<table>
<thead>
<tr>
<th>Importance</th>
<th>Course</th>
<th>Units</th>
<th>Upper Division Units</th>
<th>Min. Grade</th>
<th>Prerequisites</th>
<th>Notes</th>
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<tbody>
<tr>
<td>!</td>
<td>ENGL 101 - First Year Composition</td>
<td>3</td>
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<tr>
<td>!</td>
<td>MATH 100 - Math Lab</td>
<td>3</td>
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<td>0.9-10.9</td>
<td>Placement Exam</td>
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<tr>
<td>!</td>
<td>CHEM 152 or CHEM 162 &amp; CHEM 163</td>
<td>4</td>
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<tr>
<td>!</td>
<td>PHYS 102 &amp; PHYS 181</td>
<td>4</td>
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<tr>
<td>!</td>
<td>NSCS 200</td>
<td>3</td>
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<tr>
<td>!</td>
<td>UNIV 101 - Introduction to General Education</td>
<td>1</td>
<td></td>
<td>Entry course.</td>
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<td>!</td>
<td>NROS 195B - Engaging Topics in Neuroscience &amp; General Education Course 1*</td>
<td>3</td>
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<td>Freshman colloquium course for NSCS students.</td>
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<tr>
<td>!</td>
<td>ENGL 102 - First Year Composition</td>
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<tr>
<td>!</td>
<td>MATH 112 - College Algebra Concepts &amp; Applications</td>
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<td>!</td>
<td>PSY 150A1 - The Structure of Mind &amp; Behavior</td>
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<td></td>
<td>Second Language Placement Exam score</td>
<td>See advisor for course placement after Second Language Placement Exam has been taken. Second-semester proficiency is needed to fulfill NSCS major requirements.</td>
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<td>Second Language Course (1st Semester Proficiency)</td>
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<td>Second Language Placement Exam score</td>
<td>See advisor for course placement after Second Language Placement Exam has been taken. Second-semester proficiency is needed to fulfill NSCS major requirements.</td>
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<td>!</td>
<td>MATH 120R - Calculus Preparation</td>
<td>4</td>
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<td>C</td>
<td>60-74 Placement Exam score or MATH 112</td>
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<td>!</td>
<td>CHEM 151 - Chemical Thinking I</td>
<td>4</td>
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<td>60+ Math Placement Exam score or MATH 112</td>
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<tr>
<td>!</td>
<td>CHEM 152 - Chemical Thinking II</td>
<td>4</td>
<td></td>
<td>C</td>
<td>Second Language Placement Exam score</td>
<td>See advisor for course placement after Second Language Placement Exam has been taken. Second-semester proficiency is needed to fulfill NSCS major requirements.</td>
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<tr>
<td>!</td>
<td>MCB 181R and MCB 181L - Introductory Biology I</td>
<td>3</td>
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<td>See Note*</td>
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<td>MATH 122A - Functions for Calculus</td>
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<td>C</td>
<td>75+ Math Placement Exam score or MATH 120R with a grade of C or higher</td>
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<tr>
<td>!</td>
<td>MATH 122B - First Semester Calculus</td>
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<td>MATH 122A with grade of C or higher</td>
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<tr>
<td>!</td>
<td>CHEM 152 - Chemical Thinking II</td>
<td>4</td>
<td></td>
<td></td>
<td>CHEM 151 or CHEM 161 &amp; CHEM 163 (honors section)</td>
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<td>!</td>
<td>MCB 181R and MCB 181L - Introductory Biology I</td>
<td>4</td>
<td></td>
<td>40+ Math Placement Exam score or MATH 112/120R/122B/125</td>
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<td>!</td>
<td>General Education Course 2*</td>
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<td>!</td>
<td>NSCS 200 - Fundamentals of Neuroscience &amp; Cognitive Science</td>
<td>3</td>
<td></td>
<td>PSY 150A1 or PSY 101 and MCB 181R &amp; MCB 181L or concurrent enrollment</td>
<td>Prerequisite for all NSCS and NROS courses.</td>
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<tr>
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<td>GENG 241A - Lectures in Organic Chemistry</td>
<td>3</td>
<td></td>
<td>CHEM 152 or CHEM 162 (honors section)</td>
<td>Honors section available - CHEM 162 &amp; CHEM 164. Credit is only allowed for one lecture &amp; lab combination.</td>
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<td>CHEM 243A - Organic Chemistry Laboratory I</td>
<td>1</td>
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<td>CHEM 152 or CHEM 162 &amp; CHEM 164 (honors section)</td>
<td>Honors section available - CHEM 244A. Credit is only allowed for one lecture.</td>
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<tr>
<td>!</td>
<td>PHIL 241 - Consciousness &amp; Cognition</td>
<td>3</td>
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<tr>
<td>!</td>
<td>MATH 263 - Introduction to Statistics &amp; Biostatistics (recommended for pre-med students) or PSY 230 - Psychological Measurement &amp; Statistics</td>
<td>3</td>
<td></td>
<td>MATH 263: 60+ Math Placement Exam score or MATH 112/122B/125</td>
<td>Only complete one option.</td>
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<td>MCB 181R and MCB 181L - Introductory Biology I</td>
<td>3</td>
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<td>See Note*</td>
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<tr>
<td>!</td>
<td>General Education Course 3*</td>
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<td>!</td>
<td>NSCS 200</td>
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<td>!</td>
<td>PHYS 102 and PHYS 181 - Introductory Physics I or PHYS 141 - Introductory Mechanics</td>
<td>4</td>
<td></td>
<td>60+ Math Placement Exam score or MATH 112/120R/122B/125</td>
<td>Only complete one option.</td>
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<tr>
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<td>General Education Course 5*</td>
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<tr>
<td>!</td>
<td>Emphasis Course 1**</td>
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<td>See Note**</td>
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<tr>
<td>!</td>
<td>Elective*</td>
<td>3</td>
<td></td>
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<td>See Note**</td>
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<tr>
<td>!</td>
<td>NROS 307 - Cellular Neurophysiology</td>
<td>3-4</td>
<td></td>
<td></td>
<td>Honors section is available for enrollment to students in the W.A. Franke Honors College</td>
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<tr>
<td>!</td>
<td>NROS 398 - Methods in Neuroscience</td>
<td>4</td>
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<td>!</td>
<td>NROS 311 - Scientific Programming with MATLAB</td>
<td>3</td>
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<tr>
<td>!</td>
<td>NROS 310 - Molecular &amp; Cellular Biology of Neurons</td>
<td>3</td>
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<tr>
<td>!</td>
<td>PHYS 103 and PHYS 182 - Introductory Physics II or PHYS 241 - Introductory Electricity &amp; Magnetism</td>
<td>4</td>
<td></td>
<td></td>
<td>Only complete one option.</td>
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</tbody>
</table>
CogSci Foundation Focus Course Listings

Choose three (3) courses from at least two (2) categories:

Cognitive Psychology
- LING 440 - The Bilingual Mind
- PSY 333 - Judgement and Decision-Making
- PSY 340 - Intro to Cognitive Development
- PSY 426 - Advanced Human Memory
- PSY 429 - Advanced Perception

Linguistics
- LING 201 - Introduction to Linguistics
- LING 341 - Language Development
- LING 432 - Psychology of Language
- LING 449A - Biolinguistics

Philosophy
- PHIL 202 - Introduction to Symbolic Logic
- PHIL 346 - Minds, Brains and Computers
- PHIL 442 - Knowledge and Cognition
- PHIL 450 - Philosophy of Mind

Emphasis Course Listings (15 Units)

Cognition
- ECOL 346 – Bioinformatics
- ISTA 457 – Neural Networks
- LING 432 – Psychology of Language
- LING 440 – The Bilingual Mind
- NROS 344 – Modeling the Mind: Comp Models of Cognition
- NROS 412 – Molecular Mechanisms of Learning and Memory
- NROS 415 – Electrophysiology Lab
- PHIL 346 – Minds, Brains & Computers
- PHIL 439 – Decision Theory
- PSY 300 – Cognitive Neuroscience
- PSY 313 – Drugs and the Brain or PSY 413 – Drugs, Brain, and Behavior
- PSY 321 – Brain Rehabilitation
- PSY 326 – Human Memory
- PSY 340 – Introduction to Cognitive Development
- PSY 405 – Developmental Cognitive Neuroscience
- PSY 412 – Animal Learning
- PSY 422 – Introduction to Brain Connectivity
- PSY 433 – Decisions and the Brain

Development and Aging
- FCM 496D – Disability Perspectives in Research, Policy, and Practice
- FSHD 413 – Issues in Aging
- NROS 440 – How to Build a Brain: Mech. Of Neural Development
- PSY 340 – Introduction to Cognitive Development
- PSY 405 – Developmental Cognitive Neuroscience
- PSY 405 – Developmental Cognitive Neuroscience
- PSY 424 – Gerontology: A Multidisc. Perspective
- PSY 459 – Adult Development and Aging
- PSY 478 – Sleep and Sleep Disorders
- SLHS 340 – Language Science

Philosophy of Mind
- PHIL 305 – Intro to Philosophy of Science
- PHIL 345 – Philosophy and Psychiatry
- PHIL 346 – Minds, Brains & Computers
- PHIL 347 – Neuroethics
- PHIL 376 – Intro to the Philosophy of Language
- PHIL 437 – Moral and Social Evolution
- PHIL 439 – Decision Theory

Computation
- Quantitative Foundation - Choose One Course
- ECE 220 – Basic Circuits
- ISTA 311 – Foundations of Information & Inference
- MATH 129 – Calculus I
- MATH 254 – Introduction to Ordinary Differential Equations
- MATH 355 – Analysis of Ord. Differential Equations
- PHYS 141 – Introductory Mechanics & PHYS 241 – Introductory Electricity and Magnetism
- Emphasis - Complete Twelve (12) Units
- BME 417 – V&V Analysis in Biomed. Engineering
- BME 477 – Introduction to Biomedical Informatics
- ECOL 346 – Bioinformatics
- ISTA 410 – Bayesian Modeling and Inference
- ISTA 421 – Introduction to Machine Learning
- ISTA 450 – Artificial Intelligence
- ISTA 457 – Neural Network
- MATH 475A - Math Prim. of Numerical Analysis
- MATH 485 – Mathematical Modeling
- NROS 344 – Modeling the Mind: Computational Models of Cognition
- NROS 415 – Electrophysiology Lab
- PHIL 455 – Philosophy and Artificial Intelligence

Neurobiology
- ECOL 346 – Bioinformatics
- ISTA 457 – Neural Networks
- NROS 344 – Modeling the Mind: Comp Models of Cognition
- ECOL 487/L – Animal Behavior w/lab
- NROS 381 – Animal Brains, Signals, Sex, and Social Behaviors
- NROS 330 – Principles of Neuroanatomy: Cells to Systems
- NROS 412 – Molecular Mechanisms of Learning and Memory
- NROS 415 – Electrophysiology Lab
- NROS 420 – Sensing and Action in Predator/Prey Encounters
- NROS 430 – Neuorgenetics
- NROS 440 – How to Build a Brain: Mech. of Neural Development
- PSY 321 – Brain Rehabilitation
- PSY 313 – Drugs and the Brain or PSY 413 – Drugs, Brain, and Behavior

Notes:
- Students may choose to complete a Thematic Emphasis with courses of their choosing in a given theme. Thematic Emphases must be approved by the student’s advisor, and the NSCS Director.
- Students may use up to six (6) units of Upper Division Thesis, Independent Study, Directed Research, Internship, or Precceptorship (max three [3] units) towards their emphasis.

Last Modified: 9/25/2023 by Colleen Justu