Concentration in Cognitive Neuroscience (Option A – Biol Major/Psych Minor)

BA in Biology with Psych Minor

Coursework in Biological Sciences: (45 qtr hrs total)
- BIOL 10xx Concepts series (with labs) (12 hrs)
- BIOL 2120 Cell Structure and Function (with lab) (5 hrs)
- BIOL 2510 General Genetics (with lab) (5 hrs)
- Either BIOL 2010 General Ecology or BIOL 2050 Conservation Biology (4 hrs)
- BIOL 3646 Seminar: Cognitive Neuroscience (2 hrs)
- Any three of the following:
  - BIOL 3640 Intro to Neurobiology or
  - BIOL 3642 Neuropharmacology or
  - BIOL 3641 Systems Neuroscience or
  - BIOL 3650 Endocrinology
- BIOL 2xxx and BIOL 3xxx Electives for a total for 45 qtr hrs (with no more than 5 hrs of BIOL 3991 Independent Study and/or BIOL 3950 Undergraduate Research)

Minor coursework requirements: The BS in Biology with concentration in Cognitive Neuroscience requires TWO minors: a specialty minor in Psychology and a minor in Chemistry.

Specialty Psychology Minor: (22 qtr hrs total)
Pre-requisite course: SOCS 1710 — Foundations in Psychology (counts toward Foundation Requirement)
- PSYC 2031 Intro to Cognitive Neuroscience
- Either PSYC 2040 Cognition and Learning or PSYC 2130 Neural Bases of Perception
- Either PSYC 2080 Drugs and Behavior or PSYC 2150 Motivation and Emotion or PSYC 3666 Brain Development and Cognition
- PSYC 3035 Seminar: Cognitive Neuroscience (2 hrs)
- At least one elective:
  - Additional course listed above
  - or PSYC 2050 Child Development
  - or PSYC 2500 Abnormal Psychology
  - or PSYC 2510 Personality
  - or PSYC 2740 Social Psychology

Chemistry - ONE YEAR that includes:
- CHEM 1010 General Chemistry (with lab)
- CHEM 2451 Organic Chemistry I (with lab)
- CHEM 2xxx or higher (at least 4 hrs)

Math: (8 qtr hrs of mathematics/statistics)
- Either MATC 1101 Analytical Inquiry I (4 hrs) or MATC 1200 Calculus for Business and Social Science (4 hrs) or MATH 1951 Calculus I
- Either PSYC 2300 Intro to Statistics (5 hrs) or BIOL 2090 Biometry (4 hrs) or an approved business stats course

Chemistry Minor: (20 hrs minimum)
- CHEM 1010 General Chemistry (with lab)
- CHEM 245x Organic Chemistry I, II, and III (with labs)
- CHEM 2011 Analysis Equilibrium Systems (with lab)

NOTE: Many graduate programs (including medical schools) require at least 2 yrs of chemistry - one year of inorganic and one year of organic. To satisfy a year-long requirement for inorganic chemistry, students should also take CHEM 2130 Chem of the Elements. Some graduate programs also require or recommend biochemistry.

(continued on next page)
Math: (12 qtr hrs of calculus/statistics)
   Either MATH 195x Calculus I, II & III (12 hrs)
   or Calc I & II plus stats (BIOL 2090 Biometry, PSYC 2300 Intro to Statistics or an approved business stats course)
   or Computer Sciences I-II-III by approval

Physics: (15 qtr hrs)
  • PHYS 111x Gen Physics (with labs) or
  • PHYS 121x University Physics (with labs)

Concentration in Cognitive Neuroscience (Option B – Psych major/Biol minor)

BA or BS in Psychology: Information regarding a Psychology Major is available through the Department of Psychology.

Specialty Biology Minor: (27 qtr hrs)
  • Either BIOL 10xx Concepts series (with labs) (12 hrs)
    or NATS 122x Molecules to Humankind (with labs) (12 hrs)
  • BIOL 2120 Cell Structure and Function (with lab) (5 hrs)
  • BIOL 3646 Seminar: Cognitive Neuroscience (2 hrs)
  • At least TWO of the following:
    BIOL 3640 Introduction to Neurobiology
    BIOL 3641 Systems Neuroscience
    BIOL 3642 Neuropharmacology

Concentration in Cognitive Neuroscience (Option C - Biology/Psychology Double Major)

Biology Major: Follow specialty coursework listed on pg. 1 for BA or BS in Biology.

Psychology Major: Follow major requirements posted by Department of Psychology.

Additional requirements and notes for BA/BS in Biology

All Biology majors must satisfy University Undergraduate Requirements

Advanced Placement (AP) credit for Calculus AB or Calculus BC may count toward the MATH 195x series for either the BA or the BS according to the University approval policy (see the University of Denver Undergraduate Bulletin for details). Approval through the Department of Mathematics is required.

ONE YEAR OF CALCULUS is recommended by many graduate medical programs and is required for a few.

ONE YEAR OF CALCULUS is required for many graduate research programs in the basic sciences. Check the requirements for the school(s) to which you hope to make application before you decide about math options.

• The BA degree requires the major plus ONE minor.

• The BS degree requires the major plus TWO minors (Chem minor is earned by satisfying the chemistry requirement).

• A BA-BA double major does not require a minor.

• A BS-BS double major requires ONE minor. (Chem minor is earned by satisfying the chemistry requirement).

To declare a major or minor fill out and submit a Declaration of Major/Minor form to the Registrar’s Office. This form is available in the Registrar’s office (University Hall) and online http://www.du.edu/registrar/forms/index.html