

Resource Type	Resource Title	Description	Link
<p>Accounting a Reproducible researcher</p> <p>Responsible Conduct of Research (RCR) requires thorough and thoughtful consideration of topics from data integrity to human participants. In addition, rigor and reproducibility are critical to the future of research. These resources present case studies, debates, creativity exercises, and experimental application activities.</p>			
Training Module	NH Rigor and Reproducibility Training Modules	These modules, developed by NIH, focus on integral aspects of rigor and reproducibility in the research enterprise, such as data, sharing, and inclusion criteria.	https://www.nih.gov/extramural-activities/training-modules-for-human-researchers
Course	Let's Experiment: A Guide for Scientists Working at the Bench (Ethology)	"Let's Experiment" is a FREE 5-week online course designed to address the practical aspects of experimental design. Scientists from a variety of backgrounds (from concrete steps and advice to help you build a framework for how to design experiments.	https://courses.biology.upenn.edu/course/1180/section/1.1.1/CF/outline
Training Module	Improving Reproducibility in Research (Jason Carroll, Indiana University School of Medicine)	In order to promote better training and ensure the reliability and reproducibility of research, the group developed a series of webinars (theoretical, methodological aspects) targeted at graduate students, postdoctoral fellows, and emerging investigators that address critical features of experimental design and implementation.	https://www.msu.edu/div/evolution/teaching-modules-for-training-modules
Course	Controls in Animal Studies for Rigor and Reproducibility (Christina N. Bennett and Marina Luisa Maljars, American Physiological Society)	This teaching module was designed to help biomedical researchers understand the changing standards of practice for studies using animals as research models.	https://www.physiology.org/doi/10.1152/ajpcp.00000.2020
Training Module	Statistical Topics for Reproducible Animal Research (Kristina W. Brown and David S. Wilson, Indiana University School of Public Health Bloomington)	A series of animal research with quantitative experts and faculty identified discussing aspects of study design, interpretation, and reporting.	https://www.indiana.edu/content/indiana-edu-2020-07-14-01
Tutorial	Improving Reproducibility of Computational Microbiology Analyses (Patrick Schoen, University of Michigan School of Medicine)	A series of 6 tutorials on improving the reproducibility of data analysis for those doing microbial ecology research.	https://www.umich.edu/research/teaching-research
Course	edX Course: Principles, Statistical and Computational Tools for Reproducible Science (Xihong Lin, Harvard School of Public Health)	This free course covers fundamentals of reproducibility science, case studies, data provenance, statistical methods, for reproducible science, computational tools for reproducible science, and reproducible reporting science.	https://www.edx.org/course/principles-statistical-computational-tools-reproducible-science
Webinars	Society for Neuroscience Rigor and Reproducibility Training Webinars (Mindy McCann-Elliott, Rutgers University; Cheryl Dink, Michigan State University)	SNFHR partnered with NIH and leading neuroscientists who are devoted to the field of scientific rigor to offer the series, Promoting Awareness and Knowledge to Enhance Scientific Rigor in Neuroscience as a part of SNFHR Training Modules to Enhance Data Reproducibility (TMEDR).	https://www.sfn.org/education/promoting-awareness-and-knowledge-to-enhance-scientific-rigor-in-neuroscience
Publications	ASPM Publications on Research Ethics	A collection of books, reports, articles, and editorials on research ethics from ASPM.	https://www.aspm.org/education/publications-ethics
Case Studies	Office of Research Integrity (ORI) "The Lab"	"The Lab: Academic Research Misconduct" You become the lead characters in an interactive movie and make decisions about integrity in research that can have long-term consequences. The animation addresses Responsible Conduct of Research topics such as avoiding research misconduct, meeting responsibilities, handling of data, responsible authorship, and questionable research practices.	https://ori.hhs.gov/the-lab/
Case Studies	Annual Review of Ethics (Case Studies)	Research Ethics Cases are a tool for discussing scientific integrity. Cases are designed to confront the readers with a specific problem that does not lend itself to easy answers.	https://www.sagepub.com/annual-review-of-ethics
Website	Electronic Lab Notebooks Comparison Grid	The Electronic Lab Notebook (ELN) feature has been created to aid Harvard researchers in the Longwood Medical Area (LMA) in the process of identifying practical ELN tools to meet their specific research needs. Using the ELN Matrix, researchers can compare and contrast the numerous tools available today, and also explore individual options in-depth.	https://lifespanmanagement.harvard.edu/department/lab-notebooks



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Many thanks to the following individuals and groups who have contributed greatly to this compilation of resources.

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