

**DEGREE/PROGRAM CHANGE  
FORM C  
Form Number: C1672**

Fields marked with \* are required

**Name of Initiator:** Alec Reber    **Email:** [areber@unm.edu](mailto:areber@unm.edu)    **Phone Number:** 505-272-1921    **Date:** 09-24-2015

Associated Forms exist? Yes  Initiator's Title Sr Program Manager  
Faculty Contact David Peabody    Administrative Contact Alec Reber  
Department Biomedical Sciences    Admin Email areber@salud.unm.edu  
Branch    Admin Phone 505-272-1921

**Proposed effective term**

Semester Summer  Year 2016

**Course Information**

Select Appropriate Program Graduate Degree Program   
Name of New or Existing Program MS & PhD Biomedical Sciences- Neuroscience Concentration  
Select Category Concentration  Degree Type MS/PHD  
Select Action New

Exact Title and Requirements as they should appear in the catalog. If there is a change, upload current and proposed requirements.

See current catalog for format within the respective college (upload a doc/pdf file)

[BSGP Neuroscience Concentration - Catalog.pdf](#)

**Does this change affect other departmental program/branch campuses? If yes, indicate below.**

Reason(s) for Request (enter text below or upload a doc/pdf file)

The BSGP Steering Committee has reviewed existing curricular offerings and determined that formalizing the current requirements into concentrations (Cancer Biology - C1671, Cardiovascular Physiology - C1673, and Neuroscience - C1672 to date) is in the best interests of the students. In addition to the other Form Cs noted above, the following Form Bs are being submitted: B1717 - moving a regularly taught topics course to it's own number for use in the Neuroscience concentration. B1715 - creating a directed study course for use in the Cancer Biology concentration. Please see the attachments for additional details.

[BSGP Neuroscience Concentration - Reason.pdf](#)

Upload a document that includes justification for the program, impact on long-range planning, detailed budget analysis and faculty workload implications.(upload a doc/pdf file)

[BSGP Neuroscience Concentration.pdf](#)

**Are you proposing a new undergraduate degree or new undergraduate certificate? If yes, upload the following documents.**

Upload a two-page Executive Summary authorized by Associate Provost. (upload a doc/pdf file)

Upload memo from Associate Provost authorizing go-ahead to full proposal. (upload a doc/pdf file)

# Biomedical Sciences Graduate Program, Neuroscience Concentration

## Proposed Effective Term

Summer 2016

## Proposed Catalog Text

Neuroscience – 31 credit hours

The Concentration in Neuroscience Program will comprise one division of the Biomedical Sciences Graduate Program (BSGP). The program will lead to the M.S. or Ph.D. degree, with the majority of students obtaining a Ph.D. Pre-doctoral requisites of the program are one year of BSGP core curriculum followed by an individualized program of upper level courses and scientific research in the laboratory of a BSGP-approved faculty mentor. Students in the Neuroscience Concentration will conduct their research studies under the mentorship of a faculty member or an affiliated faculty member of the Department of Neurosciences, an academic unit of the University of New Mexico School of Medicine dedicated to the advancement of knowledge and understanding of the nervous system and to the comprehensive education and training of students in the neurosciences. Research laboratories of faculty members and affiliated faculty members of the Department of Neurosciences conduct investigations in the fundamental areas of neuroscience, focusing on four main areas of study:

1. Nervous system development
2. Learning, memory, and substance abuse
3. Brain injury, repair, and diseases of the nervous system
4. Behavioral health disorders

The Department of Neurosciences has a history of training M.S. and Ph.D. students (please see supplementary information) using requirements that were essentially the same as detailed below for the proposed concentration.

## Program Requirements

1. Complete first year BSGP core curriculum:

Course No.	Course title	Credit hrs
BIOM 501	Fundamentals for Graduate Research	1
BIOM 506	Special Topics in Biomedical Research (rotations)	3
BIOM 507	Advanced Molecular Biology	4
BIOM 508	Advanced Cellular Biology	4
BIOM 525	Cell and Molecular Basis of Disease Journal Club (2 semesters, year 1)	4
BIOM 530	Cell and Molecular Basis of Disease Seminar	1
BIOM 555	Problem-Based Research in Bioethics (may be taken in 2 <sup>nd</sup> year)	1

## Biomedical Sciences Graduate Program, Neuroscience Concentration

2. During the second semester of the first year BSGP students are required to take 9 credit hours of selectives. This hour requirement remains unchanged for students pursuing the concentration. To earn a Concentration in Neuroscience graduate students are required to take BIOM 509 – Principles of Neurobiology. The remaining 6 credit hours will be determined based on an individualized training plan for each student from the following options.

Course No.	Course title	Credit hrs
	<b>REQUIRED</b>	
BIOM 509	Principles of Neurobiology	3
	<b>Select 2 of the following</b>	
BIOM 510	Physiology	3
BIOM 514	Immunobiology	3
BIOM 515	Cancer Biology	3
BIOM 522	Experimental Methods and Design	3

3. Following successful completion of the Qualifying Exam and remaining in Good Academic Standing (as defined by the BSGP), graduate training will mainly focus on laboratory research supervised by the student's mentor, and supplemented with the following advanced courses.

Course No.	Course title	Credit hrs
	<b>REQUIRED</b>	
BIOM 533	Neuroanatomy/Neurophysiology	4
BIOM 532	Neurochemistry/Neuropharmacology	3
BIOM 535	Seminar: Neuroscience (1 hr/semester)	6
BIOM 505 [536]	Journal Club: Neuroscience (1 hr/semester) [Curriculum Form B1717 submitted]	6
	<b>Select 3 of the following</b>	
BIOM 505	ST: Neurobiol of Disease	1
BIOM 505	ST: Neurogenomics	1
BIOM 505	ST: Neural Development	1
BIOM 505	ST: Neurobiology of Alcoholism	1
BIOM 505	ST: Developmental Neurotoxicology	1
BIOM 537	Adv T: Ion Channels	1

## **Biomedical Sciences Graduate Program, Neuroscience Concentration**

### **Effects on Other Programs or Branch Programs**

N/A

### **Effect on students currently in the program**

They will be eligible to graduation with the concentration noted with no change in graduation requirements.

### **Reason for Request**

- The primary objective of the Neuroscience Concentration is to enhance the ability and competitiveness of BSGP PhD students to pursue careers in Neuroscience.
- Students graduate with a transcriptable “*Neuroscience Concentration*” depicting the specific training achieved under the interdisciplinary program in Biomedical Sciences.
- The Neuroscience Concentration helps prospective students identify key areas of research at UNM.
- The table below shows the number of current trainees and the current positions of trainees that have completed the program since 1998.

### **Impact on Long-range Planning**

Training and workforce development guidelines increasingly emphasize individualized training and career development with emphases on interdisciplinary and transdisciplinary skill-building. In addition to the Neuroscience Concentration, additional concentrations within the Biomedical Sciences graduate program that are aligned with areas of research excellence in the UNM Health Sciences Center (e.g. Cardiovascular Biology and Cancer Biology) will provide graduate trainees with further documentation of expertise in disciplines of their choosing. Providing this program to meet these guidelines may have a positive impact on the recruitment of graduate students, which could, in turn, have a positive effect on long-ranging for the department.

### **Budget Analysis**

All courses are currently being offered and the establishment of the Neuroscience Concentration will have no additional impact on the current budget of the Department.

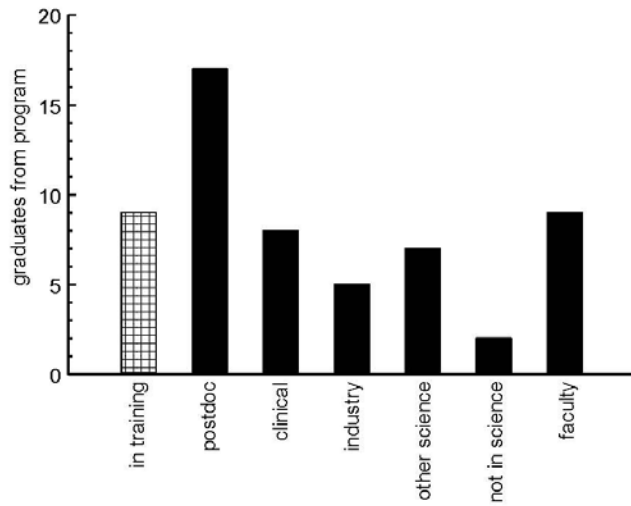
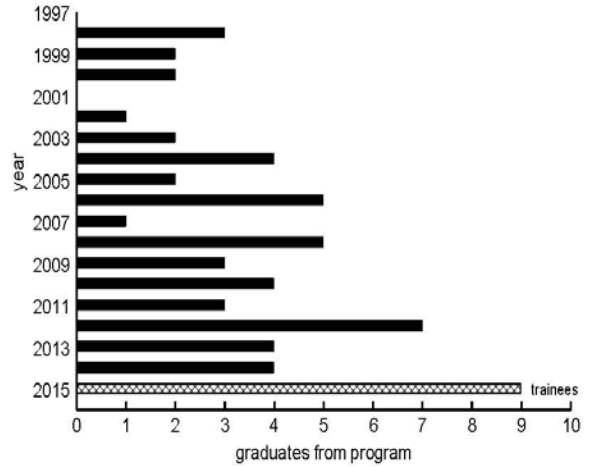
### **Faculty Load Implications**

This program will not change current faculty workload.

# Biomedical Sciences Graduate Program, Neuroscience Concentration

## Supplementary Information – Training History of the Department of Neurosciences

Degree Year	In Training	Postdoc	Clinical	Industry	Other Science Related	Not in science	Faculty
1998				1	1		1
1999					1		1
2000					1		1
2002					1		
2003					1	1	
2004			1	2		1	
2005		1		1			
2006		1			2		2
2007							1
2008		1	3		1		
2009			2				1
2010		3			1		
2011		2	1				
2012		5	1				1
2013		2			1		1
2014	1 (MD)	2		1			
2015+	6						



## **Biomedical Sciences Graduate Program, Neuroscience Concentration**

### **Reason for Request**

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# Biomedical Sciences Graduate Program, Neuroscience Concentration

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Neuroscience – 31 credit hours

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BIOM 509	Principles of Neurobiology	3
	<b>Select 2 of the following</b>	
BIOM 510	Physiology	3
BIOM 514	Immunobiology	3
BIOM 515	Cancer Biology	3
BIOM 522	Experimental Methods and Design	3

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