

**DEGREE/PROGRAM CHANGE
FORM C
Form Number: C1673**

Fields marked with * are required

Name of Initiator: Alec Reber **Email:** 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 PhD Biomedical Sciences- Cardiovascular Physiology Concentration
Select Category Concentration Degree Type 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 Cardiovascular Physiology 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 Cardiovascular Physiology 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 Cardiovascular Physiology 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, Cardiovascular Physiology Concentration

Proposed Effective Term

Summer 2016

Proposed Catalog Text

Cardiovascular Physiology – 21 credit hours

The Concentration in Cardiovascular Physiology conforms to the basic requirements of the BSGP and will lead to a Ph.D. degree. This concentration will provide an individualized program of upper level courses and scientific research in the laboratory of a faculty member within the Cardiovascular and Metabolic Disease (CVMD) Signature Research Program. The mission of the CVMD Signature program is to support and enhance the research activity of investigators at the University of New Mexico Health Sciences Center who are pursuing important, clinically relevant research questions focusing on Cardiovascular and Metabolic Disease. The training program is currently supported by an NHLBI-funded Cardiovascular training grant and is designed to ensure broad training in physiology with major research interests in vascular biology, hypertension, sleep apnea, pulmonary hypertension, hypoxia, diabetes, aging, heart disease, chronic kidney disease and stroke.

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 nd year)	1

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 Cardiovascular Physiology graduate students are required to take BIOM 510 - Physiology. 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
	REQUIRED	
BIOM 510	Physiology	3

Biomedical Sciences Graduate Program, Cardiovascular Physiology Concentration

	Select 2 of the following	
BIOM 509	Principles of Neurobiology	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
	REQUIRED	
BIOM 657	Adv T: Cellular and Systems Physiology	3
BIOM 659	Seminar: Regulatory & Systems Biology (1 hr/semester)	6
BIOM 505	ST: Biostatistics	2
	Select one of the following	
BIOM 537	Adv T: Ion Channels	1
PHARM 598	Cardiovascular Pharmacology – Special Topics	1

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 Cardiovascular Physiology Concentration is to enhance the ability and competitiveness of BSGP PhD students to pursue careers in Cardiovascular Physiology.
- Students graduate with a transcriptable "*Cardiovascular Physiology Concentration*" depicting the specific training achieved under the interdisciplinary program in Biomedical Sciences.
- The Cardiovascular Physiology Concentration helps prospective students identify key areas of research at UNM.
- The NHLBI Cardiovascular Training Grant has been funded since 1993 and over 20 faculty mentors have been involved in the successful history of the UNM Cardiovascular Physiology training program. The table below shows the number of current trainees and the current positions of trainee that completed the program within the past 15 years.

Biomedical Sciences Graduate Program, Cardiovascular Physiology Concentration

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 Cardiovascular Biology 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. Neuroscience 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 Cardiovascular Physiology 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, Cardiovascular Physiology Concentration

Supplementary Information – Training History of the CVMD Signature Program

		CURRENT POSITIONS OF PAST TRAINEES (within last 15 yrs)						
	Current Trainees	Postdoc	Faculty	Clinical	Industry	Science Education	Other Science Related	Non-Science Related
No. of trainee	13	14	15	12	8	3	5	4
Percentage		23%	25%	20%	13%	5%	8%	6%

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