

Neuroscience ILM Advising Sheet (Updated Fall 2019)

Date: _____

Student Name _____

When Declared Neuro ILM _____ *If not declared yet – please do ASAP (can declare as freshman)*

Primary Major _____

Currently approved majors are: Biology, Biochemistry, **Biotechnology, **Chemistry, Communications Sciences & Disorders, *Computer Science, Linguistics, Philosophy, Psychology, **Public Health, **Nutrition, Bioengineering or Chemical Engineering. Other combinations may be petitioned. If you are student in a major not listed above, please contact Dr. Kate Lewis (kelewi02@syr.edu)

Planned graduation semester and year _____

Plans to go abroad (if yes, when)? _____

To graduate with a degree in Neuroscience you MUST:

- EARN A MINIMUM GRADE OF **B-** IN BOTH BIO 211 AND PSY 223
- HAVE A **CUMULATIVE GPA OF 3.0** FOR THE FULL 24 CREDIT HOURS

Course Requirements (24 credit hours):

| Semester/Year Planned | Course | Credits | Offered | Prerequisites |
|---|---|---------|--|--|
| | BIO/NEU 211-Introduction to Neuroscience | 3 | F,SP | None |
| | PSY /NEU 223-Intro to Cognitive Neuroscience | 3 | F, SP | PSY 205 or 209 |
| | PSY/NEU 322-Cognitive Psychology OR COG/NEU 301-Intro to Cognitive Science | 3 | F,SP F (Annually) | PSY 205 or 209 |
| | CSD/NEU 409-Cognitive Neuroscience of Speech & Language | 3 | Currently F,SP (May return to SP ONLY) | None |
| | BIO/NEU 407-Advanced Neuroscience | 3 | SPRING ONLY | BIO/NEU 211, PSY/NEU 223 |
| | NEU 496-Neuroscience in the Arts, the Sciences & Society | 3 | Currently F,SP (May return to F ONLY) | BIO/NEU 211, PSY/NEU 223 Ideally, all other required entry and core courses Seniors given priority |
| Choose 2 elective courses from the list below that are OUTSIDE your primary major (e.g. if you are a BIO major the electives can not be BIO classes)* | | | | |
| | | 3 | | |
| | | 3 | | |

Electives(Continued on next page)

| | | | |
|--|---|-----------------------|------------------------|
| BIOLOGY | * BIO 216/316 – Human Anatomy and Physiology I | F | BIO 121, 123, 124 |
| | BIO 326-Genetics | SP | BIO 121 & 123, CHE 106 |
| | BIO 327-Cell Biology | F | BIO 121 & 123, CHE 106 |
| | **** BIO 437-Developmental Neuroscience | F | BIO 326, 327 |
| | BIO 417-Animal Behavior & Evolutionary Biology Lab | F | BIO 345 or permission |
| | *** BIO 444 Neurotoxicology | F or S | BIO 211 |
| | *** BIO 443- Epigenetic Regulation of Gene Expression | F or S | BIO 326 and 327 |
| | *** BIO 416 Biology of Aging | F or S | BIO 327 or 355 |
| ** BIO 414 Brain and Behavioral Plasticity | F or S | BIO 326 or 327 or 355 | |

| | | | |
|--|---|----------------|--|
| CSD | CSD 315-Anatomy & Physiology of Speech & Hearing | F or SP | CSD 212 |
| | CSD 325-Fundamentals of Hearing Science | F or SP | CSD 212 |
| | CSD 345- Speech Science | F or SP | CSD 212 |
| | CSD 422-Development of Speech & Language | F or SP | None |
| | CSD 429-Basic Clinical Audiology | F or SP | None |
| Linguistics | LIN 301-Introductory Linguistic Analysis | F or SP | LIN 201 |
| | LIN 431-Phonological Analysis | F or SP | LIN 301 |
| | LIN 441-Syntactic Analysis | F or SP | LIN 301 |
| | LIN 451-Morphological Analysis | F or SP | LIN 301 |
| Mathematics | MAT 331 – First Course in Linear Algebra | F or SP | MAT 286 or 296 |
| | MAT 397-Calculus III | F or SP | MAT 296 with minimum grade C- |
| | MAT 485-Differential Equations & Matrix Algebra for Engineers | F or SP | MAT 397 |
| | ** MAT 521-Introduction to Probability & Statistics | F or SP | MAT 397 |
| Philosophy | PHI 375 – Philosophy of Biology: What Can Evolution Explain? | Irregularly | Any PHI or at least junior standing |
| | PHI 378-Minds & Machines | F or SP | Any PHI or at least junior standing |
| | PHI 373-Introduction to the Philosophy of Science | Irregularly | Any PHI or at least junior standing |
| | PHI 377-Philosophy of Psychology | Irregularly | Any PHI or at least junior standing |
| | ** PHI 376-Philosophy of Mind | Irregularly | Any PHI or at least Sophomore standing |
| | ** PHI 576 – Philosophy of Mind | Irregularly | PHI 301,376,377 or 378 |
| | * PHI 593- Ethics and Health Professions | Irregularly | None |
| Physics | * PHY 101- Major Concepts of Physics I | F or SP | None |
| | * PHY 102- Major Concepts of Physics II | F or SP | PHY 101 or 211 |
| | * PHY 211- General Physics I | F and SP | None |
| | * PHY 212 – General Physics II | F and SP | PHY (211 or 215) AND 211 |
| | PHY 307-Science & Computers I | F or SP | Coreq PHY 211 or PHY 215 |
| | PHY 408-Science & Computers II | Irregularly | PHY 307 |
| | PHY 315-Biological & Medical Physics | F or SP | PHY 212 or 216 |
| | PHY 360-Vibrations, Waves & Optics | F or SP | PHY 212 or 216 |
| | PHY 444-Soft Matter | Irregularly | |
| | PHY 531-Thermodynamics & Statistical Mechanics | F or SP | PHY 361 |
| Psychology | PSY 315-Drugs & Human Behavior | F/ SP | PSY 205 or 209 |
| | PSY 321-Sensation & Perception | F (odd years) | PSY 205 or 209 |
| | PSY 331 – Laboratory in Sensation and Perception | F (odd years) | PSY 205 or 209; Coreq: PSY 321 |
| | PSY 323-Brain & Behavior | Irregularly | PSY 205 or 209 |
| | PSY 324-Developmental Biopsychology | F or SP | PSY 205 or 209 |
| | PSY 334 – Developmental Biopsychology Lab | F or SP | PSY 205 or 209; Coreq: PSY 324 |
| | PSY 332- Laboratory in Cognitive Psychology | F or SP | PSY 205 or 209; Coreq: PSY 322 |
| | PSY 373-Human Memory | Irregularly | PSY 205 or 209; PSY 322 |
| | PSY 382-Health Psychology | Yearly | PSY 205 or 209 |
| | PSY 392-Stress & Health | Irregularly | PSY 205 or 209 |
| | PSY 426-Cognitive Neurochemistry | F (even years) | PSY 205 or 209 |
| | PSY 437-Cognition & Aging | Irregularly | PSY 205 or 209 |
| *** PSY 395 Abnormal Psychology | F/ SP | PSY 205 or 209 | |
| Biomedical & Chemical Engineering | BEN 364-Quantitative Physiology | F or SP | BEN 301 |
| | BEN 458-Biomedical Imaging | F or SP | None |
| | * BEN 201– Biological Principles for Engineers | F or SP | None |
| | * BEN 468 –Biomaterials and Medical Devices | F or SP | None |
| | * BEN 48 - Bioinstrumentation | F or SP | ELE 231 and 232 |
| | * BEN 465 - Biomechanics | F or SP | ECS 221 AND MAT 485 AND BEN 364 |
| Engineering & Computer Sciences | * CPS 196- Introduction to Computer Programming | F and SP | None |
| | * CSE 283 – Introduction to Object Oriented Programming | F or SP | ECS 102 |
| | ELE 351-System & Signal Analysis | F or SP | ELE 232 and MAT 296 |
| | ELE 352-Digital Signal Processing | F or SP | ELE 351 |

Substitutions to courses above can be submitted as petitions to the ILM committee on an individual basis. Petitions should be brought to Dr. Robin Jones via appointment (rljone02@syr.edu)

* **Students that matriculated before Aug 2019 need to petition to do these things.** (e.g. chose 2 electives not in the same subject area, take starred classes as an elective and/or combine Neuroscience with computer science (Petitions will be automatically granted as long as they are signed and filed).

** **Students that matriculated before August 2018 need to petition** (automatically granted as long as petition is signed and filed).

*** **Students that matriculated before August 2015 need to petition** (automatically granted as long as petition is signed and filed).

**** **Students that matriculated before August 2014 need to petition** (automatically granted as long as petition is signed and filed).