

Plan to train BMB research personnel (post-docs, grad students, and undergrads)
in the Responsible Conduct of Research

Goal: Develop a training program to educate all post-docs, graduate students, and undergraduate students in the Responsible Conduct of Research

Objectives:

- At the end of the program, all trained personnel will understand the guidelines and policies that govern Responsible Conduct of Research in the Department of Biochemistry and Molecular Biology at Michigan State University
- At the end of the program, personnel will carry out all research activities with an adherence to the highest standards of scientific integrity
- Develop a program that can effectively deliver relevant information with flexibility to be adjusted for specific research projects within the department

Subject Areas to cover:

- Data Acquisition, Management, Sharing and Ownership
- Conflicts of Interest and Commitment
- Human Subjects
- Animal Welfare
- Research Misconduct
- Publication Practices and Responsible Authorship
- Mentor / Trainee Responsibilities
- Peer Review
- Collaborative Science
- The scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research

Training Plan for Post-docs, undergraduate students, and research technicians

- Five hours of initial training:
 - One hour PI-led discussion covering:
 - Data Acquisition, Management, Sharing and Ownership
 - Publication Practices and Responsible Authorship
 - Mentor / Trainee Responsibilities
 - Lab-specific – Animal Welfare, Human Subjects and Peer Review
 - One hour of moderator-led training on:
 - Research Misconduct; focusing on falsification, fabrication, and plagiarism
 - Conflicts of Interest and Commitment
 - Publication Practices and Responsible Authorship
 - Peer Review

- Include the three hours of annual training
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 - One hour dedicated PI-led training covering:
 - Any changes in Animal Welfare or Human Subject issues in the lab
 - Review / New issues regarding Collaborative Science
 - Analysis of recent misconduct issues in the press
 - One hour cumulative discussion during the course of the year covering:
 - Mentor / Trainee responsibilities
 - Data Acquisition, Management, Sharing and Ownership
 - Peer Review of specific data and laboratory management issues to be conducted during the course of regular lab meetings
 - One hour to be selected from lab-specific and PI-recommended topics:
 - Attendance at moderator-led training
 - Completion of on-line training modules
 - Attendance at appropriate workshops

Training Plan for graduate students:

- First year: Complete four CITI Modules
 - Introduction to the Responsible Conduct of Research
 - Authorship
 - Plagiarism
 - Research Misconduct
- Year 2: Complete three additional CITI modules from the following list:
 - CITI Collaborative Research
 - CITC Conflicts of Interest
 - CITI Data Management
 - CITI Financial Responsibility
 - CITI Mentoring
 - CITI Peer Review
 - IACUC Tutorial for Animal Care Training (in <http://Train.ORA.msu.edu>)
 - Human Research Protection/ IRB Certification (in <http://Train.ORA.msu.edu>)
 - Rigor and Reproducibility Course
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- Year 3, 4, 5...Complete Annual Training. Starting in year 3, all doctoral students must complete 3 hours of annual training (see description above).
- All graduate students must complete a minimum of 6 hours of discussion-based training prior to receiving their degrees. These hours can be completed at any point in the graduate program,

including during the first 2 years (e.g., as part of a course), or as part of the ongoing training requirement (for doctoral students).

Documentation of training:

- When Graduate Students complete the CITI training in year 1 and year 2, their records will be automatically updated by MSU's Office of Research Compliance. Completion of the Annual Refresher Training and the six hours of cumulative training will be tracked by the BMB Department. The student must inform the BMB Graduate Director when these requirements are met.
- Undergraduates, Technicians, and Post-docs should go to the MSU Research Training and Tracking System:
<https://www.egr.msu.edu/secureresearchcourses/> to document completion of the Responsible Conduct of Research Training. You can login with your MSUNetID and Password.
 - Click on the **Create/Edit Trainee Account** tab in the upper left corner.
 - It will open to page where you will be instructed to create a new account. Choose the **College of Natural Science**
 - Select the Trainee Type
 - Select the Trainee Primary Department: **Biochemistry and Molecular Biology**
 - For the Faculty Advisor, enter your PI email name
 - Click **Save**
 - Click on the **Add Course From Primary College/Department** tab in the lower left corner
 - On the next page, in the ---**Select Training Description**— dropdown, select either **BMB Annual Training** or **BMB Initial Training**. In the number of hours box, indicate either **3** if you had selected Annual Training or **5** if you had selected Initial Training. For the training date write, **8/16/2016**. In the note box, you can write: **RCR Training for 2016-2017 Academic Year**.