BIOTRAIN 751 “The Responsible Scientist I”
Spring 2021

Course Director: Erika Crosby, Ph.D.
OBGE RCR/R&R Curriculum Manager
Email: erika.crosby@duke.edu
Phone: 919-684-6205

Day/time: Thursday, 5-6 pm
Location: Online

Overview:
This course is developed to engage Biomedical Ph.D. trainees in continued Responsible conduct of research, Rigor and Reproducibility RCR/R&R training, an emerging mandate from the National Institute of Health (NIH) and future requirement for NIGMS T32 Pre-Doctoral Training grants. The course is directed by the RCR Curriculum Manager in the Office of Biomedical Graduate Education (OBGE) in Duke School of Medicine and it is team-taught by faculty members from each SoM Ph.D. training program. The content is delivered as a combination of lectures, small group discussions and online based learning modules.

Course Requirements and Expectations:
This course will have a weekly assignment or meeting. While you will not receive a numeric grade, all modules must be completed and live class meetings attended. There will be a 1 missed class/assignment grace policy. If you miss 2 classes/assignments, you will be required to complete an additional RCR forum to receive credit for BIOTRAIN754. If you miss 3 or more classes or assignments, you will be required to retake the course next Spring. A reminder that this course is a REQUIREMENT for graduation. All assignments must be completed by the beginning of class the week after they are assigned. For example, the quiz for the online module listed on February 11th must be submitted by 5 pm on February 18th.

Sakai Site and Zoom Meetings:
All course materials, modules, video recordings, and zoom links will be available on the course Sakai site. During small group discussions it is highly encouraged that you have your camera on to help facilitate an open discussion. Please plan to mute your microphone when you are not actively speaking to cut down on background noise.

Tentative Schedule:
All asynchronous assignments should be completed prior to the next class meeting. Changes to the schedule are at the discretion of the course director.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topics/ Units</th>
<th>Delivery Methods</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Jan</td>
<td>Introduction to the Course, Material, and Instructors</td>
<td>Live zoom</td>
<td></td>
</tr>
<tr>
<td>4 Feb</td>
<td>Graduate student panel and small group discussions- Choosing a mentor/lab</td>
<td>Live zoom</td>
<td></td>
</tr>
<tr>
<td>11 Feb</td>
<td>Self-paced Sakai learning module: Communication style assessment</td>
<td>Sakai</td>
<td></td>
</tr>
<tr>
<td>18 Feb</td>
<td>Small Group led by SoM PhD Training Faculty: Communication styles and establishing expectations and goals for graduate school</td>
<td>Live zoom</td>
<td></td>
</tr>
<tr>
<td>25 Feb</td>
<td>Lecture (all): Best practices in data acquisition, record keeping, and transparency (pre-recorded)</td>
<td>Sakai</td>
<td></td>
</tr>
<tr>
<td>4 Mar</td>
<td>Self-Paced Sakai Learning Module and Assessment of Understanding: Blinding and Randomization; Record keeping</td>
<td>Sakai Mar 11, 5 pm</td>
<td></td>
</tr>
<tr>
<td>11 Mar</td>
<td>Small Group led by SoM PhD Training Faculty: Experimental design, sample size, and consideration of biological variables</td>
<td>Live zoom</td>
<td></td>
</tr>
<tr>
<td>18 Mar</td>
<td>Self-Paced Sakai Learning Module and Assessment of Understanding: Cell line authentication and socially responsible science</td>
<td>Sakai Mar 25, 5 pm</td>
<td></td>
</tr>
<tr>
<td>25 Mar</td>
<td>Small Group led by SoM PhD Training Faculty: Discussion of examples of bias, cherry-picking data, and best practices in data acquisition and analysis</td>
<td>Live zoom</td>
<td></td>
</tr>
<tr>
<td>1 Apr</td>
<td>Lecture (all): Reproducible Science and Scientific Misconduct: Discussion of STAP Stem Cell (pre-recorded)</td>
<td>Sakai</td>
<td></td>
</tr>
<tr>
<td>8 Apr</td>
<td>Self-Paced Sakai Learning Module and Assessment of Understanding: Research misconduct case studies</td>
<td>Sakai Apr 15, 5 pm</td>
<td></td>
</tr>
<tr>
<td>15 Apr</td>
<td>Small Groups led by SoM PhD Training Faculty: Discussion of Duke Potti Case: Lessons Learned about Research Oversight, Ethics, and Data Handling and Reproducibility</td>
<td>Live zoom</td>
<td></td>
</tr>
</tbody>
</table>

**Objectives & Student Learning Outcomes (SLOs):**

By the end of the course, participants will be able to demonstrate the following learning outcomes:

- **Objective 1:** Gain knowledge about the responsible conduct of research (RCR)
  
  - **SLO i:** Describe rules and policies for ethical research practices

- **Objective 2:** Be exposed to ethical decision making (EDM) in RCR
  
  - **SLO ii:** Identify an ethical question (ethical sensibility: is there an ethical dilemma?)
  
  - **SLO iii:** Know procedures for reporting and investigating research misconduct

- **Objective 3:** Exhibit moral courage
  
  - **SLO iv:** Understand that knowing what to do does not equal moral courage
Objective 4: Demonstrate Integrity

SLO v: Know the importance of character and being honest and fair

Disability Statement:
Students with disabilities who believe that they may need accommodations in the class are encouraged to contact the Office of Services for Students with Disabilities at 684-5917 or disabilities@aas.duke.edu as soon as possible to better ensure that such accommodations are implemented in a timely fashion.

Academic Integrity:
Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and non-academic endeavors, and to protect and promote a culture of integrity. To uphold the Duke Community Standard:

- The student will not lie, cheat, or steal in their academic endeavors;
- The student will conduct themself honorably in all their endeavors; and
- The student will act if the Standard is compromised.

Students should also read the Duke policy on Academic Dishonesty at https://studentaffairs.duke.edu/conduct/z-policies/academic-dishonesty