

IBIOLOGY IPERT COURSES FOR GRADUATE & POSTDOCTORAL TRAINING

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As part of the NIH Innovative Programs to Enhance Research Training (IPERT) award, iBiology is building a set of freely available online courses aimed at improving the training experience of life science graduate students and postdoctoral scholars. Using the Open EdX interactive hosting platform, which can be used for student certification, these video courses will include assessments, short answers, and case studies.

Our first project for this grant is to create a series of courses that help bioscience graduate students and postdocs “do great science.” This series will help PhDs and postdocs develop the skills and best practices to carry out a research project in a rigorous and productive manner. Emphasis will be placed on teaching reproducibility and transparency. The three courses will be broken down based on major course objectives:

- Planning your scientific journey (e.g., how to ask a scientific question; planning)
- Navigating your path to discovery (e.g., experimental design & execution, rigor & reproducibility)
- Communicating your discovery (e.g., preparing manuscripts & scientific storytelling)

We are about to release the beta test of the “Planning your scientific journey” course (June 5, 2017). In this section we will cover topics like the art of asking a scientific question, dealing with failure, the importance of planning (and individual development plans), among others. We have used an innovative documentary-style curriculum that is unlike any other online science course. Our course instructors are a diverse group of talented scientists that will help trainees navigate the most challenging aspects of conducting responsible and significant research projects. This course is fashioned to equip trainees with concrete tools and practical advice concerning developing a impactful and answerable scientific question while efficiently planning their journey ahead. At the end of this course trainees will be confident in their ability to articulate their scientific interests and motivations. They will be armed with an actionable plan that reflects their research, professional development, and self-care goals. And finally, they

will be empowered to have a productive conversation with their mentor about their interests and research plan.

About iBiology (<https://www.ibiology.org>)

iBiology's mission is to convey, in the form of open-access free videos, the excitement of modern biology and the process by which scientific discoveries are made. Our aim is to let you meet the leading scientists in biology, so that you can find out how they think about scientific questions and conduct their research, and can get a sense of their personalities, opinions, and perspectives. We also seek to support educators who want to incorporate materials that illustrate the process and practice of science into their curriculum. This project is made possible by the goodwill of many biologists who are committed to making their work broadly accessible and to conveying the excitement of biology to a worldwide audience. Started in 2006 by University of California, San Francisco and Howard Hughes Medical Institute investigator, Professor Ron Vale, iBiology has grown to include over 300 seminars and short talks by the world's leading scientists. iBiology is funded by the [National Science Foundation](#), the [National Institute of General Medical Sciences](#), and the [Lasker Foundation](#).