

Responsible Conduct of Research

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Responsible Conduct of Research

- Purpose
 - The purpose of the Graduate School RCR program in association with the Office of Vice President of Research is to:
 - promote and sustain an environment of academic honesty and research integrity by cultivating and maintaining a Responsible Conduct of Research environment for all graduate students, post doctoral fellows, staff, and faculty, at Purdue University.

Responsible Conduct of Research

- What does it mean?
- It simply means that one is honest in his/her academic and research endeavors and continually strives to do the right thing.
- It means that you maintain the best and highest standards while engaging in research
- Responsible Conduct of Research does not end with graduate study at Purdue University - this frame of mind and method for action should carry on all along one's career and life.

Why is RCR important?

- Obvious Reasons:
 - For Graduate student's reputation
 - Scientist's reputation and success
 - For Department's and University's reputation
 - For Graduate student retention and graduation
 - For Continued Funding
 - For Avoiding Emotional stress

Consequences of Misconduct

- Example : Plagiarism
 - Revoking a dissertation (Ohio University)
 - <http://thepost.baker.ohiou.edu/articles/2006/02/23/news/2486.html>
- Example: Fabrication and Falsification (PhD student –CSU)
 - <http://ori.dhhs.gov/misconduct/cases/Jin.shtml>
 - **Poehlman's case (The New York Times, Oct 22,'06) (Faculty – UV)**
 - http://ori.dhhs.gov/misconduct/cases/poehlman_notice.shtml
- Reputation and success is impaired
- Debarred from research
- Costly process for everybody involved
- Education and Prevention is better

1. Research Integrity (Misconduct?)
2. Roles and Responsibilities
3. Data Management
4. Authorship and Publication
5. Intellectual Property
6. Conflict of Interest

7. Compliance Requirements:

- Protecting Human Research Subjects
- Animal Care and Use
- Bio-hazards and rDNA
- Radiation or Lasers
- Freedom of Inquiry
- Export Control regulations

1. Research Integrity (misconduct ?)

- “Is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing or in reporting research results”**
- **http://www.ostp.gov/html/001207_3.html
- How to avoid plagiarism – OWL workshops
- <http://owl.english.purdue.edu/owl/resource/589/01/>
- Outlining procedure for reporting and investigating research misconduct – Purdue University policies (C-22)

2. Roles and Responsibilities

- Good Mentoring Means
 - Making roles & responsibilities very clear
 - Showing commitment for supportive research environment
 - Holding regular meetings and reviews
 - Emphasizing RCR and being successful scientists

- ‘RCR booklet’ web site
- Department policies
- University policies (eg. C-22 and B-10)
- Roles and Responsibilities (refer to Guidelines in the RCR booklet) of the:
 - Advisor - Faculty
 - Graduate students
 - Research Advisory Committee
 - Department Head

Data Management is complex and includes:

- Data Acquisition
- Data Protection
- Data Analyses and Interpretation
- Data Ownership (Funding agencies, Research Institutions/ Data Sources)
- Data Sharing
- Departmental policies regarding data

4. Authorship and Publications

- Department Policies
- RCR booklet guidelines (refer to the RCR booklet)
- Department/faculty expectations (if any)
- What are the acceptable criteria for authorship in ‘your’ field of study (if any)

5. Intellectual Property

- “Ownership of intellectual property created by Purdue employees and students, or through use of Purdue University resources is determined through the application of Purdue’s policy on intellectual property (Executive Memorandum B-10; http://www.purdue.edu/oop/policies/pages/teach_res_outreach/b_10.html).
- Graduate students should be familiar with the principles outlined in Purdue’s policy so that they understand their rights and their obligations regarding the intellectual property they create.”**
- **Taken from RCR booklet, Purdue University

Copyright Regulations*

- *“Who owns copyright to original works of authorship created by graduate students?”*
- It is the policy of Purdue University that all rights in copyrightable works shall remain with the creator unless:
 - The copyrightable work is created pursuant to the terms of a University agreement with an external party. The copyrightable work is created as a specific, written requirement of employment or as an assigned University duty that is specified in writing or when the copyrightable work is prepared at the University’s expense (“work-for-hire”).
 - The copyrightable work is specifically commissioned by the University.
 - In the judgment of the University Committee on Patents and Copyrights, the creator of the copyrightable work made more than incidental use of University resources.
 - The copyrightable work is also patentable and/or is associated with a University trademark.”
 - *Source: Graduate School RCR booklet

6. Conflict of Interest

7. Compliance Requirements

- ***Protecting Human Research Subjects***
- All research involving the use of human subjects must comply with Federal Regulations (45 CFR 46.102) and Purdue University policies to protect human subjects. Consult the IRB web site (<http://www.irb.purdue.edu/>) to review the policies and guidelines regarding the use of human subject's research.
- ***Purdue Animal Care and Use Committee and the Laboratory Animal Program***
- All research involving the use of live, vertebrate animals in research, teaching or testing must comply with the United States Department of Agriculture/Animal and Plant Health Inspection Service-Animal Care (USDA/APHIS-AC). All protocols for animal testing must be approved by PACUC. For details please study the following web site:
 - <http://www.purdue.edu/research/vpr/compliance/animals/index.shtml>
- ***Export Regulations***
- The export of certain commodities, software, technical data, and certain other information is regulated by the federal Export Administration Regulations ("EAR") and International Traffic in Arms Regulations ("ITAR"). Please consult the following web site to all pertaining information according to Purdue University Policies.
 - <http://www.purdue.edu/research/vpr/compliance/exportregulations.html>
- (IF Department is involved in Radiation, lasers, controlled substances, etc, please refer to the appropriate guidelines at :
 - <http://www.purdue.edu/research/vpr/compliance/index.html>)

RCR web site

www.gradschool.purdue.edu/rcr/

- **Policies**
- **Resources**
- **NSF RCR training module**
- **CITI-RCR training module**
- **Graduate students/post doctoral fellows and faculty are encouraged to complete RCR training modules.**