NEUROSCIENCE, COMPREHENSIVE MAJOR

Liberal Arts (Code 445-001)

University Requirements

GRADUATION REQUIREMENTS FOR BACCALAUREATE DEGREE

Credit Requirements	
Minimum total for graduation [1]	120
Upper division credits (courses numbered 300 and higher)	39
Liberal Education Core (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header1)	36
Academic Concentrations (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header16)	
Grade Point Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header14) [2]	
Total	2.00 average
Resident	2.00 average
Major	2.00 average
Minor	2.00 average
Certificate	2.00 average
University Residency Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header15)	
Minimum total	30
Senior year	23
Major, Standard, upper division in residence	12
Major, Comprehensive, upper division in residence	21
Certificate	25 percent of credits
Procedures Required for Graduation	
Obtain admission to the degree program and/or the College offering it.	
Apply for graduation on CampS.	

[1] Certain programs exceed this minimum.
[2] See special requirements in each College.

Applicability of Credits Toward Graduation

Junior College or Two-Year College Credits. A maximum of 72 semester credits earned in a junior college or two-year college will be accepted as degree credits at UW-Eau Claire.

Extension Credits. Credits earned in credit outreach courses offered by UW-Eau Claire are treated as resident credits. Credits earned in extension courses offered by other units of the University of Wisconsin System are treated as transfer credits. All other (non-UW) extension and correspondence credits are normally limited to one-fourth of the total required for graduation from any curriculum.

WTCS Credits. A maximum of 72 semester credits earned in college parallel programs at Madison Area Technical College, Milwaukee Area Technical College, Nicolet Area Technical College, or Chippewa Valley Technical College may be accepted as degree credits at UW-Eau Claire. A set number of general education courses will be accepted from other technical schools. Occupational and technical courses may also be considered for transfer if the quality and content of the course work from the technical college is judged to be comparable to course work at UW-Eau Claire. Refer to the Transfer Credit Wizard (https://my.uwec.edu/psp/PUBLIC/EMPLOYEE/HRMS/c/EAU_SS_CUSTOM.EAU_TRNCRDWZ.GBL) or contact the UW-Eau Claire Admissions Office for information about the current transfer policy.

USAFI Credit. UW-Eau Claire will accept up to 32 semester credits for work done through the United States Armed Forces Institute, under the provision for non-UW correspondence credit (see Extension Credits above).

Activity Credit (band, chorus, drama, KINS 100-184 courses) Students may count toward graduation no more than one credit of KINS 110-184 courses. Students may count toward graduation no more than four credits earned in any single activity course and no more than 12 credits resulting from any combination of activity courses (excluding KINS 110-184 courses).

Other Restricted Credits. For other University restrictions, see the following: Cooperative Education; Credit by Examination; Satisfactory/Unsatisfactory Registration; Transfer of Credits. College or departmental restrictions may also be placed on Independent Study (399-499 courses), Directed Study (395-495), and other types of credits.

APPLICABILITY OF CREDITS TOWARD GRADUATION	**Credit Restrictions**
Satisfactory/Unsatisfactory	
Total degree credit	maximum 12
Major, Standard	maximum 1 course
Major, Comprehensive	maximum 2 courses
Minor	maximum 1 course
Credit by Examination	
Total degree credit	maximum ¼ of total
Major or minor	maximum ½ of total
Two-Year College Credits	
Total degree credit	maximum 72 credits
Activity credit (band, chorus, drama, KINS 100-184)	
Total KINS 100-184	maximum 1 credit
Total Band, chorus, drama	maximum 12 credits
Single course band, chorus, drama	maximum 4 credits
Extension credits	
UW-System	no maximum
Other extension/correspondence	maximum ¼ of total
USAFI	
USAFI	maximum 32 credits

Liberal Education Core

The University of Wisconsin-Eau Claire measures learning outcomes to ensure that its graduates have achieved a liberal education and prepared themselves

to contribute to a complex society. Upon graduation, each undergraduate will have met the five learning goals of our liberal education core and the 12 learning outcomes they comprise.

LIBERAL EDUCATION CORE REQUIREMENTS	a minimum of 36 credits
Knowledge Goal	
Knowledge Outcome 1 (K1): Natural Sciences (http://catalog.uwec.edu/undergraduate/attribute-k1/)	Two (2) learning experiences
One experience in laboratory science must be selected from either K1 or K2.	
Knowledge Outcome 2 (K2): Social Sciences (http://catalog.uwec.edu/undergraduate/attribute-k2/)	Two (2) learning experiences
One experience in laboratory science must be selected from either K1 or K2.	
Knowledge Outcome 3 (K3): Humanities (http://catalog.uwec.edu/undergraduate/attribute-k3/)	Two (2) learning experiences
Knowledge Outcome 4 (K4): Fine Arts (http://catalog.uwec.edu/undergraduate/attribute-k4/)	One (1) learning experience
Skills Goal	
Skills Outcome 1 (S1): Written and Oral Communication (http://catalog.uwec.edu/undergraduate/attribute-S1/)	Two (2) learning experiences
One S1 must meet the University Writing Requirement (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header10)	
Skills Outcome 2 (S2): Mathematics (http://catalog.uwec.edu/undergraduate/attribute-S2/)	One (1) learning experience
One S2 to meet the University Mathematics Requirement (http://catalog.uwec.edu/undergraduate/graduation-requirements/#header11)	
Skills Outcome 3 (S3): Creativity (http://catalog.uwec.edu/undergraduate/attribute-S3/)	One (1) learning experience
Responsibility Goal	
Responsibility Outcome 1 (R1): Equity, Diversity, and Inclusivity (http://catalog.uwec.edu/undergraduate/attribute-R1/)	Two (2) learning experiences
One R1 must satisfy Design for Diversity (http://catalog.uwec.edu/undergraduate/attribute-DDIV/#header13)	
Responsibility Outcome 2 (R2): Global Perspectives (http://catalog.uwec.edu/undergraduate/attribute-R2/)	One (1) learning experience
Responsibility Outcome 3 (R3): Civic and Environmental Issues (http://catalog.uwec.edu/undergraduate/attribute-R3/)	One (1) learning experience
Integration Goal	
Integration Outcome 1 (I1): Integration (http://catalog.uwec.edu/undergraduate/attribute-I1/)	Two (2) learning experiences
Service-Learning Goal	
Service-Learning (http://catalog.uwec.edu/undergraduate/attribute-SL/#header13)	30 hours

College Degree Requirements

Bachelor of Arts or Bachelor of Science Degree (B.A./B.S.)

University Graduation Requirements. All candidates for degrees must fulfill the requirements for credits, curriculum, GPA, and University residency as specified in the section of this catalog titled University Graduation Requirements (http://catalog.uwec.edu/undergraduate/graduation-requirements/).

College Graduation Requirements: Grade Point Averages. All candidates for degrees in the College of Arts and Sciences must earn minimum resident and total GPAs of 2.00 in the major, the minor, and the certificate. The resident and total GPAs for the major are computed using all attempted credits applicable to the major including those offered by departments other than the major department. The resident and total GPAs for the minor and the certificate are computed similarly.

Major-Minor and Major-Certificate Requirements. A standard major (a minimum of 36 credits) must be supplemented by a minor (a minimum of 24 credits) or by a certificate (12 to 18 credits) to meet graduation requirements for completing a first and second degree program. No minor or certificate is required with a Comprehensive Major (60 or more credits) or with two majors of 36 or more credits each.

Certain degree programs, which include Comprehensive Majors, may require more than the minimum of 120 credits for graduation.

Acceptable academic program combinations are determined at the college level. A major and a minor or a major and certificate or two majors (if available) may not be elected in the same department or program, except in the approved combinations listed here (http://catalog.uwec.edu/undergraduate/arts-sciences/#academicprogramstext).

College Credits. Earn at least 90 credits in courses offered by the College of Arts and Sciences.

Bachelor of Arts Degree in the College of Arts and Sciences (B.A.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); foreign language competency at the 102 level. Foreign language competency may be met in one of two ways: (1) Achieve a score on the foreign language placement test that qualifies the student to enter the 201-level course in a foreign language. (2) Earn a grade of at least C (not C-) or a mark of S in a 102-level foreign language course (or AIS 112 or AIS 122 or CSD 103).

Bachelor of Science Degree in the College of Arts and Sciences (B.S.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); mathematics competency at the MATH 111, MATH 112 or MATH 113 level. Mathematics competency can be met in one of three ways: (1) Achieve a score on the mathematics placement test that qualifies the student to enter MATH 114. (2) Earn a grade of at least C (not C-) or a mark of S in MATH 111, MATH 112, or MATH 113. (3) Achieve a satisfactory score on the

MATH 112 competency test. This test may be attempted no more than two times.

Major Requirements

Liberal Arts (Code 445-001)

Advisors: B. Carter (Biology), D. Jewett (Psychology), D. Leland (Psychology), D. Matthews (Psychology).

This comprehensive major will ground students in current neuroscience traditions while enhancing existing neuroscience research using a multidisciplinary learning approach that is built upon a core curriculum from biology, chemistry, philosophy, mathematics, and psychology. The comprehensive major is intentionally integrative in design and encourages transformative learning via an engaging, multidisciplinary curriculum and embedded high impact practices, such as undergraduate research opportunities, and by enhancing critical thinking both inside and outside the classroom.

Code	Title	Credits
Sixty semester credits, including:		
Core courses:		
BIOL 221	Foundations of Biology I	4
BIOL 222	Foundations of Biology II	3
BIOL 223	Foundations of Biological Inquiry	2
Choose ONE set of the following chemistry courses:		
CHEM 105 & CHEM 106 & CHEM 109	General Chemistry I Lecture and General Chemistry I Laboratory and General Chemistry II with Lab	
OR		
CHEM 115	Chemical Principles	
IDIS 125	Brain: Introduction to Neuroscience	4
MATH 246	Elementary Statistics	4
Choose ONE set of the following courses:		
MATH 441 & MATH 443 & MATH 447	Linear Regression Analysis, with Time Series and Experimental Design and Analysis and Nonparametric Statistics	
OR		
CHEM 325 & CHEM 326	Organic Chemistry I with Laboratory and Organic Chemistry II with Laboratory	
A minimum of four neuroscience core courses chosen from:		
BIOL 350	Systems Neuroscience	
BIOL 351	Systems Neuroscience Lab	
BIOL 358	Cellular and Developmental Neuroscience	
PSYC 362	Clinical Neuroscience	
PSYC 374	Cognitive Neuroscience	
PSYC 387	Behavioral Neuroscience	
Remaining credits chosen from elective courses below:		
BIOL 305	Molecular and Cell Biology	
BIOL 319	Animal Form and Function	
BIOL 323	Genetics	
BIOL 324	Genetics Inquiry	
BIOL 359	Biology of Stress	
BIOL 365	Animal Behavior	
BIOL 380	Endocrinology	
BIOL 405	Advanced Cell and Molecular Lab	
BIOL 409	Molecular Genetics	
CHEM 352	Fundamentals of Biochemistry	
CSD 440	Neurological Aspects of Communication & Cognition	
DS 140	Basics of Data Analysis with R	
MUSI 333	Influence of Music on Behavior	
MUSI 491	Special Topics (when offered as Neurology of Music)	
PHIL 343	Philosophy of Mind	
PHYS 211	General Physics	
PHYS 212	General Physics	
PSYC 363	Psychology of Addictions	
PSYC 366	Statistical Methods in Psychology II	
PSYC 372	Individual Differences and Behavior Genetics	
PSYC 376	Psychology of Perception	
PSYC 377	Psychopharmacology	
PSYC 379	Cognitive Psychology	
Up to three credits of approved neuroscience-related research or academic experience from the following courses may be applied to the major with the consent of the advisor:		
BIOL 296	Student Academic Experience	
BIOL 399	Independent Study - Juniors	
BIOL 496	Student Academic Apprenticeship	
BIOL 497	Senior Research Presentation	
BIOL 499	Independent Study - Seniors	
PSYC 396	Research Apprentice in Psychology	
PSYC 397	Student Academic Apprenticeship in Psychology	
PSYC 399	Independent Study - Juniors	
PSYC 499	Independent Study - Seniors	

Program Learning Outcomes

Students completing this program will be expected to meet the following learning outcomes:

- Identify and describe the main concepts and methodologies of the interdisciplinary field of neuroscience.
- Demonstrate critical thinking skills by analyzing and evaluating neuroscience primary literature.
- Communicate effectively in a variety of formats (oral, written, technological).
- Apply ethical standards to evaluate neuroscience research and applications.
- Formulate career plans based on accurate self-assessment of abilities, motivation, and personal demeanor.