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- Cell Biology** Program Banner Code **CELL**
Concentration(s)	Concentration(s) Banner Code(s)
Proposal	**Revise program**

Description of proposal:

We propose to change the name of the Biological Sciences-Cell Biology program to Biological Sciences-Cell Biology and Molecular Genetics.
This name change better reflects the direction of the field. [BSCM]

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

Current total credit hours: 90/60 Proposed total credit hours 90/60

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-Cellular and Molecular Biology program. Thus, this overlap would continue, but the renaming and curricular 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

Department Chair / School Director	10/5/17
Campus Dean (for Regional Campuses proposals)	___/___/___
College Dean (or designee)	10/20/17
Dean of Graduate Studies (for graduate proposals)	10/31/17
Senior Vice President for Academic Affairs and Provost (or designee)	___/___/___

Proposal Summary
Name Change and Curricular Updates to the Biological Sciences-Cell Biology PhD Program [PhD CELL]

Description of Action, Including Intended Effect

Since the initial establishment of our PhD program in Biological Sciences-Cell Biology 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 to Biological Sciences-Cell Biology and Molecular Genetics, 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 Change

- PhD in Biological Sciences-Cell Biology changed to ***Biological Sciences-Cell Biology and Molecular Genetics.***

Proposed Curricular Changes

- **We propose the following required coursework:**

Required Coursework:

1. BSCI 5/70143 Eukaryotic Cell Biology + 6/70144 Selected Readings in Eukaryotic Cell Biology
2. BSCI 6/70184 Responsible Conduct in Research and Teaching
3. BSCI 6/70491 Seminar in Physiology
4. BSCI 6/70103 Biological Statistics or a different graduate-level statistics class, as determined by advisor/guidance committee.
5. BSCI 5/70142 Bioenergetics or a different graduate-level biochemistry class, as determined by advisor/guidance committee.

Recommended, but not required:

1. 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)

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

We already have an overlap with a graduate program in Biomedical Sciences, specifically, Biomedical Sciences-Cell and Molecular Biology. Our program 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-Cell Biology 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 Sciences Director, Dr. Ernie Freeman, has provided a letter of support.

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Thus, we do not anticipate that these proposed 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

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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-Cell Biology 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

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BIOLOGICAL SCIENCES - CELL BIOLOGY and MOLECULAR GENETICS - 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–Cell Biology and Molecular Genetics is an individualized program of study and research that prepares students for career opportunities in teaching and research in academic, governmental and industrial settings. A core series of courses sets a rigorous foundation in theory, experimental design and technical knowledge of contemporary investigations at the cellular level of organization. Areas of research include developmental biology, cellular and developmental neuroscience, immunology, reproductive biology, cellular endocrinology and molecular genetics.

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 minimum of two years of chemistry, one year of calculus, one year of physics and two years of biology, including genetics, plant or animal physiology and morphology. Deficiencies at the time of admission shall be rectified during the first year of graduate study

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.**

Before admission can be completed, a prospective student must be accepted by a faculty member in the program who will act as advisor.

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]	
BSCI 40143/70143 Eukaryotic Cell Biology	
BSCI 60144/70144 Selected Readings in Eukaryotic Cell Biology	3
BSCI 60103/70103 Biological Statistics[3]	1
BSCI 50142/70142 Bioenergetics[3]	3
BSCI 80199 Dissertation[4]	3
Courses selected in consultation with academic faculty advisor[5]	30
Departmental Seminar Presented by the Student[6]	42-45

[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 or biochemistry 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. 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.

Major Requirements

BSCI 70184	RESPONSIBLE CONDUCT IN RESEARCH AND TEACHING-BIOLOGICAL SCIENCES [1]	~~0-2~~ 2
BSCI 70491	SEMINAR IN PHYSIOLOGY [2]	1
BSCI 80199	DISSERTATION I [3]	30
Courses selected in consultation with academic facutly advisor [4]		27-30
Departmental Seminar Presented by Student [5]		
Minimum Total Credit Hours for Post-Baccalaureate Students		**90**
Minimum Total Credit Hours for Post-Master's Students		**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 Pre-candidacy 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: 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. Students with coursework deficits in curricula of prior degrees should enroll in appropriate graduate-level courses (permission must be obtained form the department to enroll in undergraduate-level courses).

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- Cell Biology-PhD

Proposed new title: Biological Sciences- Cell Biology and Molecular Genetics-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-Cell Biology 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 Cell Biology 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.

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No support changes are required

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	Bioenergetics BSCI 5/70142	3
A course in cell biology/molecular biology	3-4	Eukaryotic Cell Biology + Readings, BSCI 5/70143 and 6/70144	4
Responsible Conduct in Research and Teaching, BSCI 6/70184	0-2	Responsible Conduct in Research and Teaching, BSCI 6/70184	2
Seminar each semester until candidacy	3-6	Seminar each semester until candidacy BSCI 6/70491	3-6
Statistics	3-4	Biological Statistics, BSCI 6/70103	3
Additional electives as appropriate	>9	Additional electives as appropriate**	42-45
Dissertation I, BSCI 80199	30	Dissertation I, BSCI 80199	30

* 60 hours past masters or 90 hours past baccalaureate degrees.
** 20 hours of formal graded coursework is required

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

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