

BACHELOR OF SCIENCE IN NEUROSCIENCE & COGNITIVE SCIENCE

| CURRICULUM SHEET | CATALOG YEAR: 2022+

NAME _____ SID _____ EXPECTED GRADUATION DATE _____

GENERAL EDUCATION REQUIREMENTS (36-38 Units)

English Composition

ENGL 101 or 1073__

ENGL 102 or 1083__

Or

ENGL 109H3__

Foundation Mathematics

MATH 122A & 122B1__ + 4__

*Some students may need to take MATH 100 -> MATH 112 ->

MATH 120R before taking 122A & B.

Second Language

2nd semester proficiency by credit or exam required

Intro to General Education

UNIV 1011__

Exploring Perspectives

Artist:3__

Humanist:3__

Social Scientist:3__

Natural Scientist (Requirement satisfied by NSCS foundations)

Building Connections

1:3__

2:3__

3:3__

General Education Capstone

UNIV 3011__

NSCS Required Supporting Coursework (23 Units)

MCB 181R & 181L3__ 1__

CHEM 1514__

MATH 122A & 122B1__ 4__

MATH 263 or PSY 2303__

PHYS 102 & 1813__ 1__

PHIL 241 or PHIL 3473__

NSCS Core Coursework (14-15 Units)

NSCS 200 – Fundamentals of Neurosci & CogSci3__

NROS 307/H – Cellular Neurophysiology3/4__

NROS 308 – Methods in Neuroscience1__

NROS 311 – Scientific Programming w/ MATLAB3__

CGSC 320 – Issues & Themes in CogSci3__

CGSC 321 – Methods in CogSci1__

NSCS Focus Options [Choose One] (18-19 Units)

Neuroscience Focus

CHEM 1524__

CHEM 241A & 243A3__ 1__

PHYS 103 & 1823__ 1__

NROS 310/H – Mol. & Cell. Bio of Neurons3/4__

NROS 418 – Fund. Principles in Systems Neuroscience3__

Cognitive Science Focus

CGSC 344 – Modeling the Mind3__

Three Courses from Two Categories :

Cognitive Psychology | Linguistics | Philosophy

1:3__

2:3__

3:3__

Two Courses from Cognition Emphasis:

1:3__

2:3__

Emphasis Requirement (15 Units)

Complete 15 units from one emphasis. Up to 6 units of upper-division research, internship, preceptorship (max 3 units), or thesis credit may be applied. Course listing at nscs.arizona.edu.

- Cognition _____
- Computation _____
- Development and Aging _____
- Lang. & Comm. Sci _____
- Neurobiology _____
- Philosophy of Mind _____
- Thematic _____

University Requirements			
120 total units	<input type="checkbox"/>	42 upper division units	<input type="checkbox"/>
2.000 + cumulative GPA	<input type="checkbox"/>	2.000 + major GPA	<input type="checkbox"/>
MCWA complete	<input type="checkbox"/>	Final 18/ 30 units complete	<input type="checkbox"/>
30+ total units at UA	<input type="checkbox"/>	18+ NSCS units at UA	<input type="checkbox"/>

Cognitive Science Elective Course Options		
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 Options	
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 PSY 478 – Sleep and Sleep Disorders PSYS 407 – Language and Thought: A Cog. Psych/Neuro Perspective	Computation Quantitative Foundation - Choose One Course ECE 220 – Basic Circuits ISTA 311 – Foundations of Information & Inference MATH 129 – Calculus II MATH 254 – Introduction to Ordinary Differential Equations MATH 355 – Analysis of Ord. Differential Equations PHYS 141– Introductory Mechanics Emphasis - Complete Twelve (12) Units BME 417 – Meas. & Data 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 Prin. of Numerical Analysis MATH 485 - Mathematical Modeling CGSC 344 – Modeling the Mind: Computational Models of Cognition NROS 415 – Electrophysiology Lab PHIL 455 - Philosophy and Artificial Intelligence PSIO 472 - Quantitative Modeling of Biological Sys
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 SLHS 441 – Language Acquisition	Language and Communication Science LING 300 – Introduction to Syntax LING 315 – Introduction to Phonology LING 322 – The Structure & Meaning of Words LING 341 – Language Development LING 364 – Introduction to Formal Semantics LING 388 – Language & Computers LING 432 – Psychology of Language LING 440 – The Bilingual Mind LING 449A – Biolinguistics PSYS 407 – Language and Thought: A Cog. Psych/Neuro Perspective SLHS 340 – Language Science SLHS 362 – Neurobiology of Communication SLHS 380 – Hearing Science SLHS 441 – Language Acquisition SLHS 473 – Communication Disorders II SLHS 477 – Communication Disorders I
Neurobiology ECOL 346 – Bioinformatics or ISTA 457 – Neural Networks or NROS 344 – Modeling the Mind: Comp. Models of, Cognition ECOL 487R/L – Animal Behavior w/lab or 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 – Neurogenetics 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 PSY 405 – Developmental Cognitive Neuroscience	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
	Thematic 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.