

# BEHAVIORAL NEUROSCIENCE

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## Faculty

Karl Bailey, *Director*, Psychology  
Gordon Atkins, *Advisor*, Biology  
Harvey Burnett, Psychology  
Herbert Helm, *Advisor*, Psychology  
Shandelle Henson, *Advisor*, Mathematics  
David Mbungu, *Advisor*, Biology  
Duane McBride, *Advisor*, Behavioral Sciences  
James Hayward, Biology  
Robert Moore, Mathematics  
David Steen, Biology  
John Stout, Biology

Academic Programs	Credits
BS: Biology	
Neuroscience emphasis	67–69
Behavior/Mathematics emphasis	69–72
BS: Psychology	
Behavioral Neuroscience emphasis	68–71

## Mission

As a program at a Seventh-day Adventist University, the behavioral neuroscience program aims to help students integrate their study of the mind and brain into their faith development and Christian walk by encouraging the careful study of, and faithful response to, their area of study and scholarship as both Christians and developing scholars.

Behavioral Neuroscience is an interdisciplinary program at Andrews University that is based in the Departments of Behavioral Sciences, Biology and Mathematics. Its purpose is to provide opportunities for undergraduates to prepare for exciting careers in the fascinating, rapidly growing scientific fields which involve the study of the brain and its control of behavior. In addition to helping students learn basic information about neurobiology, cognitive neuroscience, behavioral neuroscience, and mathematical modeling, the Behavioral Neuroscience program involves students in hands-on, laboratory experiences, using research-quality equipment, and prepares students to not only learn from their field of study but to actively contribute to that field as well. Indeed, research with a faculty mentor is an integral part of the program, with the goal of student presentation and publication of research in professional venues. The interdisciplinary nature of Behavioral Neuroscience is reflected in a common core of classes taken by all students, whether they are majoring in Psychology, Biology or Mathematics, and in the flexibility afforded by each of the three emphases within the program for interdisciplinary study and original research.

As an interdisciplinary program that exists across three departments, the Behavioral Neurosciences Program also aims to develop and reflect a spirit of collaboration and integration on the campus, as exemplified in the interdisciplinary interests and work of faculty and students.

# Undergraduate Programs

## Behavioral Neuroscience Core—41–43

PSYC180, BIOL165, 166, ZOO1475, CHEM131, 132, 231, 232, 241, 242 or PHYS141, 142 or PHYS241, 242, 271, 272, PSYC364, PSYC445, PSYC449/BIOL450

## BS: Biology

### Neuroscience Emphasis—26

Research Methods: BIOL251, 252, 453  
Research Project: BIOL495 (2 cr)  
BIOL371, 372, 449, 495, ZOO1468, 484, two upper division electives from Biology, Psychology or BCHM422 (BCHM421 is a prerequisite for BCHM422)

### Behavior/Mathematics Emphasis—28

Mathematical Methods: STAT340 or MATH286, MATH426  
Research Project: BIOL495 (2 cr)  
MATH191, 192, BIOL371, 372, 449, ZOO1484

## BS: Psychology

### Behavioral Neuroscience—27

Research Methods: PSYC432, 433, 434  
Research Project: PSYC438 (1 cr), 498 (2 cr)  
PSYC101, 460, 465, two upper division electives from biology, mathematics or psychology  
Cognate: BHSC230

## General Education

Completing the Behavioral Neuroscience core meets general education requirements for Interdisciplinary Social Science and both Physical and Life Sciences. Completing the Psychology/BNS major meets the general education requirement for Foundational Social Science.