

Research Reproducibility 2020
Educating for Reproducibility: Pathways to Research Integrity

**BROAD ENGAGEMENT, COLLABORATION, AND TEACHING REPRODUCIBILITY
SKILLS IN BIOMEDICAL RESEARCH**

Dana Lapato⁽¹⁾ and Nina Exner⁽²⁾

⁽¹⁾*Virginia Commonwealth University*, Dana.Lapato@vcuhealth.org, ⁽²⁾nexner@vcu.edu

ABSTRACT

Background: This presentation will talk about our interdepartmental work to build awareness and practical skills for conducting reproducible and transparent research. We are a School of Medicine faculty member and a data librarian who collaborate on designing and organizing graduate-level courses and co-curricular events in support of our university Data Science Lab's mission to promote rigorous and transparent research. The VCU Data Science Lab teaches and advocates for computational thinking and reproducible analyses in research. To date, our university has the largest number of registered users on the Open Science Framework in the state of Virginia, and over 50 students have completed our graduate-level introductory data science course. A key part of our success is our interprofessional approach to data science and data management for reproducible science.

Case presentation: We will share three years of evolution of our collaboration. We will focus on the development of our Data Science I and II course series, open to all graduate students but with a content focus on the biomedical domain. These courses use hands-on R projects and guest lecture collaboration to give graduate students essential skills in data collection, processing, visualization, and analysis. We also will discuss our roles in other courses like MD/PhD rigor, reproducibility and transparency course and molecular genetics doctoral seminars. We will summarize our advocacy events such as Open Science Day; regional OpenCon presentations and our biomedically-focused ReproducibiliTea journal club.

Conclusions: Attendees will learn about specific issues that arise when working across subdisciplines of postgraduate biomedical students. Attendees also will hear the value of facing collaborative hurdles in order to create a more robust and successful partnership to advocate for and teach biomedical reproducibility.