FIRST-YEAR PhD STUDENTS

WHAT TO REGISTER FOR in FALL (all courses below are **REQUIRED):**

BSR1706	Neuro Core 1: Systems Neuroscience" (Aug-Oct)
BSR1705	Neuro Core 2: Cellular and Molecular Neuroscience" (Oct-Dec)
BSR1021	Responsible Conduct in Research
BSR4701*	Journal Club: Neuroscience
BSR4702*	Works-in-Progress: Neuroscience
BSR5701**	Seminar Series: Neuroscience
BSR2707	Techniques and Approaches in Neuroscience
BSR1715***	Modern Statistics for Modern Biology (*see Note*** *below*)
BSR1006	Laboratory Rotation

WHAT TO REGISTER FOR in SPRING (all courses below are **REQUIRED):**

BSR1707	Neuro Core 3: Behavioral and Cognitive Neuroscience (Jan-Mar)
BSR1708	Neuro Core 4: Pathophysiol of Neurol and Psych Disorders (Mar-May)
BSR6705	Neuro Core 5: Clinical Topics in Neuroscience" (*direct patient contact) (Apr)
BSR4701*	Journal Club: Neuroscience
BSR4702*	Works-in-Progress: Neuroscience
BSR5701**	Seminar Series: Neuroscience
BSR1022	Rigor and Reproducibility
BSR1007	Laboratory Rotation

***BIOSTATISTICS (must be completed in YEAR 1)**

While there are three first-year Biostats classes offered, **we prefer** that Neuroscience PhD students take BSR 1715 ("Modern Statistics for Modern Biology")—a course designed by three computational Neuroscientists and aimed at Neuroscience students. The course covers core probability, statistical inference, linear models, null hypothesis significance testing, bayesian parameter estimation, and other important topics. The course has lab simulations using R-programming. Students not familiar with R can take BIO6300 ("Intro to R-Programming) in the Fall (this would also count as an Advanced Elective), but this is optional—there is an R-programming "boot camp" in the first few weeks of the Biostats course as well.

Importantly, we do not feel that MPH0300 "Introduction to Biostatistics" is sufficient. It is too basic and too limited to be useful to Neuroscience students. Please do not register for this course.

There is another potential option that requires prior discussion with the Neuroscience MTA director as to its suitability in lieu of BSR1715. BIO6400 "Biostatistics for Biomedical Research" is taught in the **Fall**. This course is taught from the perspective of data-sets relevant to epidemiology/population genetics, so it may not in every instance be immediately relevant to neural data. A placement test is required (about 20-25 min long) testing concepts in calculus and algebra, or alternatively, you can provide evidence (your transcript or a Corsera course) that you have had calculus in the past 2-3 years.

This biostats preparatory course also has labs requiring R programming (or SAS, not recommended).

SECOND-YEAR PhD STUDENTS (all courses below are **REQUIRED**):

BSR6717	Neural Data Science (Fall)
BSR4701*	Journal Club: Neuroscience (Fall & Spring)
BSR4702*	Works-in-Progress: Neuroscience (Fall & Spring)
BSR5701**	Seminar Series: Neuroscience (Fall & Spring)
BSR8000	Independent Research (prior to completing your Thesis Proposal Exam)
OR	
BSR9000	Dissertation Research (after passing your thesis proposal exam) (10 credits)

Notes:
*BSR4701 and BSR4702 are required for all students to register for, and to attend, in their first two years of the program (regardless of when the thesis proposal exam is taken and passed, which is also during Year 2). Starting in Year 3, students are no longer required to register for, or to attend, these two courses. However, they remain optional for attending and presenting if desired (see course directors if interested).

BSR5701 is required for students to register for and attend, **each semester for all of the years in the program.

Advanced Classes (6 credits-worth are required). We require minimally 6-credits worth of Advanced classes, achieved by a combination of 4 required courses and (minimally) one additional elective course (s) that can be taken anytime during your graduate studies, from any MTA or program at Mount Sinai or any of our partner Institutions.

6-credits of Advanced Courses:
1. Techniques and Approaches in Neuroscience- BSR2707 (1 credit, required course in year 1).
2. Neural Data Science BSR6717 (2 credits, required course in year 2).
3. Principles of Writing Scientific Proposals- BSR3102 (1 credit, required course in year 2).
4. Effective Science Communication- BSR2705 (1 credit, required course in year 2 or later).
5. Your choice 1 (1 credit course)

Total = 6 credits

THIRD-YEAR PhD STUDENTS (need to maintain 9 credits/semester for full-time status)

BSR9000	Dissertation Research (Fall & Spring)
BSR5701	Seminar Series: Neuroscience (Fall & Spring)

Advanced Classes as needed

FOURTH-YEAR PhD STUDENTS

BSR9000	Dissertation Research (Fall & Spring)
BSR5701	Seminar Series: Neuroscience (Fall & Spring)

Advanced Classes as needed

FIFTH-YEAR PhD STUDENTS

BSR9000	Dissertation Research (Fall & Spring)
BSR5701	Seminar Series: Neuroscience (Fall & Spring)
BSR1023	Responsible Conduct in Research Refresher (fall) REQUIRED

The NIH mandates that all PhD students take an RCR refresher every four years, so students should

take this refresher course in their 5th year.

SIXTH-YEAR+ PhD STUDENTS

BSR9000 Dissertation Research (Fall & Spring)
BSR5701 Seminar Series: Neuroscience (Fall & Spring)

*****Note for students appointed to any of our T32 Training Grants.**

Our T32 training grants may have grant-specific course requirements as part of the funded training program. If you are appointed to any of these T32 grants, please check with the PI of the grant ensure you comply with any special requirements.