KENT STATE UNIVERSITY
CERTIFICATION OF CURRICULUM PROPOSAL

Preparation Date **5-Oct-17** Curriculum Bulletin _____

Effective Date **Fall 2018** Approved by EPC _____

Department	**Biological Sciences**
College	**AS - Arts and Sciences**
Degree	**PHD - Doctor of Philosophy**
Program Name	**Biological Sciences-Physiology** Program Banner Code **PSIO**
Concentration(s)	Concentration(s) Banner Code(s)
Proposal	**Revise program**

Description of proposal:

We propose to change the name of the Biological Sciences-Physiology program to Biological Sciences-Integrative Physiology and Neurobiology.
This name change better reflects the direction of the field. [BOPN]

Does proposed revision change program's total credit hours? ☐ Yes ☒ No

Current total credit hours: Proposed total credit hours

Describe impact on other programs, policies or procedures (e.g., duplication issues; enrollment and staffing considerations; need; audience; prerequisites; teacher education licensure):

This is an existing program, we are requesting to update the name and some of the common coursework. This program already has an existing overlap with the Biomedical Sciences-Physiology and the Biomedical Sciences-Neurosciences programs. Thus, this overlap would continue, but the renaming and currciular changes are more in line with our current faculty and our future research focus within the Department.

Units consulted (other departments, programs or campuses affected by this proposal):

Yes, Biomedical Sciences has been consulted and a letter of support is included.

REQUIRED ENDORSEMENTS

_____ 10/5/17
Department Chair / School Director

_____ ___/___/___
Campus Dean (for Regional Campuses proposals)

_____ 10/20/17
College Dean (or designee)

_____ 10/31/17
Dean of Graduate Studies (for graduate proposals)

_____ ___/___/___
Senior Vice President for Academic Affairs and Provost (or designee)

Proposal Summary
Name and Curricular Updates to the Biological Sciences-Physiology Program [PhD PSIO]

Description of Action, Including Intended Effect

Since the initial establishment of our PhD program in Biological Sciences-Physiology the fields of biology have changed as has the research focus of our Department. In order to have highly qualified graduate applicants, which is directly connected to our ability to sustain high levels of research productivity, as measured by grants and peer-reviewed publications- we propose a degree title update Biological Sciences-Integrative Physiology and Neurobiology, as well as several curricular updates. The proposed title and curricular changes are consistent with our current and future research focus areas and will be more likely to appeal to the high quality students we are seeking.

Proposed Title Changes

- PhD in Biological Sciences- Physiology changed to ***Biological Sciences-Integrative Physiology and Neurobiology.***

Proposed Curricular Changes

- **We propose the following required course work:**

Required Coursework:

1. BSCI 6/70184 Responsible Conduct in Research and Teaching
2. BSCI 6/70491 Seminar in Physiology
3. BSCI 6/70103 Biological Statistics or a different graduate-level biochemistry class, as determined by advisor/guidance committee.

Recommended, but not required:

1. BSCI 5/70142 Bioenergetics, or a different graduate-level biochemistry class, as determined by advisor/guidance committee.
2. BSCI 5/70195 Seminar in Current Topics- this is a one-hour "seminar-style" specialty courses focused on the primary literature (would change each semester)

Beyond this, additional coursework will be customized depending on an individual student's research interests.

Impact on Other Programs, Course Offerings, Students, Faculty, Staff (e.g., duplication issues)

We already have overlap with a couple of graduate programs in Biomedical Sciences, including: Biomedical Sciences-Physiology and Biomedical Sciences-Physiology. This is not changing in such a way as to significantly alter this overlap, but rather to increase our competiveness in the market. As of now, the Biological Sciences-Physiology program receives very few applications each year. With this name change and curricular updates this program will be more consistent with developments within the field as well as more aligned with the research we do in the Department. The Biomedical

BSCI 23

Sciences Director, Dr. Ernie Freeman, has provided a letter of support.

Thus, we do not anticipate that these changes will negatively impact the Biomedical Sciences program and should not have any impact on course offerings, students, faculty or staff.

Fiscal, Enrollment, Facilities and Staffing Considerations

There are no issues here.

Evidence of Need and Sustainability if Establishing

N/A

Provisions for Phase-Out if Inactivating

N/A

Timetable and Actions Required: *a chronology of actions required to approve the proposal with an anticipated implementation date for each action*

Departmental Approval	Spring 2017
A&S CCC Approval	Fall 2017
EPC Approval	Fall 2017
Effective Date	Fall 2018

BSCI 24

KENT STATE UNIVERSITY

May 25, 2017

Dr. Heather Caldwell
Associate Professor and Graduate Coordinator
Department of Biological Sciences
Kent State University
253C Cunningham Hall
Kent, OH 44242-0001

Dear Dr. Caldwell:

Thank you for allowing me the opportunity to review the changes to the BSCI PhD- Physiology program that have been approved by the graduate faculty in the Department of Biological Sciences. As these changes are being made to an existing program to better reflect the faculty research areas of the Department of Biological Sciences, I do not see that the proposed name change or the proposed curricular changes will negatively impact the courses or curriculum in the Biomedical Sciences program. As before, our two programs will continue to work together to help attain the highest quality graduate students for the faculty in Biological Sciences.

Good luck with your proposed changes.

Sincerely,

Dr. Ernie Freeman
Director
School of Biomedical Sciences
Associate Professor
Department of Biological Sciences
efreema2@kent.edu

BSCI
25

BIOLOGICAL SCIENCES - ~~PHYSIOLOGY~~ Integrative Physiology and Neurobiology - PH.D.

College of Arts and Sciences
Department of Biological Sciences
256 Cunningham Hall
Kent Campus
330-672-3613
kentbiology@kent.edu
www.kent.edu/biology

Description

The Ph.D. degree in Biological Sciences–~~Physiology~~ Integrative Physiology and Neurobiology is the study of a broad range of topics, including endocrinology, neuroscience, immunology, reproductive biology and other regulatory systems. Students have access to resources for physiological research, including a vivarium, tissue culture facility, confocal microscope/visualization facility, laser capture microscope, genomics and proteomics facilities.

FULLY OFFERED AT:

Kent Campus

Admission Requirements

Official transcript(s)

GRE scores

Goal statement

Three letters of recommendation

A list of up to five potential faculty advisors

Baccalaureate in the natural sciences, with a strong background in biology and related subjects such as chemistry and mathematics

English Language Proficiency Requirements for International Students: All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 587 TOEFL score (94 on the Internet-based version), minimum 82 MELAB score, minimum 7.0 IELTS score or minimum 65 PTE Academic score. For more information on international admission, visit the **Office of Global Education's admission website**. **Effective spring 2018.**

Deficiencies at the time of admission shall be rectified during the first year of graduate study. Before admission can be completed, a prospective student must be accepted by a faculty member in the program who will act as adviser.

For more information about graduate admissions, please visit the **Graduate Studies** website.

Program Learning Outcomes

Graduates of this program will be able to:

1. Understand advanced biological concepts beyond the scope of the typical undergraduate degree and to increase the depth of their knowledge through coursework and hands-on experiences.
2. Apply scientific principles and appreciate work outside of their particular field.
3. Effectively communicate about science with colleagues as well as those outside of the student's area of expertise.
4. Develop the necessary laboratory skills that will allow testing of hypotheses.

BSCI 60184/70184 Responsible Conduct in Research and Teaching-Biological Sciences[1] 2
BSCI 60491/70491 Seminar in Physiology[2] 3-6
BSCI 60103/70103 Biological Statistics[3] 3
BSCI 80199 Dissertation[4] 30
Courses selected in consultation with academic faculty advisor[5] 49-52
Departmental Seminar Presented by the Student[6]

[1]Students are required to enroll in BSCI 60184/70184 their first semester (or the following fall semester for those starting their studies in the spring semester).
[2]Pre-candidacy students must enroll in BSCI 60491/70491 each semester (repeatable for credit).
[3]Course substitutions for a different graduate-level statistics class can be made if deemed appropriate by the advisor/guidance committee.
[4]same as what is now "3" in the catalog
[5]It is recommended that students enroll in BSCI 50195/70195 for coursework on selected current topics and BSCI 50142/70142 for Bioenergetics. Additional coursework should provide the necessary skills and/or knowledge base that will aid in the completion of the student's research project and will be beneficial for their professional development. At least 20 hours of formal graded coursework is required.
[6]Students are required to present at least one departmental seminar about their work.

Program Requirements

BSCI 70184	RESPONSIBLE CONDUCT IN RESEARCH AND TEACHING-BIOLOGICAL SCIENCES [1]	0-2
BSCI 70491	SEMINAR IN PHYSIOLOGY [2]	1
BSCI 80199	DISSERTATION I [3]	30
Courses selected in consultation with academic facutly advisor [4]		20-30
Departmental Seminar Presented by Student [5]		
Minimum Total Credit Hours for Post-Baccalaureate Students		**90**
Minimum Total Credit Hours for Post-Master's		**60**

1 Students who will serve as teaching assistants are required to take BSCI 70184 their first semester (or the following fall semester for those starting their studies in spring semester).

2 Students must enroll in BSCI 70491 each semester (repeatable for credit).

3 Doctoral candidates, upon admission to candidacy, must register for BSCI 80199 for a total of 30 hours. It is expected that doctoral candidates will continuously register for BSCI 80199, and thereafter BSCI 80299, each semester, including one term each summer, until all requirements for the degree have been met. It is expected that candidates will present the results of their research in a defense open to students and faculty, at which the dissertation will be presented an defended before the dissertation committee, with not more than one negative vote, in order to be recommended to the Department of Biological Sciences and the College of Arts and Sciences for degree conferral.

4 Students must take at least one course in each of the following areas: physiology, cell biology/molecular biology (such as eukaryotic cell biology) and biochemistry (such as bioenergetics). Students are required to enroll in at least one graduate level statistics course. Students must complete the required OSHA Training Session prior to working with radioactive materials. Students should enroll in additional courses that provide necessary skills for completion of research projects and that will be beneficial for their professional development. In addition, doctoral students are expected to

include coursework in other appropriate areas to insure a breadth of training.

5. Students are required to present at least one departmental seminar about their research.

CANDIDACY AND PROSPECTUS

After completing their coursework, students will complete the doctoral program by being admitted to candidacy, by proposing a research project to the faculty and by completing and defending that research with a written dissertation before a faculty committee.

Students are admitted to doctoral candidacy following successful completion of both written and oral candidacy examinations. These exams are based on prior coursework and coursework taken in this graduate program as determined by the students' academic Guidance Committee, which must consist of at least three eligible faculty members. The advisor(s) and a majority of members of the Guidance Committee must be members of the appropriate graduate program. This committee is responsible for determining the students' academic curriculum and for administering the candidacy exams.

Following completion of the candidacy exam, doctoral students must successfully prepare, present and a defend a formal prospectus of the research project before the dissertation committee.

Ohio | Department of Higher Education

John R. Kasich, Governor
John Carey, Chancellor

CHANGE REQUEST:
NAME AND CURRICULUM MODIFICATION

Date of submission: October 5, 2017

Name of institution: Kent State University

Previously approved title: Biological Sciences- Physiology-PhD

Proposed new title: Biological Sciences- Integrative Physiology and Neurobiology-PhD

Proposed implementation date of the request: Fall 2018

Date that the request received final approval from the appropriate institutional committee:
[DATE] (Kent State University Board of Trustees)

Primary institutional contact for the request

Name:	Melody J. Tankersley, PhD
Title:	Senior Associate Provost and Dean of Graduate Studies
Phone:	330-672-8613
E-mail:	mtankers@kent.edu

Educator Preparation Programs:

Leads to licensure:	No	[change to Yes if true]
Leads to endorsement:	No	

Explain the rationale for name and curricular changes.

Since the initial establishment of our PhD program in Biological Sciences-Physiology the fields of biology have changed as has the research focus of our Department. In order to have highly qualified graduate applicants, which is directly connected to our ability to sustain high levels of research productivity, as measured by grants and peer-reviewed publications- we propose a degree title update for Biological Sciences-Physiology as well as several curricular updates. The proposed title and curricular changes are consistent with our current and future research focus areas and will be more likely to appeal to the high quality students we are seeking.

Describe how the name and curricular changes will affect students in the current program.

The name change is still inclusive of the students we currently have in the program and thus will have no impact on current students in the program. Current students will be able to complete their program requirements as the courses will continue to be offered.

Describe any faculty, administrative or support service changes occurring along with the name and curriculum changes.

No support changes are required

BSCI
30

Provide evidence that the appropriate accreditation agencies been informed of the proposed change (if applicable).
n/a

Describe how the effectiveness of the new curriculum will be monitored over time.

The effectiveness of our new curriculum will be evaluated by the quality of our applicant pool as well as the successful completion of our degree program. The first can be evaluated by average GPAs, GRE scores, and percentage of applicants with Master's degrees. The second can be evaluated by the time to degree completion.

Submit a comparison of the currently authorized curriculum and the proposed curriculum.

Previously Authorized Curriculum	Credit Hours	Proposed Curriculum	Credit Hours
Biochemistry requirement	3-4		
Responsible Conduct in Research and Teaching	0-2	Responsible Conduct in Research and Teaching, BSCI 6/70184	2
Seminar each semester until candidacy	1	Seminar each semester until candidacy, BSCI 6/70491	3-6
Statistics	3-4	Biological Statistics, BSCI 6/70103	3
Additional electives as appropriate**	20-30	Additional electives as appropriate**	49-52
Dissertation I, BSCI 80199	30	Dissertation I, BSCI 80199	30

*60 hours post masters or 90 hours past baccalaureate degrees.
** 20 hours of formal graded coursework is required and BSCI 5/70195 (Current Topics) and BSCI 5/70142 (Bioenergetics) are recommended.

Kent State University verifies that the information in this request is truthful and accurate.

Respectfully,

Todd A. Diacon, PhD
Senior Vice President for Academic Affairs and Provost

BSCI
31

Transmittal memo

Date: Sept 26, 2017
To: Mary Ann Haley, Assoc Dean for Curriculum
From: Daniel Holm, Chair of Geology
Re: Geology Curriculum Proposal

The Faculty in the Department of Geology have approved the following proposed curriculum change:

Add a GIS option (Geog 49070) to the Physics II or Chem II requirement for the GEOL BS degree.

Daniel K Holm

GEOL