

Core Psychology Course Requirements		
PSYC 111 – General Psychology <i>PSYC 111 is a pre-requisite for the PSYC 243 & most PSYC courses.</i>		Need a C or higher to continue in the major
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>		Need a C or higher to continue in the major
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>		Need a C- or higher to count towards the major
PSYC 330 – Psychopharmacology* (Formerly Drugs & Behavior)		Need a C- or higher to count towards the major
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		
Core Chemistry Course Requirements (Need a C- or higher to count towards the major)		
Choose one of the following three options:		
Option 1: CHEM 104 – Intro to Chemical Principles I, CHEM 105 – Intro to Chemical Principles II & CHEM 106 – General Chemistry Lab	Option 2: CHEM 107 – Gen Chemistry I & CHEM 108 – Gen Chem II	Option 3: 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 Option 2: <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		
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	✓	
CS 105 - Intro to Computing	4		
CS 110 - Programming Concepts & Applications	4		
DIDA 325 - Data & Society	4		
GEOG 422 - Biogeography	4		
HARP 150 - Intro to Coding (Python)	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 327 - Evolution and Behavior (I)	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 375 - Animal Behavior (I)	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 IN Seminar	2/4		
Research - BIOL 297/495/496/497/498 (see advisor)			

Important Notes for the Major

- It is not possible to double major in Integrative Neuroscience and Psychology, Biology, Biochemistry, or Global Public Health: Future Healthcare Provider BS.
- **Grade Requirements:** To count towards the major, you must earn a C or higher in PSYC 111 & PSYC 243, a C- or higher in core courses, and a D or higher in electives.
- PSYC 397 can only be taken pass/fail.
- Some non-core courses can double/triple count towards the major. Ex) PSYC 352=PSYC elective, lab and upper level elective.
- **Residency Requirement*:** PSYC 330, PSYC 344, PSYC 362, the IN seminar, one IN lab, and three additional courses of your choosing must be taken at Binghamton.
- **BIOL 451 can only count towards the major once.**
- **(I)** You cannot take both BIOL 375 and PSYC 327.
- *Refer to the Academic Guide for more information.*

Integrative Neuroscience Advising:

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