

## Establishing a Thriving Research Program Spring 2025

### **Course Directors**

Graeme Mason, PhD, Professor of Radiology and Biomedical Imaging and of Psychiatry

Rajita Sinha, PhD, Foundations Fund Professor of Psychiatry and Professor in the Child Study Center and of Neuroscience

### **Course Objectives:**

The goal of the course is to provide participants with the practical skills necessary to become successful Physician-Scientists and Scientists in academia. Additionally, the course will be a great venue to network with other trainees who are in a similar career stage.

### **Textbook**

None; Scientific, business and management articles and papers will be assigned. Within each module, relevant sections will address effective strategies in leading a research team, manage collaborations, and carry out team science.

### **Objectives**

At the end of the course, attendees should understand

- 1) How to write and manage a Human Subjects research protocol with respect to Institutional Review Board (IRB) requirements.
- 2) How to write and manage an Animal research protocol with respect to Institutional Care and Use Committee (IACUC) requirements.
- 3) Effective strategies in leading a research team.
- 4) Funding strategies to sustain an academic research laboratory.
- 5) Financial management of an academic research laboratory.
- 6) Different types of NIH research grants and how to write them.
- 7) Optimal approaches to personnel recruitment, assessment, and supervision.
- 8) Principles of mentoring students and postdoctoral trainees.
- 9) Principles of time management.
- 10) Management of collaborations, with particular attention to interdisciplinary research and team science.
- 11) Rigor and Reproducibility in Experiment Design.
- 12) The importance of diversity in a research team
- 13) Developing data management and sharing plans
- 14) Faculty Appointments
- 15) Opportunities outside of academia
- 16) How to make effective poster presentations, 10-minute oral presentations, and 20-40 minute lectures.

| Date      | Room            | Time        | Presenters                             | Topic                                     |
|-----------|-----------------|-------------|--|---|
| 4/15/2025 | BCMM<br>206/208 | 9:45-10:00  | Rajita Sinha; Graeme Mason             | Introduction                              |
|           |                 | 10:00-11:00 | Graeme Mason                           | General Principles of Grant Writing       |
|           |                 | 11:00-12:00 | Jennifer Edelman                       | Reviewing and Writing NIH Grant Proposals |
|           |                 | 12:00-1:00  | Jennifer Edelman; Rajita Sinha; Graeme | Discussion                                |

|           |                            |             |  |  |
|-----------|----------------------------|-------------|--|--|
|           |                            |             | Mason  |  |
| 4/22/2025 | BCMM<br>206/208            | 10:00-11:00 | Robin de Graaf                                   | Dissemination-Presentations  |
|           |                            | 11:00-12:00 | Andres Martin                                    | Just Do It! Writing, Submitting, Revising, and Yes: Getting Published                |
|           |                            | 12:00-1:00  | Robin de Graaf; Andres Martin                    | Discussion   |
| 4/29/2025 | Beaumont<br>SHM L-<br>221A | 10:00-11:00 | Douglas Rothman                                  | Negotiating a Start up Plan  |
|           |                            | 11:00-12:00 | Rajita Sinha, Graeme Mason                       | Management of Laboratory Resources, Finances, and Personnel                          |
|           |                            | 12:00-1:00  | Douglas Rothman, Rajita Sinha, Graeme Mason      | Discussion   |
| 5/6/2025  | SHM I-116                  | 10:00-11:00 | Aaron Kuan; Sarah Yip                            | Chalk Talks and Job Talks  |
|           |                            | 11:00-12:00 | Jonathan Grauer; Samuel Ball                     | Introduction to Faculty Appointments   |
|           |                            | 12:00- 1:00 | Kuan, Yip, Grauer, Ball                          | Discussion   |
| 5/20/2025 | BCMM<br>206/208            | 10:00-11:00 | Ralitza Gueorguiva                               | Grant Writing for Rigor and Reproducibility: a Statistician's Perspective            |
|           |                            | 11:00-12:00 |  |  |
|           |                            | 12:00-1:00  | Ralitza Gueorguiva                               | Discussion   |
| 5/27/2025 | Beaumont<br>SHM L-<br>221A | 10:00-11:00 | Rajita Sinha                                     | Your Research Identity, Reviews, Summaries, Abstracts and Dissemination              |
|           |                            | 11:00-12:00 | Marina Picciotto                                 | Lab Management: Supervision of Staff and Mentoring Students and Postdoctoral Trainee |
|           |                            | 12:00-1:00  | Rajita Sinha; Marina Picciotto                   | Discussion   |
| 6/3/2025  | BCMM<br>206/208            | 10:00-11:00 | Madelon Baranoski                                | Human Subjects Research Regulations  |
|           |                            | 11:00-12:00 | Brandon Dorry                                    | Navigating the Yale University IACUC and OARS  |
|           |                            | 12:00-1:00  | Madelon Baranoski, Brandon Dorry                 | Discussion   |
| 6/10/2025 | BCMM<br>206/208            | 10:00-11:00 | Sahar Usmani-Brown; SungKwon Kim                 | Careers in Industry  |
|           |                            | 11:00-12:00 | Darin Latimore                                   | How Will You Create an Inclusive Environment? rs in Industry                         |
|           |                            | 12:00- 1:00 | SungKwon Kim; Sahar Usmani-Brown; Darin Latimore | Discussion   |