

Student Name: \_\_\_\_\_

Student Number: \_\_\_\_\_

Expected Graduating Term: \_\_\_\_\_

## Major Concentration in Neuroscience - 65 credits

### Required Courses (20 credits)

- |                          |                      |   |
|--------------------------|----------------------|---|
| <input type="checkbox"/> | BIOL 200             | Molecular Biology   |
| <input type="checkbox"/> | CHEM 212 (4 credits) | Intro Organic Chemistry 1 (If CHEM 212 is taken before start at McGill, students substitute elective) |
| <input type="checkbox"/> | NSCI 200             | Introduction to Neuroscience 1 (PHGY209)  |
| <input type="checkbox"/> | NSCI 201             | Introduction to Neuroscience 2 (PSYC308)  |
| <input type="checkbox"/> | NSCI 300             | <b>Neuroethics replace with one of: PHIL 306, PHIL 341, PHIL 221, PHIL 237</b>                        |
| <input type="checkbox"/> | PSYC 311             | Human Cognition and the Brain   |
| <input type="checkbox"/> | NSCI 400             | Neuroscience Seminar (1)  |

### Core Complementary Courses (9 credits)

- |                          |  |  |
|--------------------------|--|--|
| <input type="checkbox"/> | COMP 202 <b>OR</b> COMP 204                    | Foundations of Programming <b>OR</b> Computer Programming for Life Sci     |
| <input type="checkbox"/> | BIOL 373 <b>OR</b> PSYC 305 <b>OR</b> MATH 324 | Biometry <b>OR</b> Statistics for Experimental Design <b>OR</b> Statistics |
| <input type="checkbox"/> | MATH 222 <b>OR</b> BIOL 309 *See note below    | Calculus 3 <b>OR</b> Mathematical Models in Biology                        |

### Stream Courses (15 credits)

#### Stream A - Cell and Molecular

- |                          |                             |   |
|--------------------------|-----------------------------|---|
| <input type="checkbox"/> | BIOL 201 <b>OR</b> BIOC 212 | Cell Biology and Metabolism <b>OR</b> Molecular Mechanisms of Cell function |
| <input type="checkbox"/> | BIOL 202                    | Basic Genetics  |
| <input type="checkbox"/> | BIOC 311                    | Metabolic Biochemistry  |
| <input type="checkbox"/> | MIMM 214 <b>OR</b> PHAR 300 | Introductory Immunology: Elements of Immunity <b>OR</b> Drug Action         |
| <input type="checkbox"/> | PHGY 311                    | Channels, Synapses & Hormones   |

#### Stream B - Neurophysiology/Neural Computation

- |                          |                             |   |
|--------------------------|-----------------------------|---|
| <input type="checkbox"/> | BIOL 201 <b>OR</b> BIOC 212 | Cell Biology and Metabolism <b>OR</b> Molecular Mechanisms of Cell function |
| <input type="checkbox"/> | BIOL 306 <b>OR</b> PHGY 314 | Neural Basis of Behaviour <b>OR</b> Integrative Neuroscience                |
| <input type="checkbox"/> | PHGY 311                    | Channels, Synapses & Hormones   |

**AND** 6 credits from:

- |                          |                         |                                |                          |          |                           |
|--------------------------|-------------------------|--------------------------------|--------------------------|----------|---------------------------|
| <input type="checkbox"/> | ANAT 321                | Circuitry of the Human Brain   | <input type="checkbox"/> | MATH 223 | Linear Algebra            |
| <input type="checkbox"/> | BIOL 309*See note below | Mathematical Models in Biology | <input type="checkbox"/> | COMP 206 | Intro to Software Systems |
| <input type="checkbox"/> | MATH 222                | Calculus 3                     | <input type="checkbox"/> | COMP 250 | Intro to Computer Science |

#### Stream C - Cognitive/Behavioural

- |                          |                             |  |
|--------------------------|-----------------------------|--|
| <input type="checkbox"/> | PSYC 213                    | Cognition  |
| <input type="checkbox"/> | PSYC 318                    | Behavioural Neuroscience 2 *See note below                   |
| <input type="checkbox"/> | BIOL 306 <b>OR</b> PHGY 314 | Neural Basis of Behaviour <b>OR</b> Integrative Neuroscience |

**AND** 6 credits from:

- |                          |          |                              |                          |          |                        |
|--------------------------|----------|------------------------------|--------------------------|----------|------------------------|
| <input type="checkbox"/> | ANAT 321 | Circuitry of the Human Brain | <input type="checkbox"/> | PSYC 303 | Intro to Human Memory  |
| <input type="checkbox"/> | PSYC 302 | The Psychology of Pain       | <input type="checkbox"/> | PSYC 342 | Hormones and Behaviour |

**Note for BIOL 309:** Since course is not offered in Fall 2025, students can replace with Math 323, Math 222, Math 324, Math 315 even if substitution class is taken before or after Winter 2026. Cannot count replacement course toward more than one program requirement.

**Note for PSYC 318:** Since course is not offered in Winter 2026, students can replace with PSYC 315, PSYC 443, PSYC 303 or PSYC 342 to satisfy program requirements even if substitution class is taken before or after Winter 2026

**Other Complementary Courses** (21 credits, 15 of which must be at the 400- or 500-level)

Student take a minimum of 3 credits and a maximum of 16 credits from the following 4 courses:

- BIOL 301 Cell and Molecular Laboratory (4 credits)
- BIOL 389 Laboratory in Neurobiology (3 credits)
- NSCI 410 Independent Research 1 (6 credits)
- NSCI 420 Independent Research 2 (9 credits)

The remaining credits are chosen from the following courses:

**300-level courses:**

- |  |   |
|--|---|
| <input type="checkbox"/> ANAT 321 Circuitry of the Human Brain   | <input type="checkbox"/> MATH 324 Statistics                            |
| <input type="checkbox"/> BIOL 201 <b>OR</b> BIOC 212 Cell Biology & Metabolism/Mol Mech of Cell Function   | <input type="checkbox"/> MIMM 214 Intro Immunology: Element of Immunity |
| <input type="checkbox"/> BIOL 202 Basic Genetics   | <input type="checkbox"/> MIMM 314 Intermediate Immunology               |
| <input type="checkbox"/> BIOC 311 Metabolic Biochemistry   | <input type="checkbox"/> NEUR 310 Cellular Neurobiology                 |
| <input type="checkbox"/> BIOL 300 Molecular Biology of the Gene  | <input type="checkbox"/> PHAR 300 Drug Action                           |
| <input type="checkbox"/> BIOL 306 Neural Basis of Behaviour  | <input type="checkbox"/> PHGY 210 Mammalian Physiology 2                |
| <input type="checkbox"/> BIOL 307 Behavioural Ecology  | <input type="checkbox"/> PHGY 311 Channels, Synapses & Hormones         |
| <input type="checkbox"/> BIOL 320 Evolution of Brain and Behaviour   | <input type="checkbox"/> PHGY 314 Integrative Neuroscience              |
| <input type="checkbox"/> CHEM 222 Introductory Organic Chemistry 2 (4 cts)                                 | <input type="checkbox"/> PSYC 213 Cognition                             |
| <input type="checkbox"/> COMP 206 <b>OR</b> COMP 250 Intro to Software Systems / Intro to Computer Science | <input type="checkbox"/> PSYC 302 The Psychology of Pain                |
| <input type="checkbox"/> MATH 223 Linear Algebra   | <input type="checkbox"/> PSYC 315 Computational Psychology              |
| <input type="checkbox"/> MATH 315 Ordinary Differential Equations  | <input type="checkbox"/> PSYC 317 Genes and Behaviour                   |
| <input type="checkbox"/> MATH 323 Probability  | <input type="checkbox"/> PSYC 318 Behavioural Neuroscience 2            |
|  | <input type="checkbox"/> PSYC 319 Computational Models - Cognition      |
|  | <input type="checkbox"/> PSYC 342 Hormones and Behaviour                |

**400-/500-level courses:**

- |  |  |
|--|--|
| <input type="checkbox"/> BIOL 414 Invertebrate Brain Circuits and Behaviours | <input type="checkbox"/> PHGY 520 Ion Channels                               |
| <input type="checkbox"/> BIOL 506 Neurobiology of Learning                   | <input type="checkbox"/> PHGY 524 Chronobiology                              |
| <input type="checkbox"/> BIOL 530 Advances in Neuroethology                  | <input type="checkbox"/> PHGY 556 Topics in Systems Neuroscience             |
| <input type="checkbox"/> BIOL 532 Developmental Neurobiology Seminar         | <input type="checkbox"/> PSYC 410 Special Topics in Neuropsychology          |
| <input type="checkbox"/> BIOL 580 Genetic Approaches to Neural Systems       | <input type="checkbox"/> PSYC 427 Sensorimotor Behaviour                     |
| <input type="checkbox"/> BIOL 588 Molecular /Cellular Neurobiology           | <input type="checkbox"/> PSYC 433 Cognitive Science                          |
| <input type="checkbox"/> BMDE 519 Biomedical Signals and Systems             | <input type="checkbox"/> PSYC 443 Affective Neuroscience                     |
| <input type="checkbox"/> COMP 546 Computational Perception                   | <input type="checkbox"/> PSYC 444 Sleep Mechanisms and Behaviour             |
| <input type="checkbox"/> MATH 437 Math Methods in Biology                    | <input type="checkbox"/> PSYC 470 Memory and Brain                           |
| <input type="checkbox"/> MIMM 414 Advanced Immunology                        | <input type="checkbox"/> PSYC 502 Psychoneuroendocrinology                   |
| <input type="checkbox"/> MIMM 509 Inflammatory Processes                     | <input type="checkbox"/> PSYC 506 Cognitive Neuroscience of Attention        |
| <input type="checkbox"/> NEUR 502 Basic/Clinical Aspects of Neuroimmunology  | <input type="checkbox"/> PSYC 513 Human Decision-Making                      |
| <input type="checkbox"/> NEUR 503 Computational Neuroscience                 | <input type="checkbox"/> PSYC 514 Neurobiology of Memory                     |
| <input type="checkbox"/> NEUR 507 Topics in Radionuclide Imaging             | <input type="checkbox"/> PSYC 522 Neurochemistry and Behaviour               |
| <input type="checkbox"/> NEUR 550 Free Radical Biomedicine                   | <input type="checkbox"/> PSYC 526 Advances in Visual Perception              |
| <input type="checkbox"/> PHAR 562 Neuropharmacology                          | <input type="checkbox"/> PSYC 529 Music Cognition                            |
| <input type="checkbox"/> PHGY 425 Analyzing Physiological Systems            | <input type="checkbox"/> PSYT 455 Neurochemistry                             |
| <input type="checkbox"/> PHGY 451 Advanced Neurophysiology                   | <input type="checkbox"/> PSYT 500 Advances: Neurobiology of Mental Disorders |
| <input type="checkbox"/> PHGY 513 Cellular Immunology                        | <input type="checkbox"/> PSYT 522 Early Adversity, Development, and Health   |

Notes: