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 107 .....3__
ENGL 102 or 108 .....3__

Or

ENGL 109H .....3__

Foundation Mathematics

MATH 122A & 122B .....1__ + 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 101 .....1__

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 301 .....1__

NSCS Required Supporting Coursework (23 Units)

MCB 181R & 181L .....3__ 1__
CHEM 151 .....4__
MATH 122A & 122B .....1__ 4__
MATH 263 or PSY 230 .....3__
PHYS 102 & 181 .....3__ 1__
PHIL 241 or PHIL 347 .....3__

NSCS Core Coursework (14-15 Units)

NSCS 200 – Fundamentals of Neurosci & CogSci .....3__
NROS 307/H – Cellular Neurophysiology .....3/4__
NROS 308 – Methods in Neuroscience .....1__
NROS 311 – Scientific Programming w/ MATLAB .....3__
CGSC 320 – Issues & Themes in CogSci .....3__
CGSC 321 – Methods in CogSci .....1__

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

Neuroscience Focus

CHEM 152 .....4__
CHEM 241A & 243A .....3__ 1__
PHYS 103 & 182 .....3__ 1__
NROS 310/H – Mol. & Cell. Bio of Neurons .....3/4__
NROS 418 – Fund. Principles in Systems Neuroscience .....3__

Cognitive Science Focus

CGSC 344 – Modeling the Mind .....3__
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	☐	**42 upper division units**	☐
2.000 + cumulative GPA	☐	**2.000 + major GPA**	☐
MCWA complete	☐	Final 18/ 30 units complete	☐
30+ total units at UA	☐	18+ NSCS units at UA	☐

Cognitive Science Elective Course Options		
Cognitive Psychology	**Linguistics**	**Philosophy**
LING 440 - The Bilingual Mind	LING 201 - Introduction to Linguistics	PHIL 202 - Introduction to Symbolic Logic
PSY 333 - Judgement and Decision-Making	LING 341- Language Development	PHIL 346 - Minds, Brains and Computers
PSY 340 - Intro to Cognitive Development	LING 432 - Psychology of Language	PHIL 442 - Knowledge and Cognition
PSY 426 - Advanced Human Memory	LING 449A - Biolinguistics	PHIL 450 - Philosophy of Mind
PSY 429 - Advanced Perception		

Emphasis Options	
Cognition	**Computation**
ECOL 346 – Bioinformatics	**Quantitative Foundation - Choose One Course**
ISTA 457 – Neural Networks	ECE 220 – Basic Circuits
LING 432 – Psychology of Language	ISTA 311 – Foundations of Information & Inference
LING 440 – The Bilingual Mind	MATH 129 – Calculus II
NROS 344 – Modeling the Mind: Comp Models of Cognition	MATH 254 – Introduction to Ordinary Differential Equations
NROS 412 – Molecular Mechanisms of Learning and Memory	MATH 355 – Analysis of Ord. Differential Equations
NROS 415 – Electrophysiology Lab	PHYS 141– Introductory Mechanics
PHIL 346 – Minds, Brains & Computers	**Emphasis - Complete Twelve (12) Units**
PHIL 439 – Decision Theory	BME 417 – Meas. & Data Analysis in Biomed. Engineering
PSY 300 – Cognitive Neuroscience	BME 477 – Introduction to Biomedical Informatics
PSY 313 – Drugs and the Brain	ECOL 346 – Bioinformatics
or PSY 413 – Drugs, Brain, and Behavior	ISTA 410 - Bayesian Modeling and Inference
PSY 321 – Brain Rehabilitation	ISTA 421 - Introduction to Machine Learning
PSY 326 – Human Memory	ISTA 450 - Artificial Intelligence
PSY 340 – Introduction to Cognitive Development	ISTA 457 – Neural Network
PSY 405 – Developmental Cognitive Neuroscience	MATH 475A - Math Prin. of Numerical Analysis
PSY 412 – Animal Learning	MATH 485 - Mathematical Modeling
PSY 422 – Introduction to Brain Connectivity	CGSC 344 – Modeling the Mind: Computational Models of Cognition
PSY 433 – Decisions and the Brain	NROS 415 – Electrophysiology Lab
PSY 478 – Sleep and Sleep Disorders	PHIL 455 - Philosophy and Artificial Intelligence
PSYS 407 – Language and Thought: A Cog. Psych/Neuro Perspective	PSIO 472 - Quantitative Modeling of Biological Sys
Development and Aging	**Language and Communication Science**
FCM 496D - Disability Perspectives in Research, Policy, and Practice	LING 300 – Introduction to Syntax
FSHD 413 – Issues in Aging	LING 315 – Introduction to Phonology
NROS 440 – How to Build a Brain: Mech. Of Neural Development	LING 322 – The Structure & Meaning of Words
PSY 340 – Introduction to Cognitive Development	LING 341 – Language Development
PSY 405 – Developmental Cognitive Neuroscience	LING 364 – Introduction to Formal Semantics
PSY 405 – Developmental Cognitive Neuroscience	LING 388 – Language & Computers
PSY 424 – Gerontology: A Multidisc. Perspective	LING 432 – Psychology of Language
PSY 459 – Adult Development and Aging	LING 440 – The Bilingual Mind
PSY 478 – Sleep and Sleep Disorders	LING 449A – Biolinguistics
SLHS 340 – Language Science	PSYS 407 – Language and Thought: A Cog. Psych/Neuro Perspective
SLHS 441 – Language Acquisition	SLHS 340 – Language Science
Neurobiology	SLHS 362 – Neurobiology of Communication
ECOL 346 – Bioinformatics	SLHS 380 – Hearing Science
or ISTA 457 – Neural Networks	SLHS 441 – Language Acquisition
or NROS 344 – Modeling the Mind: Comp. Models of, Cognition	SLHS 473 – Communication Disorders II
ECOL 487R/L – Animal Behavior w/lab	SLHS 477 – Communication Disorders I
or NROS 381 – Animal Brains, Signals, Sex, and Social Behaviors	**Philosophy of Mind**
NROS 330 - Principles of Neuroanatomy: Cells to Systems	PHIL 305 – Intro to Philosophy of Science
NROS 412 – Molecular Mechanisms of Learning and Memory	PHIL 345 – Philosophy and Psychiatry
NROS 415 – Electrophysiology Lab	PHIL 346 – Minds, Brains & Computers
NROS 420 – Sensing and Action in Predator/Prey Encounters	PHIL 347 – Neuroethics
NROS 430 – Neurogenetics	PHIL 376 – Intro to the Philosophy of Language
NROS 440 – How to Build a Brain: Mech. Of Neural Development	PHIL 437 – Moral and Social Evolution
PSY 321 – Brain Rehabilitation	PHIL 439 – Decision Theory
PSY 313 – Drugs and the Brain	**Thematic**
or PSY 413 – Drugs, Brain, and Behavior	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.
PSY 405 – Developmental Cognitive Neuroscience	