**Training in the Responsible Conduct of Research (RCR)**

*(Last updated May 9, 2012)*

The RCR training requirement will be met by successful completion of OVPR601, Scientific Integrity. This one credit course surveys contemporary issues relating to scientific integrity and responsible conduct in research and fulfills the five NIH instructional components for RCR training.

*Format:* The course consists of 11 in-class sessions for a total of 15 contact hours (1 cr. hr.). All sessions consist of formal presentations by the faculty instructors (45 min.) followed by face-to-face discussion of student-led case studies (45 min.). Group size for case discussion is approximately 10 students, and a faculty member is always present in these sessions. The final grade (A-F) in the course is determined based on the following weighting: 10% of the grade is based on attendance; 30% of the grade is based on class participation; and the remaining 60% of the grade is based on a writing assignment (examples include writing a solution to a complex case, composing new cases and proposing solutions, drafting sections of a code of research conduct, writing a position paper on a relevant topic, etc.).

*Subject Matter:* The nine NIH instructional topics are covered in OVPR601. These include: research and academic misconduct and relevant policies (2 sessions); subjects protection and safe lab practices (2 sessions); the mentor-trainee relationship (1 session), authorship and peer review (1 session); collaborative research (1 session), data acquisition, management, sharing, and ownership (2 sessions); personal, professional, financial, and institutional conflict of interest (1 session); and science, technology and society (1 session). All content areas are linked to relevant case studies that trainees present in small group discussion sections. The course uses *Scientific Integrity: Text and Cases in Responsible Conduct of Research (Third Edition)* (ASM Press, Washington, DC. 2005). This text was authored by Francis L. Macrina, who is the course director of OVPR601. Dr. Macrina been an NIH funded investigator for over 35 years, and has been teaching responsible conduct of research to graduate biomedical trainees at VCU since 1986. For the past decade he also has maintained a research program in research integrity and has published on topics such as scientific standards, mentoring, authorship, and RCR education methods.

*Faculty Participation*: OVPR601 topic instructors are faculty experts. Dr. Macrina lectures in areas that reflect his scholarly and published interests (mentoring, authorship/peer review, research data) as well as those that fall under his responsibility and expertise as the senior research officer of the institution (conflict of interest, misconduct policies). Topics related to research subject protection are taught by the Principal Investigator of VCU NIH CTSA Award, the director of the VCU Office of Subjects Protections, and the faculty chair of the VCU IACUC. Select faculty experts who do research or write in socially relevant areas of scientific research (reproductive biology, dual use technology, etc.) lecture in the session on science, technology and society. Faculty case facilitators are recruited from across the university. Dr. Macrina holds train-the-trainer sessions for all faculty facilitators prior to their initial course participation. Faculty mentors of record on NIH K-, F-, R-, T- or U- mechanism grants are recruited to be facilitators.

*Duration:* OVPR601 has 15 contact hours of in-class instruction and case study discussion, exceeding by almost 50% the contact hours recommended by the NIH. Training in RCR at VCU is mandated to occur at least once during each career stage (e.g., pre- or postdoctoral tenure) but no less than once every four years. Predoctoral trainees are required to complete instruction within the first 2 years of their program and postdoctoral trainees must complete the instructional requirement within 12 months of their start date.

*Frequency of Instruction:* In the event that refresher training is needed to meet the four year cycle requirement, trainees are required to successfully complete OVPR 602, *Responsible Scientific Conduct*. This 1 credit course is offered during the spring semester of each year and is comprised of self-paced, on-line learning modules accompanied by approximately 8 contact hours of in-class instruction and case study discussion. It covers the same topic areas as described for OVPR601. The on-line reading is derived from the *Scientific Integrity* text (with permission of the publisher) and the course has two short writing assignments that focus on contemporary issues in responsible conduct of research. This course is also directed by Dr. Macrina, who recruits faculty experts to assist him as case discussion facilitators.