FIRST-YEAR STUDENTS

WHAT TO REGISTER FOR in FALL:

BSR1706 "Neuro Core 1: Systems Neuroscience" (Aug-Nov)
BSR1705 "Neuro Core 2: Cellular and Molecular Neuroscience" (Nov-Jan)
BSR1021 "Responsible Conduct in Research"
BSR4702 "Selected Topics in Neuroscience" (our weekly Journal Club/WIP)
BSR5701 "Translational Neuroscience Seminar series"
BSR2707 "Techniques and Approaches in Neuroscience"
BSR1006 Laboratory Rotation

WHAT TO REGISTER FOR in SPRING:

BSR1707 "Neuro Core 3: Behavioral and Cognitive Neuroscience"
BSR1708 "Neuro Core 4: Pathophysiology of Neurological and Psychiatric
                Disorders"
BSR6705 "Neuro Core 5: Clinical Topics in Neuroscience" (*direct patient contact)
BSR4702 "Selected Topics in Neuroscience"
BSR5701 "Translational Neuroscience Seminar series"
BSR1006 Laboratory Rotation
BSR1022 "Rigor and Reproducibility"

BIOSTATISTICS OPTIONS (should be completed in YEAR 1)

There are three options. Regardless of the option that you choose, Biostats should be completed in YEAR 1. Importantly, we do not feel that Option 1 adequately prepares Neuroscience students for rigorous statistical and quantitatively analytical principles needed to succeed in your research. Therefore, we urge students to follow **OPTION 2** or **OPTION 3**.

Option 1 (*NOT* recommended): MPH0300 "Introduction to Biostatistics". This course is taught in the **Fall**. There is no placement test requirement, and no prerequisites. There is a weekly statistical computing lab using SAS. It is too basic and too limited to be useful to Neuroscience students.

Option 2 BIO6400 "Biostatistics for Biomedical Research". This course is taught in the **Fall**. 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. It is a rigorous biostats preparatory course, with labs in R programming (or SAS, not recommended) that accompany the course. It is a great option if you have a decent-to-strong math background, and will set you up well for "Neural Data Science", a 2nd year, required advanced course taught by Mark Baxter and Erin Rich (see below).

Option 3 BIO1026 "Applied Biostatistics for Biomedical Research". This is a **SPRING** course; there is no placement test, but prerequisites include a working-level knowledge of algebra, and familiarity with logarithms and exponents (calculus is helpful, but not

required). Additionally--and importantly--students *must* be familiar with programming in R, Python or MATLAB as a prerequisite. If you have programming skills in any of these, you can take BIO1026 directly in the Spring. If you do not, then you can first take either BIO6300 ("Intro to R-Programming) or BMI1007 ("Computer Systems: Intro to Scientific Programming in Python) in the FALL semester. For students picking this 2-course option (an Intro programming course in the Fall, BIO1026 stats in the Spring), we recommend taking BIO6300. The R-programming skills will be directly relevant to "Neural Data Science" in Year 2, which is R-programming based.

SECOND-YEAR STUDENTS (and later years)

Requirements for year 2+ students are listed below, and includes *Neural Data Science* in the Spring of Year 2. Neural Data Science *is required* of all Neuroscience PhD students. Additionally, for year 2 students (or later), minimally two *Advanced Electives* are required which can be fulfilled at any time from Year 2 onwards. Note carefully that some advanced electives are taught every-other-year. Students can take any Advanced elective courses offered by the Institution, from any MTA (but please check for any prerequisites).

Both Fall and Spring, all years:

BSR4702 "Selected Topics in Neuroscience"
BSR5701 "Translational Neuroscience Seminar series"
BSR8000 "Independent Research" (prior to your Thesis Proposal Exam), or BSR9000 "Dissertation Research" after successfully passing your thesis proposal exam but before your thesis defense.

Spring (Year 2):

BSR6717 "Neural Data Science" (required)