misconduct: https://research.ucr.edu/about/policies-ucr.aspx?k=31	
Skills training and professional development	Discuss with student any further training needs related to the research and professional development more generally.	Grad Success: http://graduate.ucr.edu/success.html Individual Development Plans http://myidp.sciencecareers.org/ https://www.imaginephd.com/ https://chemidp.acs.org/	
Supervisory meetings	Discuss how regularly to meet and set up meetings.	Compact/Agreements https://members.aamc.org/eweb/upload/Compact_Between_Biomedical_Graduate_Students.pdf https://www.aamc.org/initiatives/research/postdoccompact	