CHANGE DOCTORAL DEGREE PROGRAM FORM

GENERAL INFORMATION

College:	Medicine	Department:	Toxicology and Cancer Biology
Current Major Name:	Toxicology and Cancer Biology	Proposed Major Name:	Toxicology and Cancer Biology
Current Degree Title:	Ph.D.	Proposed Degree Title:	Ph.D.
Current Formal Option(s):	n/a	Proposed Formal Option(s):	n/a
Current Specialty Fields w/in Formal Option:	n/a	Proposed Specialty Fields w/in Formal Option:	n/a

Date of Contact with Associate Provost for Academic Administration[1]: 4/25/2017

Bulletin (yr & pgs):	_____	CIP Code[1]:	26.1004	Today's Date:	5/9/2017

Accrediting agency (if applicable): n/a

Requested Effective Date: ☒ Semester following approval. OR ☐ Specific Date[2]: _____

Dept Contact Person:	David Orren	Phone:	323-3612	Email:	dkorre2@uky.edu

CHANGE(S) IN PROGRAM REQUIREMENTS

	Current	*Proposed*
1. Number of transfer credits allowed:	9	*9*
(Maximum is Graduate School limit of total of 9 hours (or 25% of the credit hours needed to fulfill the pre-qualifying residency requirement.)		
2. Residence requirement:	no change	*no change*
(Minimum of one year before and after Qualifying Exams.)		
3. Language(s) and/or skill(s) required:	no	*no*
4. Provisions for monitoring progress and termination criteria:	yes	*yes*
5. Total credit hours required:	36	*36*
6. Required courses:	19	*18*
7. Required distribution of courses within program:	36 credit hrs (prequalifying) including 19 required courses for 33 credit hr and at least 1 elective for a minimum of 3 credit hours.	*36 credit hrs (prequalifying) including 18 required courses for a minimum of 30 or 31 credit hr and electives for a minimum of 6 or 5 credit hrs, respectively (see attachment for details).*
8. Minor area or courses outside program required:	8	*7*

[1] Prior to filling out this form, you MUST contact the Associate Provost for Academic Administration (APAA). If you do not know the CIP code, the APAA can provide you with that during the contact.

[2] Programs are typically made effective for the semester following approval. No program will be made effective until all approvals are received.

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9.Distribution of courses levels required (400G-500/600-700):	(400G-500) 2 credit hr (600-700) 31 credit hr plus 3 credit hr accepted elective	*(400G-500) 0 or 2 credit hr* *(600-700) 29 or 31 credit hr* *plus 5 credit hr electives* *(see attachment for details).*
10. Qualifying examination requirements:	Yes	*Yes*

11. Explain whether the proposed changes to the program (as described in numbers 1 through 10) involve courses offered by another department/program. Routing Signature Log must include approval by faculty of additional department(s).

The MI616 course required currently would no longer be an absolute requirement, although most Ph.D. students would likely still enroll in this course under the proposed, more flexible curriculum.

12. Other requirements not covered above:

no changes to admission, progression or graduation requirements.

13. What is the rationale for the proposed changes? If the rationale involves accreditation requirements, please include specific references to those requirements.

The proposed change to reduce the number of required courses by one (2-3 credit hours) and increase the elective courses by one (to total at least 5 credit hr) will allow our Ph.D. students to have more flexibility in crafting their education to align better with their research and career goals (see attachment for details). The proposed curriculum would require students to take 3 of 4 "core" courses, one of which is MI616; presumably, most of our Ph.D. students will still enroll in MI616 as a required course (or an elective). Notably, two of those core courses (MI616 and TOX680) are 3 credit hr, while the other two (TOX509 and TOX663) are 2 credit hr courses. So, if a student decides to not take one of the 2 credit hr courses as a requirement, the required credit hours would only drop to 31; however, if they decided not to take one of the 3 credit hr courses, it would drop to 30 credit hr. The credit hr for electives would adjust accordingly so that the minimum total credit hr requirement stays at 36 hr.

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Signature Routing Log

General Information:

Proposal Name: Toxicology and Cancer Biology Ph.D. curriculum update 2017

Proposal Contact Person Name: David Orren Phone: 323-3612 Email: dkorre2@uky.edu

INSTRUCTIONS:
Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Toxicology and Cancer Biology Chair and Faculty	3/27/2017	Daret St. Clair / 257-3956 / daret.stclair@uky.edu	
		/ /	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision[3]
Undergraduate Council			
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

[3] Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

GOAL: To revise the TOX Ph.D. curriculum requirements to increase educational flexibility

Model Agreed upon at TOX Curriculum Committee Meeting of 1/6/17 and approved by the TOX faculty (see page 2)
Allow choice (any 3 of 4) between current 2nd year required courses (TOX509, TOX663, TOX680 and MI616), and increase the elective requirement to a minimum of 5 credit hours--i.e., students will be able to choose 2 electives rather than 1.

Current Curriculum for Ph.D. in TOX/Cancer Biology

Pre-qualifying

Course No: Title	Credit Hour
IBS601: Biomolecules and Metabolism	3
IBS602: Biomolecules and Molecular Biology	3
IBS603: Cell Biology	3
IBS606: Integrated Biomedical Sciences	3
IBS608: Special Topics in IBS (4 x 0.5 h mini-courses)	2
IBS610: Critical Scientific Readings	2
IBS611: Practical Statistics	1
TOX770-001: Toxicology Seminar[1]	0
TOX770-002: Toxicology Seminar/Orientation-Journal Club	1
TOX600: Ethics in Scientific Research	1
TOX663: Drug Metabolism and Disposition	2
TOX680: Molecular Toxicology and Carcinogenesis	3
TOX780: Special Problems in Toxicology/Grant Writing	2
TOX509: Environmental and Regulatory Toxicology	2
TOX790: Research in Toxicology (or IBS609)[2]	2
MI616: Biology and Therapy of Cancer	3
Elective related to Toxicology or Cancer Biology (or subject to DGS approval)	3
	Total: 36

Post-qualifying

TOX767: Dissertation Residency Credit[3]	2/semester

Footnotes:
[1]Ph.D. students register for TOX770-001 until residency is completed and again in the semester in which they present a seminar (required for the degree).
[2]Ph.D students entering directly into TOX/Cancer Biology program register for TOX790 for 1 h credit in their first two semesters in the program. Similarly, IBS students register for IBS609 for 1 h credit in their first two semesters.
[3]Ph.D. students register for TOX767 each semester post-residency until successful completion of their dissertation.

PROPOSED PRE-QUALIFYING CURRICULUM for TOXICOLOGY and CANCER BIOLOGY Ph.D. Degree

Proposed Common Core (Pre-qualifying)			Credit Hour
IBS601: Biomolecules and Metabolism			3
IBS602: Biomolecules and Molecular Biology			3
IBS603: Cell Biology			3
IBS606: Integrated Biomedical Sciences			3
IBS608: Special Topics in IBS (4 x 0.5 h mini-courses)			2
IBS610: Critical Scientific Readings			2
IBS611: Practical Statistics			1
TOX600: Ethics in Scientific Research			1
TOX770-001: Toxicology Seminar[1]			0
TOX770-002: Toxicology Seminar/Orientation-Journal Club			1
TOX780: Special Problems in Toxicology/Grant Writing			2
TOX790: Research in Toxicology (or IBS609)[2]			≥3*
		Subtotal	**≥24**
Additional requirements: students must take at least 3 of the following 4 courses			
TOX509: Environmental and Regulatory Toxicology	Fall		2
TOX663: Drug Metabolism and Disposition	Fall		2
TOX680: Molecular Toxicology and Carcinogenesis	Spring		3
MI616: Biology and Therapy of Cancer	Spring		3
		Subtotal	≥7
2 or more elective courses			≥5
		TOTAL	≥36

List of Recommended Electives

TOX509: Environmental and Regulatory Toxicology [Jones] (2)
TOX663: Drug Metabolism and Disposition [Wang] (2)
TOX680: Molecular Toxicology and Carcinogenesis [Yang] (3)
TOX780: Systems Biochemistry [Lane]
MI616: Biology and Therapy of Cancer [Rangnekar] (3)
PLS560/TOX560 Ecotoxicology [Unrine] (4)
PHA622: Molecular Drug Targets and Therapeutics (in Cancer) [Piascik] (1)

List of Acceptable Electives

ANA516: Select Topics in Advanced Neuroscience; Brain Body Mind [Gash] (3)
ANA605/PGY605: Neurobiology of CNS Injury and Repair [Hall] (3)
ANA636: Advanced Neuroanatomy [Maley et al.] (5)
BCH604: Structural Biology [Fried] (3)
BCH610: Biochemistry of Lipids and Membranes [Waechter; Whiteheart] (3)
BCH611: Biochemistry and Cell Biology of Nucleic Acids [Noonan] (3)
BCH612: Structure and Function of Proteins/Enzymes [Zhu] (3)
BCH615/BIO615/MI615: Molecular Biology [Peterson] (3)
BIO520/INF520: Bioinformatics [Smith] (3)
BIO618: Molecular Neurobiology (4)
BIO685/MI685: Immunobiology, Infection and Inflammation [Kaplan et al.](3)
CHE565: Environmental Chemistry [Guzman] (3)
CHE666: Proteomics and Mass Spectrometry
CPH601: Environmental Health [Mannino] (3)
CPH604: Public Health and Disease Prevention [Eddens] (3)
CPH605: Epidemiology [Fleming] (3)
CPH615: Cancer Epidemiology [Coker] (3)
CPH620: Occupational and Environmental Health [Sanderson] (3)
HES600: Research Methods in Human Environmental Science [Easter] (3)
PGY617: Physiological Genomics [McClintock] (2)
PHA649: Molecular Pharmacology (3)
PHR664: Theory and Practice of Drug Metabolism (3)