

# University of Michigan - Department of Psychology

## Biopsychology, Cognition and Neuroscience (BCN) Major Worksheet

Effective Fall 2021 - present; updated on 12/11/24

- Students may declare the Psychology major once they have passed an Introductory Psychology course (with a "C" or better), Statistics 206/250/280 (with a "C-" or better, or Pass/P), and completed the online Pre-Major Tutorials at <https://lsa.umich.edu/psych/undergraduates/major-in-psychology-or-bcn/how-to-declare>.
- Courses that are graded "credit/no credit" may be used to satisfy the categorical requirement for a laboratory course, but do not count toward the 32 credits needed to complete the BCN major.
- All courses, with the exception of the Stats pre-requisite and non-graded research labs, must be taken for a letter grade.
- BCN majors are urged to consult with an advisor within the Department at least once per year to review their progress toward the major requirements.
- When taking a course that is crosslisted under multiple departments (i.e. PSYCH 240 / NEURO 240), you can register under EITHER department. It will count towards your major the same way, regardless.

### PRE-REQUISITES TO DECLARE THE MAJOR

Credits from pre-requisites do not count toward the 32 required major credits.

**Complete one Introductory Psychology Course (with minimum grade of "C"):**

	Grade	Credits	Term
AP credit for PSYCH 111 (score 4 or 5 on AP PSYCH exam)		4	
PSYCH 111 (Introduction to Psychology)		4	
PSYCH 112 (Introduction to Psychology as a Natural Science)		4	
PSYCH 114 (Honors Introduction to Psychology)		4	
PSYCH 115 (Honors Introduction to Psychology as a Natural Science)		4	

**Complete one Statistics Course (with a minimum grade of "C-" or Pass/P):**

AP credit for Stats 180 will not fulfill the Stats pre-req. Students with Stats 180 credit may take Stats 250 at UM to fulfill this requirement (but will lose their Stats 180 credit), or take Stats 280 at UM (without losing Stats 180 credit)

[Not sure which Stats course to take? Check out this guide!](#)

DATASCI 101 <i>formerly Stats 206/Datasci 101</i> (Introduction to Data Science) OR		4	
STATS 250 (Introduction to Statistics and Data Analysis)		4	
STATS 280 (Honors Introduction to Statistics and Data Analysis)		4	

### MAJOR REQUIREMENTS: 32 Credits Needed

**Complete three Gateway Courses:**

One course from each of the following three gateway/breadth groups must be completed. Additional breadth courses do not count towards the major credits.

**Biopsychology Gateway**

	Grade	Credits	Term
PSYCH 230 / NEURO 230 (Introduction to Behavioral Neuroscience)		4	

**Cognitive Psychology Gateway**

PSYCH 240 / NEURO 240 (Introduction to Cognitive Psychology)		4	
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**Breadth Gateway**

PSYCH 235 (Introduction to Evolution and Behavior) OR		4	
PSYCH 250 (Introduction to Developmental Psychology) OR		4	
PSYCH 270 (Introduction to Abnormal Psychology) OR		4	
PSYCH 280 (Introduction to Social Psychology) OR		4	
PSYCH 290 (Introduction to Personality Psychology) OR		4	
PSYCH 291 / WGS 291 (Introduction to the Psychology of Women)		4	

## BCN Lab Requirement

The lab requirement must be met in one of the following three ways for a minimum of 5 credits. Each course must be taken for at least 2 credits in a single term. At least one course must be within the Psychology Department (only one Bio-based lab may be used). It is recommended to complete the methods lab soon after completing the Stats pre-requisite, as methods labs build off of the foundation established in Stats. Students interested in research experience (e.g., PSYCH 326 or 331) should try to apply to labs no later than first semester of their junior year. Many labs do not accept seniors. To find research opportunities, visit:

<https://lsa.umich.edu/psych/undergraduates/research.html>

Option 1: One course from A (Methods Based Labs) AND one course from B (Experiential Labs)

Option 2: Two courses from A (Methods Based Labs)

Option 3: Honors Thesis or Senior Thesis sequence

### A – Methods-Based Labs

	Grade	Credits	Term
PSYCH 300 (Research Methods Psych NS Special Topics)		3	
PSYCH 302 / NEURO 302 (Research Methods in Cognitive Neuroscience)		3	
PSYCH 303 (Research Methods in Psychology)		3	
PSYCH 331 (Experiential Research Methods in Psychology) - by application; visit <a href="http://www.myumi.ch/Z6WDG">www.myumi.ch/Z6WDG</a> (case-sensitive link) previously titled Research Methods in BCN		4	
PSYCH 341 (Advanced Laboratory in Cognitive Psychology)		3	
PSYCH 342 (Research Methods in Human Electroencephalography)		3	
PSYCH 366 (Field Biology and Behavioral Methods)		3	
PSYCH 422 (Faculty Directed Advanced Research)		2 - 4	
PSYCH 423 (Faculty Directed Advanced Research/Upper Level Writing)		2 - 4	
PSYCH 451 (Advanced Research in Adolescent Psychology)		3	
BIOLOGY 226 (Animal Physiology Laboratory)		2	
EEB 381 (General Ecology)		5 - 6	
EEB 493 (Laboratory in Animal Behavior)		3	
MCDB 306 (Introductory Genetics Laboratory)		3	
MCDB 308 (Developmental Biology Laboratory)		3	
MCDB 423 (Introduction to Research in Cellular and Molecular Neurobiology)		3	

### B – Research/Experiential Labs

PSYCH 211 (Project Outreach - ONLY "Biopsychosocial Health" sections)		3	
PSYCH 226 (Undergraduate Research in Psychology - UROP)		2-4	
PSYCH 306 (Project Outreach Group Leading - ONLY "Biopsychosocial Health" sections) - by application; visit <a href="http://www.myumi.ch/xdxq1">www.myumi.ch/xdxq1</a>		3	
PSYCH 322* (Faculty Directed Research - C/NC)		C/NC	
PSYCH 326 (Faculty Directed Research - letter-graded)		2 - 4	
PSYCH 422 (Faculty Directed Advanced Research)		2 - 4	
PSYCH 423 (Faculty Directed Advanced Research - ULWR)		2 - 4	

\*Research-based labs that are graded Credit/No Credit may fulfill the categorical requirement for this lab; however, the credits do not count toward the 32 major credits.

## Psychology Thesis Sequence (optional)

The Senior and Honors thesis sequences are advanced research opportunities during the final two semesters. To be eligible, students must gain significant research experience prior to their final year. PSYCH 424 and 428 fulfill the experiential/research lab; PSYCH 426 and 429 fulfill the methods lab and ULWR. Interested students should consult with an advisor and view the website for more information:

<https://lsa.umich.edu/psych/undergraduates/honors-program/for-prospective-honors-students.html>

PSYCH 424 (Senior Honors Research I)		3 - 4	
PSYCH 426 (Senior Honors Research II - ULWR)		3 - 4	
PSYCH 428 (Senior Thesis: Research I)		3 - 4	
PSYCH 429 (Senior Thesis: Research II - ULWR)		3 - 4	

## BCN Cognate Requirement

One course from this list or a Psychology 300-400 level course (lect/sem) **not** on the BCN Advanced Course list (next page) is required.

	Grade	Credits	Term
Anatomy 403 (Human Anatomy: Structure and Function)		5	
Anthro 467 (Human Behavioral Ecology)		3 - 4	
Biolchem 415 / Biolchem 515 (Introduction to Biochemistry)		3	
Biology 205 (Developmental Biology)		3	
Biology 208 (Embryology)		3	

## BCN Cognate Requirement, Continued

	Grade	Credits	Term
Biology 222 (From Message to Mind: An Introduction to Neurobiology)		3	
Biology 225 (Principles of Animal Physiology: Lecture)		3	
Biology 305 (Genetics)		3	
CogSci 200 (Intro to Cognitive Science)		4	
EEB 381 (General Ecology)		5 - 6	
EEB (BIO) 390 (Evolution)		3	
EEB 440/Environ 442/EAS 442 (Biology of Fishes)		3	
EEB 442 (Biology of Insects)		5	
EEB 450 (Biology of Amphibians and Reptiles)		5	
EEB 451/Environ 451/EAS 451 (Biology of Mammals)		4	
EEB 481 (Population Dynamics and Ecology)		4	
EEB 492 (Behavioral Ecology)		4 - 5	
EECS 281 (Data Structures and Algorithms)		4	
EECS 492 (Introduction to Artificial Intelligence)		4	
LING 315 (Introduction to Syntax)		2 - 3	
LING 516 (Semantics and Pragmatics)		3	
MCDB 310 or 311 (Intro to Biochemistry) or Chem 351 (Fundamentals of Biochemistry)		4	
MCDB 418 (Endocrinology)		3	
MCDB 422 / NEURO 422 (Brain Development, Plasticity, and Circuits)		3	
Phil 340 (Minds and Machines)		4	
Phil 345 (Language and Mind)		2 - 3	
Phil 450 (Philosophy of Cognition)		3	
Phil 482 (Philosophy of Mind)		2 - 3	
Stats 401 (Applied Statistical Methods II)		4	
Stats 406 (Introduction to Statistical Computing)		4	

## BCN Advanced Course Requirement

Students must take at least 4 courses for at least 12 credits. 2 courses must be at the 300-level and one course at the 400-level. Note: PSYCH 420 may NOT be the only 400-level course. Courses in Psychology (upper level, 300+, lecture/seminar based) not on this list may be used to satisfy Cognate requirement. For a complete list of courses that count towards this requirement, view the term-specific course charts:

<https://lsa.umich.edu/psych/undergraduates/major-in-psychology-or-bcn/course-info.html>

	Grade	Credits	Term
PSYCH 330 / NEURO 330 (Topics in Biopsych)		3	
PSYCH 333 / NEURO 333 (Affective Neuroscience)		3	
PSYCH 334 (Neuroscience of Learning and Memory)		3	
PSYCH 335 / LING 336 (Reading: Language, the Brain, and Cognition)		3	
PSYCH 336 / NEURO 336 (Drugs of Abuse)		3	
PSYCH 337 (Hormones and Behavior)		3	
PSYCH 338 / Anthrbio 368 (Primate Behavior)		4	
PSYCH 339 / NEURO 339 (The Neuroevolutionary History of Homo Sapien; <i>formerly Biopsychology of Cooperation</i> )		3	
PSYCH 340 / NEURO 340 (Topics in CCN)		3	
PSYCH 343 (Cognitive Neuroscience of Learning and Memory)		3	
PSYCH 344 / ELI 351 / LING 351 (Second Language Acquisition)		3	
PSYCH 345 / NEURO 345 (Human Neuropsychology)		4	
PSYCH 346 (Learning and Memory)		3	
PSYCH 347 (Perception)		3	
PSYCH 348 (Psychology of Thinking)		3	
PSYCH 349 / LING 347 (Talking Minds)		3	
PSYCH 352 / LING 352 (Development of Language and Thought)		3	
PSYCH 355 (Cognitive Development)		3	
PSYCH 356 (Educational Psychology)		4	
PSYCH 358 (Psychology of Adolescence)		3	
PSYCH 359 (Psychology of Aging)		3	
PSYCH 363 (Human Cognitive Evolution)		3	
PSYCH 364 (Biopsychology of Sports)		3	
PSYCH 365 (Advanced Animal Behavior)		3	
PSYCH 402 (Special Topics in Psychology)		3	
PSYCH 413 (History of Modern Psychology)		3	
PSYCH 420 (Tutorial Reading/Independent Study)		2 - 4	
PSYCH 430 (Selected Topics in Biopsychology)		3	
PSYCH 431 (Selected Topics in Behavioral Neuroscience)		3	
PSYCH 432 (Selected Topics in Evolutionary and Comparative Psychology)		3	

## BCN Advanced Course Requirement, Continued

	Grade	Credits	Term
PSYCH 433 / NEURO 433 (Selected Topics in Neuroscience)		3	
PSYCH 434 / NEURO 434 (Neuroscience of Fear and Anxiety)		3	
PSYCH 435 / NEURO 435 (Neurobiology of Attention and Attention Disorders)		3	
PSYCH 436 / NEURO 436 (Sleep: Brain and Behavior, From Flies to Humans)		3	
PSYCH 439 / NEURO 439 (The Developing Brain)		3	
PSYCH 440 / NEURO 440 (Current Topics in Cognitive Neuroscience)		3	
PSYCH 442 / NEURO 442 (The Neuroscience of Perception)		3	
PSYCH 443 (Creativity)		3	
PSYCH 444 / LING 432 / COGSCI 432 / NEURO 432 (Intro to Neurolinguistics)		3	
PSYCH 445 / LING 447 (Psychology of Language)		3	
PSYCH 446 (Altruism)		3	
PSYCH 447 (Special Topics in Cognitive Psychology)		3	
PSYCH 448 (Mathematical Psychology)		3	
PSYCH 449 (Decision Processes)		3	
PSYCH 454 / NEURO 454 (Developmental Neuroscience)		3	
PSYCH 456 (Human Infancy)		3	
PSYCH 460 / AnthrBio 464 (Behavioral Biology of Women)		3	
PSYCH 461 (Animal Cognition)		3	
PSYCH 462 (Primate Communication and Language)		3	
PSYCH 463 / AnthrBio 463 / Environ 473 (Statistical Modeling and Data Visualization in R)		4	
PSYCH 464 (Mammalian Social Behavior)		3	
PSYCH 465 (Evolution and Human Nature)		3	
PSYCH 466 (The Origins of Moral Behavior)		3	
PSYCH 468 / Anthrbio 468 (Evolutionary Endocrinology)		3	
PSYCH 469 / Anthrbio 478 (Advanced Primate Behavior)		3	
PSYCH 476 (Inside the Criminal Mind: Neural, Genetic, & Environmental Contributions to Psychopathy, Violence, & Aggression across the Lifespan)		3	
PSYCH 478 Addictive Behaviors		3	

### Total Major Credits (32):

A minimum of 32 credits are required. The pre-requisite courses are not included in the total credits. If you have completed all the above coursework but have not reached 32 credits, you must complete additional BCN coursework at the 300-level or above until at least 32 credits are achieved. List additional coursework below.

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### BCN GPA Requirement

Must earn a cumulative grade point average (GPA) of at least 2.0 in ALL courses taken within the Psychology Department, as well as any non-PSYCH courses that are counting towards the major. Stats 250 is not included in the major GPA. Transfer courses are not calculated into the GPA unless the grade appears on the official UM transcript. Once you have declared, your major GPA can be viewed through your LSA Audit Checklist:

<https://myadvising.lsa.umich.edu/audit-checklist>

Major GPA = Major MHP / MSH = _____ / _____ =			
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## BCN MAJOR QUICK FACTS

- ▶ Get involved in **Research!** If you are planning on attending any type of graduate program, especially within the field of Psychology, you will need research experience. You can do this for research-based lab credit. Visit <http://lsa.umich.edu/psych/undergraduates/research> for more info.
- ▶ **Transfer courses** may be applied toward your major, but at least 24 credits must be completed in-residence through the University of Michigan's Department of Psychology (includes pre-requisite and major credits). Of those 24 credits, at least 12 credits must be in upper level courses (300+, letter graded) in Psychology. Visit <https://lsa.umich.edu/psych/undergraduates/transfer-credit> for more information.
- ▶ **Registration Tip:** If courses are closed:
  - Watch Wolverine Access for openings and/or waitlists
  - Attend first day of class and speak with the GSI or Professor (If class has a discussion section, you must get permission from the GSI to be enrolled in the section, then you will automatically be enrolled in the corresponding lecture.)
- ▶ **Middle Digit Trick:** The middle digit of Psychology Department undergraduate courses indicates the area of PSYCH with which the course is associated, with some exceptions:
 

0, 1, 2=General	6=Evolution & Behavior
3=Biopsychology	7=Clinical
4=Cognitive	8=Social
5=Developmental	9=Personality