

**Workshop Series Syllabus: *Individual, Institutional, and Professional Responsibility for Ethical Practice & Integrity in Research/Scholarship***  
 (<http://grad.msu.edu/rcr/syllabus.pdf>)

Registration 5:30 – 5:50 p.m.; Workshop Programs 6:00 – 7:30 p.m.  
 The [Erickson Hall Kiva](#)

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“The scientific enterprise is built on a foundation of trust. Society trusts that scientific research results are an honest and accurate reflection of a researcher’s work. Researchers equally trust that their colleagues have gathered data carefully, have used appropriate analytic and statistical techniques, have reported their results accurately, and have treated the work of other researchers with respect. When this trust is misplaced and the professional standards of science are violated, researchers are not just personally affronted – they feel that the base of their profession has been undermined. ...”

Ralph J. Cicerone, Charles M. Vest, and Harvey V. Fineberg. 2009. Preface to *On Being a Scientist – A Guide to Responsible Conduct in Research*. The National Academies Press, Washington, DC. 63pp.

### **Graduate Education & Postdoctoral Training at Michigan State University**

Our collective goal is to prepare students and postdoctoral researchers to become globally-engaged citizen-leaders. Central to achieving this goal is the ability to conduct quality research/scholarship as the foundation for strong professional reputations for individuals, their departments and graduate programs, and Michigan State University (MSU). For students and postdoctoral trainees, professional development occurs under the [guidance and leadership](#) of individual faculty through partnerships intended to be mutually beneficial. To be successful, these partnerships must be based on a shared commitment to responsible research/scholarly practices based on [key principles of research integrity](#). This workshop series will highlight these key principles and repeatedly emphasize that research and scholarly integrity is a fundamental characteristic of quality research/scholarship in all disciplines.

### **Why is this Workshop Series Offered?**

Pursuing a graduate degree and undertaking a research training experience is intensely personal; however, it is critically important that early career scholars understand that their research/scholarly work impacts others and contributes to the research/scholarship of others in important ways that may not always be clear. Work is often supported by public funding or with funding from private sources to address issues and questions important to individuals, companies, national interests, etc. Regardless of the scope of the impact, interested parties (both individuals and groups) trust that new information, and the reported outcomes they support, is accurate, true,

and carefully considered. Inaccurate or flawed results can occur for many reasons ranging from mistakes or chance alone to malicious misrepresentations where individual researchers are responsible for violating important accepted principles of research integrity.

Students and trainees are accountable for deviations from and violations of established policies and professional standards concerning academic and research integrity. This is particularly important for students to understand, because the most serious violations can affect completion of individual courses and jeopardize enrollment as a student in a degree program. Findings of research misconduct in theses and dissertations after granting of a degree can even lead to revocation of the degree.

All interested individuals and parties who support, conduct, oversee, and use the results of research/scholarship share a common commitment for the importance of maintaining the integrity of research/scholarly enterprises. This includes a commitment that early-career scholars receive appropriate education and training in the responsible and ethical conduct of research. As part of this commitment, the Federal government implemented a requirement that students and post-doctoral trainees supported by Federal funds be educated and trained in the responsible and ethical conduct of research. MSU departments and graduate programs developed [plans to provide this education](#) and to assure compliance to the Federal government as the primary funder of university research/scholarship.

This workshop series is intended to support the efforts of departments and graduate programs which have the primary responsibility for educating and training students/trainees to understand, apply, and foster responsible research/scholarly practices within their departments and graduate programs according to national, university, and professional standards. The expectation is that student/trainee research/scholarship will be of higher quality and that students/trainees will be better able to avoid and respond to situations involving irresponsible research/scholarly practices and behaviors.

### **Expectations of Your Participation in this Series**

- 1) As a student or postdoctoral trainee at MSU, it is your responsibility to do your own work to take full advantage of the opportunities presented to you. Departments, Schools and Interdisciplinary Programs are responsible for establishing requirements and developing plans for appropriate training and oversight in the ethical and responsible conduct of research. Many decided to require attendance at this workshop series as a key aspect of their educational strategies. The Certificate of Attendance offered after completing all workshops is the way that The Graduate School certifies to departments and programs, as well to the Federal government, that students and trainees have fully participated in the workshops. Taking short cuts or misrepresenting the extent of your participation deprives you of the value of this educational opportunity and devalues the time and effort of others. It is deceptive (*i.e.*, a lie) to certify your attendance by signing the attendance sheet and then leave or ask another person to falsely sign your name.
- 2) It is your responsibility and duty to read and understand MSU's policies and procedures on academic and research integrity and misconduct. Misrepresenting your participation would be considered a violation and invalidate granting of a Certificate of Completion.
- 3) Workshops will begin promptly at 6 p.m. and end at 7:30 p.m. Please arrive early, sign the registration sign-in sheet, and pick up your materials by 5:50 p.m. so that everyone will be ready to begin the workshop at 6 p.m. Delays for late arrivals would disrupt the start and inconvenience

others who arrive on time. Sign in is required, because certificates are provided for those who complete the full series as a requirement by many graduate programs and/or to meet NSF-mandated training and education for continued funding of your assistantship. Sign out will be required for two sessions chosen at random.

4) Preparation prior to each workshop is required in order to make the best use of our 90 minutes together. Pre-workshop readings and specific tasks are listed under each workshop topic to facilitate learning and discussions, but it will be impossible in just 90 minutes to cover every important aspect of topics. Therefore, key issues and examples will be emphasized as case studies. **Every student is responsibility for reading and considering the Pre-Workshop Readings and completing the Pre-Workshop Tasks as a prerequisite for identifying the issues and questions that are most important to their own interests.**

5) Short writing exercises will be included in each session to evaluate pre-workshop planning and understanding about key issues regarding the specific content of the session.

6) Because these sessions are designed to promote discussions, no cell phones or laptops will be allowed on desks or be used during the workshops.

7) Each participant will be provided a folder by the Graduate School to use at each session as a name card, to identify your department or training program, and to return writing exercises for review after individual workshops. This folder must be returned at the end of each session with writing assignments enclosed.

### **Issuance of a Certificate of Attendance**

All individuals (including faculty or other university employees) who desire to receive a Certificate of Attendance will be expected to participate and engage in all seven workshops as described in this syllabus. Everyone is welcome to attend both the workshop on “Protecting Human Research Participants” and “The Care and Use of Animals in Research”, but attending only one of the two is required in order to receive a Certificate of Attendance. We understand that not everyone does research on one or the other, but understanding the ethical responsibilities for review by Institutional Boards and application of approved protocols is an important principle. There are other Institutional Boards that are required to oversee and review research protocols that will not be considered directly in the workshops.

Responses provided through the “short writing exercises” will be read and assessed as to whether or not they are responsive to the question asked. Attendance at all workshops (or excused absences from portions of workshops) as well as “suitable responses” to 80% of the writing exercises will be required as the basis for issuance of a Certificate of Attendance.

It is difficult for anyone to insure individuals will become committed to applying ethical standards and responsible research practices. However, we are serious about insuring that individuals are informed and educated about the key principles of research integrity.

A list of students completing the series will be provided to the graduate programs that require this series. You should also enter your name and completion information into the [Research Training Tracking System](#) (RTTS).

## Workshop Series Outcomes

Attendees are expected to commit to thinking about and discussing their understanding of responsible research practices both at workshops and with their student/trainee/faculty colleagues in their Departments, Schools and Interdisciplinary Programs. All attendees will be expected to participate actively by reading assigned materials in advance, contributing to group discussions, reflecting on and their understanding of professional principles and standards; and sharing views about responsible and ethical conduct of research/scholarship in their academic field of study. At the end of the workshop series, attendees will be expected to understand and be able to explain:

- MSU's rules concerning academic integrity, including possible disciplinary actions regarding allegations of academic or research misconduct;
- MSU's requirements for training and oversight in the responsible and ethical conduct of research;
- Where to find their department's or program's plan for training and oversight in the responsible and ethical conduct of research;
- The Key Principles of Research Integrity and core values of responsible and ethical conduct of research/scholarly practices;
- How to properly credit other's works in order to avoid accusations of plagiarism;
- How to reason logically and critically evaluate ethical dilemmas and professional situations to guide responsible and ethical actions in the conduct of research/scholarship;
- How their research/scholarship affects others, both professionally and personally; and
- How to responsibly collaborate with others in research/scholarly teams.

## Accommodations

Persons with disabilities or special needs should contact the Graduate School at 517-353-3231 to request arrangements no later than one week prior to the session date. Requests received after this date will be met when possible.

## Workshop Series Topics / Pre-Workshop Assigned Readings & Tasks

### Fall Semester 2011

#### Workshop 1: *Being an Early Career Scholar* (Wednesday, September 14, 2011)

#### Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Introduction to the Responsible Conduct of Research](#)  
[Advising and Mentoring](#)  
[Mistakes and Negligence](#)  
[Laboratory Safety in Research](#)
- Academic Programs (a listing of academic programs, policies and related information) (for Graduate Students only)  
 Appropriate information regarding academic advising and research for your graduate program ([Masters](#) or [Doctoral](#))
- [Graduate Student Rights and Responsibilities](#)(for Graduate Students only)  
 Article 2: [Academic Rights and Responsibilities for Graduate Students](#)
- [Guidelines for Graduate Student Advising and Mentoring Relationships](#)(for Graduate Students only)
- Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty: Second edition (for Post-Doctoral Trainees only)  
[Chapter 5: Mentoring and Being Mentored](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Mentor/Trainee Relationships](#)
- Your [Graduate Handbook](#) (request a copy if it is not online; for Graduate Students only)  
 Section on Integrity & Safety in Research & Creative Activities (bring a copy)
- [Guidelines for Integrity in Research and Creative Activities](#)

#### Pre-Workshop Tasks (Graduate Program Advisors will be invited to attend this workshop)

- Because departments and graduate programs have the primary responsibility for educating students and trainees about responsible research/scholarly practices, we now require that you identify and ask an experienced researcher/scholar in your department or program to serve as your research integrity consultant for each session in the workshop series. This individual could be different for each session or semester, but our intent is for you to communicate regularly with someone in your discipline about the topics covered in the workshop series. This individual could be your rotation supervisor, chair or member of your dissertation committee, thesis advisor, graduate program director, or research supervisor.
- Before selecting and asking someone to serve as your research integrity consultant, decide for yourself the three most important characteristics that you would desire in a faculty mentor.
- After receiving a commitment by someone to serve as your research integrity consultant, ask this person to name one or two most common areas where communications could be improved between students/trainees and their advisers/mentors. Ask them and discuss how communication could be improved in these areas.

**Workshop 2: *Scientific Communications, Rights to Data, and Authorship***  
**(Thursday, October 6, 2011)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Authorship and the Allocation of Credit](#)  
[Sharing of Research Results](#)  
[Intellectual Property](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Authorship and Publication](#)  
[Collaborative Research](#)  
[Protection of Intellectual Property](#)

Pre-Workshop Tasks

- Meet with your research integrity consultant and agree on five outlets that would be appropriate for publishing interim or final results from graduate research/scholarship.
- Consider for yourself the criteria that would determine a scientific communication that would be suitable for deciding what should be included on your CV or resume.
- Bring a copy of the “Notes or Instructions to Authors” from one journal in which you might publish in your discipline.
- Discuss with your research integrity consultant how authorship and author order is decided. Also discuss who decides about these questions.

**Workshop 3: *Crediting the Works of Others and Avoiding Plagiarism***  
**(November 2, 2011)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Authorship and the Allocation of Credit](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Plagiarism](#)  
[Avoiding Unintentional Plagiarism](#)

Pre-Workshop Tasks

- Discuss with your research integrity consultant the meaning of plagiarism and their recommendation(s) for how to avoid unintentional plagiarism.
- Consider for yourself when and how you should properly credit others for their ideas and research/scholarly work AND when and how you wish to be credited for your work.

**Workshop 4: *Record Keeping, Data Management, and Sharing of Information***  
**(Wednesday, November 16, 2011)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[The Treatment of Data](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Management of Research Data](#)

Pre-Workshop Tasks

- Consider for yourself how you would define data as they apply to your research/scholarship.
- Discuss with your research integrity consultant when and how it is proper to share information as well as when it might be unwise to share information.
- Ask your research integrity consultant how s/he reviews and verifies the clarity/accuracy of data collected by the students/trainees s/he supervises.

**Spring Semester 2012**

**Workshop 5: *Misconduct in Research & Creative Activities***  
**(Wednesday, January 18, 2012)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Research Misconduct](#)  
[Responding to Suspected Violations of Professional Standards](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[The Continuum from Research Integrity to Research Misconduct](#)

Pre-Workshop Tasks

- Consider for yourself who you would go to receive advice and assistance if you suspected another person of misconduct.
- Discuss with your research integrity consultant ways that it is appropriate to manipulate data and research/scholarly results in your discipline. Also discuss examples of manipulating data and research/scholarly results in your discipline that would NOT be proper.

**Workshop 6A: *Protecting Human Research Participants***  
**(Tuesday, January 31, 2012)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Human Participants and Animal Subjects in Research](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Protection of Human Subjects](#)

Pre-Workshop Tasks

- If your research involves human research participants, bring a copy of your IRB research protocol application if one has been submitted and/or approved.
- Discuss with your research integrity consultant the distinctions between the terms Confidential, Private, and Anonymous as they relate to human participant research in your discipline.
- If your research involves neither human research participants nor use of animals, discuss with your research integrity consultant a possible ethical dilemma you might face in research in your discipline.

**Workshop 6B: *The Care and Use of Animals in Research***  
**(Thursday, February 2, 2012)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Human Participants and Animal Subjects in Research](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Use of Animals at Michigan State University](#)

Pre-Workshop Tasks

- If your research involves animals, bring a copy of your IACUC research protocol application if one has been submitted and/or approved.
- Discuss with your research integrity consultant the distinctions between the terms Discomfort, Distress, and Pain as they relate to use of animals in research in your discipline.
- If your research involves neither human research participants nor use of animals, discuss with your research integrity consultant a possible ethical dilemma you might face in research in your discipline.

**Workshop 7: *Conflict of Interest, Peer Review, & Collaboration/Teamwork***  
**(Wednesday, February 22, 2012)**

Pre-Workshop Readings

- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
[Competing Interests, Commitments, and Values](#)
- MSU Research & Scholarly Integrity [Resources](#)  
[Collaborative Research](#)  
[Conflict of Interest](#)  
[Peer Review](#)

Pre-Workshop Tasks

- Decide for yourself the three most important issues that you would expect to be clarified when working on a collaborative research/scholarly project.
- Discuss with your research integrity consultant the three areas s/he sees as creating the greatest misunderstandings in research/scholarly collaborations.
- Consider and be prepared to discuss two ways that research/scholarship within your discipline might be biased by outside interests.