

BSc HONOURS in Neuroscience

(66 credits)

CORE REQUIREMENTS (24 crs.)

- ☐ NEUR/PSYC 355 (Fund. Neuroscience) ☐ NEUR 356 (Research Methods in Neuroanatomy)
☐ PSYC 315 (Statistical Analysis I) ☐ PSYC 316 (Statistical Analysis II)
☐ PSYC 351 (Fundamentals of Learning) ☐ PSYC 364 (Fundamentals of Cognition)
☐ PSYC 495 (Honours Thesis 6.00 credits)

NEUROSCIENCE ELECTIVES REQUIREMENT (9 crs.)

- ☐ NEUR 451 (Learning & Neuroplasticity)
☐ _____ ☐ _____ [Choose 2 from below list]

PSYC 354, PSYC/NEUR 445, PSYC/NEUR 450, PSYC/NEUR 452, PSYC/NEUR 453, PSYC/NEUR 454, PSYC/NEUR 455, PSYC/NEUR 457.

INTERDISCIPLINARY FOUNDATIONS REQUIREMENT (21 crs.)

- ☐ BIOL 261 (Molecular & Gen. Genetics) ☐ BIOL 266 (Cell Biology) ☐ BIOL 364 (Cell Physiology)
☐ CHEM 221 (Intro Organic Chemistry I) ☐ CHEM 271 (Biochemistry I)
☐ _____ [BIOL 367 (Molecular Biology) or BIOL 368 (Genetics & Cell Biology Lab)]
☐ _____ [CHEM 212 (Analytical Chemistry for Biology & Environmental & Sustainability Science) or CHEM 217 (Intro Analytical Chemistry)]

NEUROSCIENCE INDIVIDUALIZATION REQUIREMENT (12 crs.)

12 credits selected from ANY of the Individualized Content Areas on the reverse page.

- ☐ _____ ☐ _____ ☐ _____ ☐ _____

Name: _____ Student id# _____

PROFILE

BIOL 201, CHEM 205 & 206,
MATH 203, 204, 205; PHYS 204, 224, 205, 225, 206 & 226

Refer to the [undergraduate calendar](#) for the year that you were admitted to your concentration for a full list of requirements and courses, especially section 31.250.

NON-NEUR ELECTIVE REQUIREMENT (24 crs.)

General Education Electives* (6 crs.): _____ ☐ _____ ☐

*[non-science](#) courses in Social Sciences, Humanities, Fine Arts, Gina Cody Sch., JMSB.

Outside NEUR electives (18 crs.)**

- _____ ☐ _____ ☐ _____ ☐
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** Courses chosen from any discipline except NEUR, BIOL, CHEM, PSYC.

FREE CHOICE COURSES***

Additional courses from any discipline to complete the minimum credits required for your degree. This includes the MEP or ECP requirement. It can also include extra 300/400-level NEUR and PSYC courses.

- ☐ 0 credits for 90-credit program; ☐ 18 credits for the 108 MEP;
☐ 30 credits for the 120 ECP

NEUROSCIENCE CORE COURSE STRUCTURE:

NEUR 355 Fund. of Neuroscience <i>(FORMERLY: PSYC 355, PSYC 358, BIOL 383)</i> <i>(PREREQ: BIOL 200, BIOL 201, BIOL 202)</i>	NEUR 356 Research Methods in Neuroanatomy <i>(PREREQ: NEUR 355 & PSYC 315)</i>	PSYC 315 Statistical Analysis I <i>(PREREQ / CO-REQ: PSYC 310 OR NEUR 356)</i>	PSYC 316 Statistical Analysis II <i>(PREREQ: PSYC 310/NEUR 356; PSYC 315).</i>	PSYC 351 Fund. of Learning <i>(FORMERLY: PSYC346)</i> <i>(PREREQ: PSYC 310/NEUR 356)</i>	PSYC 364 Fund. of Cognition <i>(FORMERLY: PSYC352)</i> <i>(PREREQ: PSYC 310/NEUR 356)</i>
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NEUROSCIENCE ELECTIVES	INTERDISCIPLINARY FOUNDATIONS	INDIVIDUALIZED CONTENT AREAS
PSYC 354: Evolutionary Foundations of Psychology (FORMERLY: PSYC398) (PREREQ: NEUR 356 or PSYC 310) ----- PSYC 445 Human Neuropsychology (FORMERLY: PSYC359) (PREREQ: NEUR 356 or PSYC 310, PSYC 315, PSYC/NEUR 355) ----- PSYC/NEUR 450: Neurobiology of Drug Abuse & Addiction (FORMERLY: PSYC361, PSYC 450) (PREREQ: NEUR 356 or PSYC 310, PSYC 315, PSYC 355/NEUR 355) ----- NEUR 451 Learning & Neuroplasticity (PREREQ: NEUR 356 or PSYC 310, PSYC 316, and PSYC 351) ----- PSYC/NEUR 452 Neurobiology of Sensation & Perception (FORMERLY: PSYC365, PSYC 452) (PREREQ: NEUR 356 or PSYC 310; PSYC 315; PSYC355/NEUR 355; and PSYC 363) ----- PSYC/NEUR 453 Neurobiology of Motivated Behaviour (FORMERLY: PSYC 367, PSYC450) (PREREQ: NEUR 356 or PSYC 310; PSYC 315; PSYC355/NEUR 355) ----- PSYC/NEUR 454: Hormones & Behaviour (FORMERLY : PSYC369, PSYC 454) PREREQ: NEUR 356 or PSYC 310; PSYC 315; PSYC355 or NEUR 355) ----- PSYC/NEUR 455 Neuropharmacology (FORMERLY: PSYC 455) (PREREQ: NEUR 356 or PSYC 310; PSYC 315; PSYC 354; PSYC 355/NEUR 355) ----- PSYC/NEUR 457 Foundations of Animal Behaviour (FORMERLY : PSYC396, 457) (PREREQ: NEUR 356 or PSYC 310; PSYC 315, PSYC 354, PSYC 355/NEUR 355) ----- PSYC/NEUR 458 Behavioural Neuroscience Advanced Issues (FORMERLY: PSYC398, PSYC 458) (PREREQ: Dept. permission) ----- NEUR 460 (labs) Neuroimaging (PREREQ: NEUR 356 or PSYC 310, PSYC 316, PSYC 364) ----- NEUR 495 (6 credits) Honours Thesis (PREREQ: NEUR 451 or NEUR 460, plus departmental permission)	BIOL 261 Molecular & General Genetics (FORMERLY: (PREREQ: BIOL 201, CHEM 205 & 206) BIOL 266 Cell Biology (PREREQ: BIOL 201, CHEM 205, & 206) BIOL 364 Cell Physiology FORMERLY: (PREREQ BIOL 266; CHEM 271) Biol 367 Molecular Biology FORMERLY: (PREREQ: BIOL 261; CHEM 271) Biol 368 Genetics & Cell Biology Lab FORMERLY: (PREREQ: BIOL 261, 266; CHEM 212) CHEM 212 Analytical Chemistry for Biology & Environmental & Sustainability Science (PREREQ: CHEM 205 & 206; PHYS 204, 224, 205, 225; MATH 205) CHEM 217 Intro Introductory Analytical Chemistry I FORMERLY: - PREREQ: CHEM 205, 206; PHYS 204, PHYS 206, PHYS 224, PHYS 226; MATH 203, MATH 205) CHEM 221 Intro Organic Chemistry FORMERLY: (PREREQ: CHEM 205 & 206) CHEM 271 Biochemistry I FORMERLY: (PREREQ: CHEM 221)	<u>Neuroscience content area:</u> NEUR 416 Large Data Analytics PSYC/NEUR 458 Neuroscience Advance Issues NEUR 460 Neuroimaging <u>Psychology content area:</u> PSYC 354 Evolutionary Foundations of Psychology PSYC 363 Fundamentals of Sensation & Perception PSYC 445 Human Neuropsychology PSYC 450 Neurobiology of drug Abuse & Addiction PSYC 452 Neurobiology of Sensation & Perception PSYC 453 Neurobiology of Motivated Behaviour PSYC 454 Hormones & Behaviour PSYC 455 Neuropharmacology PSYC 457 Foundations of Animal Behaviour PSYC 460 Vision PSYC 461 Computational Modeling of Human Cognition PSYC 462 Memory and Attention PSYC 463 Concepts and Categories PSYC 464 Judgement and decision Making PSYC 465 Language PSYC 466 Cognitive Development PSYC 467 Learning <u>Biology content area:</u> BIOL 367 Molecular Biology BIOL 368 Genetics and Cell Biology Laboratory BIOL 371 Microbiology BIOL 462 Immunology BIOL 466 Advanced Techniques in Molecular Biology BIOL 467 Advanced Cell Biology BIOL 474 Cellular Neuroscience <u>Chemistry content area:</u> CHEM 222 Introductory Organic Chemistry II CHEM 375 Biochemistry II CHEM 473 Protein-Protein Interactions CHEM 476 Structure and Function of Biomembranes CHEM 477 Advanced Laboratory in Biochemistry <u>HKAP content area:</u> EXCI 360 Neural & Hormonal Control of Human Systems EXCI 455 Physical Activity, Health & Aging EXCI 458 Pediatric Exercise Science EXCI 471 Pain Management Strategies <u>PHYS content area:</u> PHYS 443 Quantitative Human Systems Physiology PHYS 445 Principles of Medical Imaging

****All courses are 3 credits unless otherwise noted.**