

VCU OFFICE OF RESEARCH POLICY

NSF and NIH Responsible Conduct of Research (RCR) Education Requirements

(Updated 8-19-10)

NSF Requirements and Implementation

Effective January 4, 2010, the Authorized Organizational Representative (Research Administrator) of institutions that apply for financial assistance from NSF for science and engineering research or education must certify that the institution has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who will be supported by NSF to conduct research.

As of January 4, 2010, all undergraduate students, graduate students and postdoctoral researchers supported by NSF to conduct research must complete Responsible Conduct of Research education.

Beginning with applications submitted to NSF on January 4, 2010, each PI will certify on the Internal Approval Form that all undergraduate students, graduate students and postdoctoral researchers to be supported by an NSF award will complete the VCU program of education in RCR prior to hire or within 60 days of a new NSF award.

NIH Requirements and Implementation

NIH requires that all trainees, fellows, participants, and scholars receive support through any NIH training, career development award (individual or institutional) research education grant, and dissertation research grant must receive instruction in responsible conduct of research. This requirement will take effect for all new and renewal applications submitted on or after January 25, 2010, and all continuation applications with deadlines on or after January 1, 2011. This applies to the following programs: **D43, D71, F05, F30, F31, F32, F33, F34, F37, F38, K01, K02, K05, K07, K08, K12, K18, K22, K23, K24, K25, K26, K30, K99/R00, KL1, KL2, R25, R36, T15, T32, T34, T35, T36, T37, T90/R90, TL1, TU2, and U2R.** This policy also applies to any other NIH-funded programs supporting research training, career development, or research education that require instruction in responsible conduct of research as stated in the relevant funding opportunity announcements.

As of January 25, 2010, all trainees, fellows, participants, and scholars supported through any NIH training, career development award (individual or institutional), research education grant, or dissertation research grant must complete Responsible Conduct of Research education as a part of their program. Further guidance on the components of the NIH requirement is available at <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html>.

Each PI will certify on the Internal Approval Form that all individuals to be supported by a NIH training, career development, research education grant, or dissertation research grant award will complete an appropriate program in Responsible Conduct of Research in accordance with the NIH guidelines.

Responsible Conduct of Research Education

VCU courses in responsible research conduct are listed below.

RCR education at VCU follows NIH best practices. These are also presented below. With respect to frequency of instruction we require mandated RCR training once during a specific career stage (e.g., undergraduate, graduate, postdoctoral), or at least once every four years. Evidence that acceptable training has been successfully completed at another institution in keeping with these prescribed timeframes meets the RCR requirement.

If you have any questions about the RCR educational requirement, or need additional information, please contact Post Award Manager, Office of Sponsored Programs at 828-6772 or ospaward@vcu.edu.

VCU Responsible Conduct of Research Courses and Training Programs (updated 8-19-10)

Note: all courses/workshops, include selected readings in Responsible Conduct of Research, have face-to-face case discussions with VCU researchers, and cover the following topics: Subjects Protection; Conflicts of Interest; collaborative research; peer review and publication; data acquisition, management, sharing and ownership; research misconduct; and, mentoring

Term	Title	Course Director	Format	Course Restrictions	Target Audience	Meets NSF Requirements http://www.nsf.gov/bfa/dias/policy/rcr.jsp	Meets NIH Requirements http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html	Meets VCU Requirements http://www.research.vcu.edu/vpr/resources/rcr.htm	Enrollment Max
Summer	Responsible Scientific Conduct (GRAD 691)	Macrina	1 credit; hybrid with 2 in-class sessions (total of 4 hours) that include case discussions; online portion requires interactive writing assignments	Postdoctoral scholars	Postdoctoral scholars	Yes	Yes	Yes	40
Fall	Scientific Integrity (MICR 510)	Macrina	1 credit; classroom-based course; meets for 11 class sessions	Graduate students, postdocs, and faculty	Biomedical researchers	Yes	Yes	Yes	90
Fall	Responsible Conduct of Research (GRAD 603)	Nichols-Casebolt	1 credit; Hybrid with 2 in-class sessions (total of 4 hours) that include case discussions; online portion requires interactive writing assignments	PFF students have priority	Graduate students and postdocs enrolled in Preparing Future Faculty program (PFF)	Yes	Yes	Yes	25

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Spring	Research Seminar in Clinical & Translational Sciences (CCTR 690)	Macrina	1 credit; Hybrid with 2 in-class sessions (total of 4 hours) that include case discussions; online portion requires interactive writing assignments	Graduate students, postdocs, and faculty	Biomedical researchers	Yes	Yes	yes	120
Summer	Responsible Conduct of Research (LFSC591)	Tombes	1 credit; classroom-based with some on-line learning	Undergrad students	Undergraduate students on NSF funded grants	Yes	Yes	N/A	20
Summer	Research Ethics for Undergrads	Macrina	Misc. Workshops	Priority to those in federally funded projects	undergraduate research fellows; HHMI; BBSI; HERO; etc.	No	N/A	N/A	N/A
Summer	Train the Trainer	Macrina	1 day interactive workshop	Postdocs & faculty	completed CCTR 690	N/A	N/A	N/A	15

NIH best practices in Responsible Conduct of Research Training:
<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html>.

1. **Format:** Substantial face-to-face discussions among the participating trainees/fellows/scholars/participants; a combination of didactic and small-group discussions (e.g. case studies); and participation of research training faculty members in instruction in responsible conduct of research are highly encouraged. **While on-line courses can be a valuable supplement to instruction in responsible conduct of research, online instruction is not considered adequate as the sole means of instruction. A plan that employs only online coursework for instruction in responsible conduct of research will not be considered acceptable, except in special instances of short-term training programs (see below), or unusual and well-justified circumstances.**
- 2.
3. **Subject Matter:** While there are no specific curricular requirements for instruction in responsible conduct of research, the following topics have been incorporated into most acceptable plans for such instruction:
 - a. conflict of interest – personal, professional, and financial
 - b. policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices
 - c. mentor/mentee responsibilities and relationships
 - d. collaborative research including collaborations with industry
 - e. peer review
 - f. data acquisition and laboratory tools; management, sharing and ownership
 - g. research misconduct and policies for handling misconduct
 - h. responsible authorship and publication
 - i. the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research

While courses related to professional ethics, ethical issues in clinical research, or research involving vertebrate animals may form a part of instruction in responsible conduct of research, they generally are not sufficient to cover all of the above topics. Additional detail regarding subject matter is available under Resources.

3. **Faculty Participation:** Training faculty and sponsors/mentors are highly encouraged to contribute both to formal and informal instruction in responsible conduct of research. Informal instruction occurs in the course of laboratory interactions and in other informal situations throughout the year. Training faculty may contribute to formal instruction in responsible conduct of research as discussion leaders, speakers, lecturers, and/or course directors. Rotation of training faculty as

course directors, instructors, and/or discussion leaders may be a useful way to achieve the ideal of full faculty participation in formal responsible conduct of research courses over a period of time.

4. **Duration of Instruction:** Instruction should involve substantive contact hours between the trainees/fellows/scholars/participants and the participating faculty. Acceptable programs generally involve at least eight contact hours. A semester-long series of seminars/programs may be more effective than a single seminar or one-day workshop because it is expected that topics will then be considered in sufficient depth, learning will be better consolidated, and the subject matter will be synthesized within a broader conceptual framework.
5. **Frequency of Instruction:** Reflection on responsible conduct of research should recur throughout a scientist's career: at the undergraduate, post-baccalaureate, predoctoral, postdoctoral, and faculty levels. Institutional training programs and individual fellows/scholars are strongly encouraged to consider how to optimize instruction in responsible conduct of research for the particular career stage(s) of the individual(s) involved. Instruction must be undertaken at least once during each career stage, and at a frequency of no less than once every four years. It is highly encouraged that initial instruction during predoctoral training occurs as early as possible in graduate school. Individuals at the early career investigator level (including mentored K awardees and K12 scholars) must receive instruction in responsible conduct of research at least once during this career stage. Senior fellows and career award recipients (including F33, K02, K05, and K24 awardees) may fulfill the requirement for instruction in responsible conduct of research by participating as lecturers and discussion leaders. To meet the above requirements, instruction in responsible conduct of research may take place, in appropriate circumstances, in a year when the trainee, fellow or career award recipient is not actually supported by an NIH grant.