

# Memorandum

To: Faculty of Health Curriculum Committee  
From: Denise Henriques, Coordinator, Neuroscience Undergraduate Program  
Date: December 20, 2023  
Subject: Neuroscience Program – BIOL 2060 3.00

---

The Neuroscience major is a joint program offered by the Faculty of Health and the Faculty of Science. Students have the option to specialize in Neuroscience with a Biology major under the Faculty of Science or specialize in Neuroscience within the Psychology or Kinesiology and Health Science majors with the Faculty of Health.

The majors underwent an approval process, enabling students to satisfy the statistics requirement through the utilization of HH/PSYC 2021 3.00 (Statistical Methods I), HH/KINE 2050 3.00 (Analysis of Data in Kinesiology I), or SC/BIOL 2060 3.00 (Statistics for Biologists). The Faculty of Science incorporated SC/BIOL 2060 3.00 into the academic calendar as part of a curriculum revision.

In alignment with the Faculty of Science, the program now approves students in both the Faculty of Science and the Faculty of Health the option to fulfill the major's statistics requirement by completing any one of these specified statistical courses.



**Program:** Neuroscience (All streams)

**Degree Program:** Please Select Applicable Degree Program

**Specialized Honours**    Honours    Ordinary (90-credit)    Double Major    Major/Minor    Minor

Other:

**Effective Date: Fall 2024**

**Please note that only those fields applicable to the relevant program need to be completed.**

Current Calendar Copy  
(~~Strikethrough~~ items to be removed)

New Calendar Copy  
(Underline items to be added in revisions to existing programs)

**Major Requirements – Required Credits: 64**

- Complete all of the following

**Students must complete a minimum of 64 credits in neuroscience major.**

- Passed the following:
  - [SC/BIOL1000](#) - Biology I - Cells, Molecular Biology and Genetics (3.00)
  - [SC/BIOL1001](#) - Biology II - Evolution, Ecology, Biodiversity and Conservation Biology (3.00)
  - [HH/KINE3650](#) - Functional Neuroanatomy (3.00)
  - [HH/PSYC1010](#) - Introduction to Psychology (6.00)
  - [HH/PSYC3250](#) - Neural Basis of Behaviour (3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC1001](#) - Frontiers of Neuroscience (1.00)
  - Passed the following:
    - [SC/NRSC1001](#) - Frontiers of Neuroscience (1.00)
  - Note: HH/NRSC 1001 1.00 (cross-listed to: SC/NRSC 1001 1.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC2000](#) - Fundamental Molecular and Cellular Neuroscience (3.00)
  - Passed the following:
    - [SC/NRSC2000](#) - Fundamental Molecular and Cellular Neuroscience (3.00)
  - Note: HH/NRSC 2000 3.00 (cross-listed to: SC/NRSC 2000 3.00)
- Complete 1 of the following
  - Passed the following:

**Major Requirements – Required Credits: 64**

- Complete all of the following

**Students must complete a minimum of 64 credits in neuroscience major.**

- Passed the following:
  - [SC/BIOL1000](#) - Biology I - Cells, Molecular Biology and Genetics (3.00)
  - [SC/BIOL1001](#) - Biology II - Evolution, Ecology, Biodiversity and Conservation Biology (3.00)
  - [HH/KINE3650](#) - Functional Neuroanatomy (3.00)
  - [HH/PSYC1010](#) - Introduction to Psychology (6.00)
  - [HH/PSYC3250](#) - Neural Basis of Behaviour (3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC1001](#) - Frontiers of Neuroscience (1.00)
  - Passed the following:
    - [SC/NRSC1001](#) - Frontiers of Neuroscience (1.00)
  - Note: HH/NRSC 1001 1.00 (cross-listed to: SC/NRSC 1001 1.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC2000](#) - Fundamental Molecular and Cellular Neuroscience (3.00)
  - Passed the following:
    - [SC/NRSC2000](#) - Fundamental Molecular and Cellular Neuroscience (3.00)
  - Note: HH/NRSC 2000 3.00 (cross-listed to: SC/NRSC 2000 3.00)
- Complete 1 of the following
  - Passed the following:

- [HH/NRSC2100](#) - Systems, Behavioral, and Cognitive Neuroscience (3.00)
  - Passed the following:
    - [SC/NRSC2100](#) - Systems, Behavioral, and Cognitive Neuroscience (3.00)
  - Note: HH/NRSC 2100 3.00 (cross-listed to: SC/NRSC 2100 3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC2200](#) - Neuroscience Techniques (3.00)
  - Passed the following:
    - [SC/NRSC2200](#) - Neuroscience Techniques (3.00)
  - Note: HH/NRSC 2200 3.00 (cross-listed to: SC/NRSC 2200 3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC3000](#) - Molecular and Cellular Neurobiology (3.00)
  - Passed the following:
    - [SC/NRSC3000](#) - Molecular and Cellular Neurobiology (3.00)
  - Note: HH/NRSC 3000 3.00 (cross-listed to: SC/NRSC 3000 3.00)
- Complete 1 of the following
  - Complete 1 of the following
    - Passed the following:
      - [HH/NRSC4000](#) - Neuroscience Individual Research Project (6.00)
    - Passed the following:
      - [SC/NRSC4000](#) - Neuroscience Individual Research Project (6.00)
  - Complete 1 of the following
    - Passed the following:
      - [HH/NRSC4002](#) - Team Research Project (6.00)
    - Passed the following:
      - [SC/NRSC4002](#) - Team Research Project (6.00)
  - Note: HH/NRSC 4000 6.00 (cross-listed to: SC/NRSC 4000 6.00) or HH/NRSC 4002 6.00 (cross-listed to: SC/NRSC 4002 6.00)
- Complete 1 of the following
  - Passed the following:

- [HH/NRSC2100](#) - Systems, Behavioral, and Cognitive Neuroscience (3.00)
  - Passed the following:
    - [SC/NRSC2100](#) - Systems, Behavioral, and Cognitive Neuroscience (3.00)
  - Note: HH/NRSC 2100 3.00 (cross-listed to: SC/NRSC 2100 3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC2200](#) - Neuroscience Techniques (3.00)
  - Passed the following:
    - [SC/NRSC2200](#) - Neuroscience Techniques (3.00)
  - Note: HH/NRSC 2200 3.00 (cross-listed to: SC/NRSC 2200 3.00)
- Complete 1 of the following
  - Passed the following:
    - [HH/NRSC3000](#) - Molecular and Cellular Neurobiology (3.00)
  - Passed the following:
    - [SC/NRSC3000](#) - Molecular and Cellular Neurobiology (3.00)
  - Note: HH/NRSC 3000 3.00 (cross-listed to: SC/NRSC 3000 3.00)
- Complete 1 of the following
  - Complete 1 of the following
    - Passed the following:
      - [HH/NRSC4000](#) - Neuroscience Individual Research Project (6.00)
    - Passed the following:
      - [SC/NRSC4000](#) - Neuroscience Individual Research Project (6.00)
  - Complete 1 of the following
    - Passed the following:
      - [HH/NRSC4002](#) - Team Research Project (6.00)
    - Passed the following:
      - [SC/NRSC4002](#) - Team Research Project (6.00)
  - Note: HH/NRSC 4000 6.00 (cross-listed to: SC/NRSC 4000 6.00) or HH/NRSC 4002 6.00 (cross-listed to: SC/NRSC 4002 6.00)
- Complete 1 of the following
  - Passed the following:

- [HH/PSYC2021](#) - Statistical Methods I (3.00)
- Passed the following:
  - [HH/KINE2050](#) - Analysis of Data in Kinesiology I (3.00)

**12 credits selected from the list of courses in the chosen specialized stream - Systems Neuroscience Stream**

- Earned at least 12 credits from the following:
  - [HH/KINE3020](#) - Skilled Performance and Motor Learning (3.00)
  - [HH/KINE4225](#) - Principles of Neuro-motor learning (3.00)
  - [HH/KINE4226](#) - Principles of Neurorehabilitation (3.00)
  - [HH/KINE4240](#) - Applied Human Factors (3.00)
  - [HH/KINE4452](#) - Autonomic Function in Health and Disease (3.00)
  - [HH/KINE4500](#) - Neural Control of Movement (3.00)
  - [HH/PSYC3210](#) - Vision Science (3.00)
  - [HH/PSYC4215](#) - Neuroimaging of Cognition - fMRI methods (3.00)
  - [HH/PSYC4380](#) - Seminar in Neuroscience: Rhythms of the Brain (3.00)
  - [SC/BIOL3380](#) - Sensory Systems (3.00)
  - [SC/BIOL4380](#) - Systems Neuroscience (3.00)

**12 credits selected from the list of courses in each of the two alternative specialized streams with a minimum of 3 credits required from each stream.**

- Complete all of the following

**Molecular and Cellular Neuroscience Stream**

- Earned at least 3 credits from the following:
  - [HH/KINE3670](#) - Molecular and Cellular Neuroscience with Applications to Health (3.00)

- [HH/PSYC2021](#) - Statistical Methods I (3.00)
- Passed the following:
  - [HH/KINE2050](#) - Analysis of Data in Kinesiology I (3.00)
  - Passed the following:
    - [SC/BIOL2060](#) - Statistics for Biologists (3.00)

**12 credits selected from the list of courses in the chosen specialized stream - Systems Neuroscience Stream**

- Earned at least 12 credits from the following:
  - [HH/KINE3020](#) - Skilled Performance and Motor Learning (3.00)
  - [HH/KINE4225](#) - Principles of Neuro-motor learning (3.00)
  - [HH/KINE4226](#) - Principles of Neurorehabilitation (3.00)
  - [HH/KINE4240](#) - Applied Human Factors (3.00)
  - [HH/KINE4452](#) - Autonomic Function in Health and Disease (3.00)
  - [HH/KINE4500](#) - Neural Control of Movement (3.00)
  - [HH/PSYC3210](#) - Vision Science (3.00)
  - [HH/PSYC4215](#) - Neuroimaging of Cognition - fMRI methods (3.00)
  - [HH/PSYC4380](#) - Seminar in Neuroscience: Rhythms of the Brain (3.00)
  - [SC/BIOL3380](#) - Sensory Systems (3.00)
  - [SC/BIOL4380](#) - Systems Neuroscience (3.00)

**12 credits selected from the list of courses in each of the two alternative specialized streams with a minimum of 3 credits required from each stream.**

- Complete all of the following

**Molecular and Cellular Neuroscience Stream**

- Earned at least 3 credits from the following:
  - [HH/KINE3670](#) - Molecular and Cellular Neuroscience with Applications to Health (3.00)
  - [HH/KINE4230](#) - Neuronal development for activity and health (3.00)

- [HH/KINE4230](#) - Neuronal development for activity and health (3.00)
- [HH/KINE4505](#) - Neurophysiology of Movement in Health and Disease (3.00)
- [SC/BIOL4310](#) - Physiology of Circadian Timing (3.00)
- [SC/BIOL4370](#) - Neurobiology (3.00)

**Behavioural and Cognitive Neuroscience Stream**

- Earned at least 3 credits from the following:
  - [HH/KINE4210](#) - Disorders of Visual Cognition (3.00)
  - [HH/PSYC2220](#) - Sensation and Perception I (3.00)
  - [HH/PSYC2260](#) - Cognition (3.00)
  - [HH/PSYC3140](#) - Psychological Health, Distress, & Impairment (3.00)
  - [HH/PSYC3265](#) - Memory (3.00)
  - [HH/PSYC3270](#) - Sensation and Perception II (3.00)
  - [HH/PSYC3495](#) - Neuroscience of Aging & Cognitive Health (3.00)
  - [HH/PSYC4080](#) - Neuropsychology of Abnormal Behaviour (6.00)
  - [HH/PSYC4260](#) - Seminar in Sensation and Perception (3.00)
  - [HH/PSYC4270](#) - Seminar in Memory and Cognition (3.00)
  - [HH/PSYC4360](#) - Visuospatial Memory and Goal-Directed Action (3.00)

**Alternative Specialized Streams**

- Completed at least 6 credits from the following types of courses:  
  
from the Molecular and Cellular Neuroscience Stream and /or Behavioural Cognitive Neuroscience Stream.

- [HH/KINE4505](#) - Neurophysiology of Movement in Health and Disease (3.00)
- [SC/BIOL4310](#) - Physiology of Circadian Timing (3.00)
- [SC/BIOL4370](#) - Neurobiology (3.00)

**Behavioural and Cognitive Neuroscience Stream**

- Earned at least 3 credits from the following:
  - [HH/KINE4210](#) - Disorders of Visual Cognition (3.00)
  - [HH/PSYC2220](#) - Sensation and Perception I (3.00)
  - [HH/PSYC2260](#) - Cognition (3.00)
  - [HH/PSYC3140](#) - Psychological Health, Distress, & Impairment (3.00)
  - [HH/PSYC3265](#) - Memory (3.00)
  - [HH/PSYC3270](#) - Sensation and Perception II (3.00)
  - [HH/PSYC3495](#) - Neuroscience of Aging & Cognitive Health (3.00)
  - [HH/PSYC4080](#) - Neuropsychology of Abnormal Behaviour (6.00)
  - [HH/PSYC4260](#) - Seminar in Sensation and Perception (3.00)
  - [HH/PSYC4270](#) - Seminar in Memory and Cognition (3.00)
  - [HH/PSYC4360](#) - Visuospatial Memory and Goal-Directed Action (3.00)

**Alternative Specialized Streams**

- Completed at least 6 credits from the following types of courses:  
  
from the Molecular and Cellular Neuroscience Stream and /or Behavioural Cognitive Neuroscience Stream.

**Grand Total Credit Count - 120**

**Grand Total Credit Count - 120**