

Core Psychology Course Requirements		
PSYC 111 – General Psychology		
<i>PSYC 111 is a pre-requisite for the PSYC 243 & most PSYC courses.</i>		
PSYC 243 – Statistical Analysis and Design (M)		
<i>PSYC 243 is a pre/co-requisite for the PSYC Foundational courses, and pre-requisite for PSYC 344.</i>		
PSYC 344 – Research Methods (W)*		
<i>PSYC 344 is a pre-requisite for the PSYC labs, and PSYC seminars. It cannot be taken concurrently.</i>		
PSYC 362 – Behavioral Neuroscience* (Need a C- or higher to count towards the major)		
Core Biology Course Requirements (Need a C- or higher to count towards the major)		
BIOL 113 – Intro to Cell & Molecular Biology		
BIOL 114 – Intro to Organisms and Pops Biology		
BIOL 115 – Intro Biology Lab		
Choose one of the following:		
<ul style="list-style-type: none"> • PSYC 327 – Evolution and Behavior* • BIOL 375 – Animal Behavior✓* 		<i>Due to significant content overlap, you will not receive credit if you take both (Harpur Rule)</i>
Core Chemistry Course Requirements (Need a C- or higher to count towards the major)		
Choose one of the following three options :		
Option 1:	Option 2:	Option 3:
CHEM 104 – Intro to Chemical Principles I, CHEM 105 – Intro to Chemical Principles II & CHEM 106 – General Chemistry Lab	CHEM 107 – Gen Chemistry I & CHEM 108 – Gen Chem II	CHEM 111 – Chemical Principles Pre-med and pre-health candidates should NOT take CHEM 111.
CHEM 231 – Organic Chemistry I		
CHEM 332 – Organic Chemistry II		
Elective Requirements (Need a D or higher to count towards the major)		
MATH/CHEM/PHYSICS Electives (6 credits)		
Related Subject Electives (4 credits)		
Type A Biology Electives (4 credits)		
Type B Biology Electives (4 credits)		
Psychology Electives (6 credits)		
Lab and Upper Level Requirements (Need a C- or higher to count towards the major)		
Three Labs (as indicated by the ✓ on page 2)		
<ul style="list-style-type: none"> • Must be 200-level or above • At least <u>one lab</u> needs to be in residence* • 4 credits of approved research can substitute one lab 		
16 credits - Upper Level (300+)		
<ul style="list-style-type: none"> • Core courses do not count (ex. PSYC 344) • 8 credits of approved research can count here (Integrative Neuroscience, Psychology, or Biology) 		
Approved IN Seminar		
Option 1: One approved 4 credit PSYC 473 or BIOL 483, OR		
Option2: <u>Two</u> approved BIOL 407 or BIOL 480 (2cr each)		
<ul style="list-style-type: none"> • The list of approved seminars changes each semester. See Integrative Neuroscience Advising for current list: www.binghamton.edu/integrative-neuroscience/courses.html 		



MATH/CHEM/PHYSICS ELECTIVES		
Course	Cr	Lab
CHEM 221 - Intro Analytic Chem	4	✓
CHEM 335 - Org Chem Lab	2	✓
CHEM 341 - Inorganic Chem	4	
CHEM 434 - Bioorganic Chem	4	
MATH 224 & 225 - Calculus I (both classes)	4	
MATH 226 & 227 - Calculus II (both classes)	4	
MATH 323 - Calculus III	4	
CS 140 - Programming w/ Obj.	4	
CS 240 - Data Structures	4	
PHYS 121 or 131 - Physics I	4	
PHYS 122 or 132 - Physics II	4	

RELATED SUBJECT ELECTIVES		
Course	Cr	Lab
AMS 121 - Medical Terminology	4	
ANTH 111 - Intro to Anthropology	4	
ANTH 168 - Intro to Biological Anthropology	4	
ANTH 242 - Biology, Culture, and Lifestyle	4	
ANTH 243 - Medical Anthro: Human Bio & Health	4	
ANTH 244 - Plagues, Culture, and History	4	
ANTH 247 - The Science of Skeletons	4	
ANTH 248 - Evolutionary Medicine	4	
ANTH 249 - Intro to Epidemiology & Biostats	4	
ANTH 330 - Neuroanthropology	4	
ANTH 333 - Human Genetics	4	
ANTH 334 - Comp. Aspects of Human Growth	4	
ANTH 335 - Human Origins	4	
ANTH 336 - Human Skeleton	4	✓
ANTH 337 - Human Biological Variation	4	
ANTH 338 - Survey of Primates	4	
BIOL 105 - Evolution for Everyone	4	
CS 105 - Intro to Computing	4	
CS 110 - Programming Concepts & Applications	4	
DIDA 325 - Data & Society	4	
GEOG 422 - Biogeography	4	
HIST 230 - History of Modern Medicine	4	
HIST 238 - Sci & Tech in the Modern World	4	
HWS 410 - Pathophys Nutrition Disease	4	
PHIL 121 - Methods of Reasoning	4	
PHIL 122 - Elementary Logic	4	
PHIL 148 - Medical Ethics	4	
SLP 408 - Anat & Phys of Speech/Lang/Hear	4	
SLP 414 - Intro Communication Disorders	4	
SLP 415 - Normal & Abnormal Spch & Lang Dev	4	

PSYCHOLOGY ELECTIVES		
Course	Cr	Lab
PSYC 220 - Developmental Psych (S)	4	
PSYC 223 - Behavior Disorders (S)	4	
PSYC 330 - Psychopharmacology (S)	4	
PSYC 350 - Human Memory	4	
PSYC 351 - Perception	4	
PSYC 352 - Perception Lab (C)	4	✓
PSYC 355 - Applied Behavioral Analysis Lab (C)	4	✓
PSYC 356 - Learning	4	
PSYC 357 - Learning Lab(C)	4	✓
PSYC 358 - Cognition	4	
PSYC 359 - Cognition Lab (C)	4	✓
PSYC 360 - Psychotherapy	4	
PSYC 363 - Behavioral Neuroscience Lab (C)	4	✓
PSYC 385 - Psychological Tests	4	
PSYC 473 - Additional Approved Seminar	4	
Research - PSYC 395/397/493/494/498/499 (see advisor)		

TYPE A or TYPE B BIOLOGY ELECTIVES		
Course	Cr	Lab
BIOL 251 - Anatomy & Physiology I	4	✓
BIOL 252/347 - Anatomy & Physiology II	4	✓
BIOL 324 - Tissue Biology	4	✓
BIOL 332 - Genetics	4	
BIOL 340 - Genetics Lab	4	✓
BIOL 430 - Animal Physiology	4	
BME 340 - Bioinformatics & Biostats	3	

TYPE A BIOLOGY ELECTIVES		
Course	Cr	Lab
BIOL 304 - Pre-Health Biochemistry	4	
BIOL 311 - Principles of Cell Biology	4	
BIOL 313 - Cellular Neurobiology	4	
BIOL 314 - General Microbiology	4	
BIOL 318 - Developmental Biology	4	
BIOL 319 - Pre-Health Microbiology	4	
BIOL 329 - Pre-Health Microbiology Lab	2	✓
BIOL/BCHM 401 - Molecular Genetics	4	
BIOL 402 - Immunology	4	
BIOL/BCHM 403 - Biochemistry	4	
BIOL 405 - Vertebrate Endocrinology	4	
BIOL 421 - Microbiology Lab	4	✓
BIOL/BCHM 425 - Molecular Biology Lab	2	✓
BIOL/BCHM 426 - Biochemistry Lab	2	✓
BIOL 427 - Cell Biology Lab	2	✓
BIOL 428 - Functional Genomics & Proteomics	4	✓
BIOL 407/480/483 - Additional Approved Seminar	2/4	
Research - BIOL 297/495/496/497/498 (see advisor)		

TYPE B BIOLOGY ELECTIVES		
Course	Cr	Lab
BIOL 351 - Mechanisms of Evolution	4	
BIOL 371 - Zoology	4	✓
BIOL 379 - Biology & Cons of Birds	4	✓
BIOL 437 - Biostatistics	4	
BIOL 451 - Current Topics in EvoS	2	
BIOL 475 - Entomology	4	✓
BIOL 480/483 - Additional Approved Seminar	2/4	
Research - BIOL 297/495/496/497/498 (see advisor)		

Important Notes for the Major:

- Due to significant overlap in course requirements, it is not possible to **double major** in Integrative Neuroscience and Psychology, Biology, Biochemistry, or Global Public Health: Future Healthcare Provider BS.
- **Grade Requirements:** Must earn a C- or higher in all core courses, except PSYC 111 & PSYC 243 (C or higher) to count towards the major. Need D or higher in electives.
- PSYC 397 can only be taken pass/fail.
- Some non-core courses can double or triple count towards the major. Ex) PSYC 352 = PSYC elective, lab and upper level.
- **Residency Requirement (*):** PSYC 344, PSYC 362, the seminar, one lab, either PSYC 327 or BIOL 375, and 3 additional courses of the students choosing must be taken at BU.
- **BIOL 451 can only count towards the major once.**
- See the Schedule of Classes for pre/co-reqs, & Gen-Ed attributes.

Integrative Neuroscience Advising:

www.binghamton.edu/integrative-neuroscience/advising/index.html