



The University of Georgia

Office of the Vice President for Instruction

October 20, 2010

UNIVERSITY CURRICULUM COMMITTEE – 2010-2011

Mr. David E. Shipley, Chair

Agricultural and Environmental Sciences - Dr. T. Dean Pringle

Arts and Sciences - Dr. Roxanne Eberle (Arts)

Dr. Rodney Mauricio (Sciences)

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Environment and Design - Mr. Scott S. Weinberg

Family and Consumer Sciences - Dr. Jan M. Hathcote

Forestry and Natural Resources - Dr. Sarah F. Covert

Journalism and Mass Communication - Dr. Alison F. Alexander

Law – No representative

Pharmacy - Dr. Keith N. Herist

Public and International Affairs - Dr. Jerome S. Legge

Public Health – Dr. Marsha M. Black

Social Work - Dr. Stacey R. Kolomer

Veterinary Medicine - Dr. K. Paige Carmichael

Graduate School - Dr. Malcolm R. Adams

Undergraduate Student Representative – Mr. Stephen Thompson

Graduate Student Representative – No representative

Dear Colleagues:

The attached proposal for the following Areas of Emphasis under the major in Toxicology (Ph.D.) will be an agenda item for the October 27, 2010, Full University Curriculum Committee meeting:

Area of Emphasis in Ecological Toxicology

Area of Emphasis in Computational Toxicology

Area of Emphasis in Mechanistic Toxicology

Sincerely,

David E. Shipley, Chair
University Curriculum Committee

cc: Professor Jere W. Morehead
Dr. Laura D. Jolly

Riverbend South, Room 161
110 Riverbend Road
Athens, GA 30602



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Georgia Genomics Facility

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30 July, 2010

Dr. Maureen Grasso, Dean of the Graduate School
UGA Curriculum Committee

Dear Dr. Grasso and Committee Members,

Enclosed is the formal **Proposal for Areas of Emphasis** within the recently updated and approved **Ph.D. in Toxicology** curriculum. The proposed areas of emphasis are exactly as was stated in the updated and approved curriculum. Thus, this proposal is simply to follow the new procedures now in place.

Copies of the updated and approved curriculum, as well the letter of acceptance are included for your reference.

Please feel free to contact me if you have any questions.

Thank you,

Travis C. Glenn, PhD
Associate Professor, Department of Environmental Health Science
Chair, Toxicology Curriculum Committee
University of Georgia
Athens, GA 30602
Phone: (706) 583-0662
e-mail: TravisG@uga.edu

PROPOSAL FOR AREAS OF EMPHASIS

School/College: Interdisciplinary

Department/Division: Toxicology Program

Major: PhD Toxicology

Major Requirements:

Core Toxicology Requirement for all ITP Ph.D students: 9 credit hours**

- PHRM(VPHY)(EHSC) 6910 Introductory Toxicology 3 h
- BIOS 7010 or BIOS 7020 Introductory Biostatistics I or II (or equivalent) 3 h
- VPHY 8960 Molecular Toxicology 3 h

****Pre-requisite:**

- Biochemistry course: BCMB 6000 level (or equivalent)

Proposed Areas of Emphasis for the ITP: (12 credit hours minimum)

- **Ecological Toxicology**
 - Fundamentals of Ecotoxicology
FISH(EHSC)(ECOL)(ENTO)(VPHY)(PHRM) 8350 3 h
 - Quantitative Ecological Toxicology EHSC 8630-8630L 4 h
 - Aquatic Toxicology EHSC(ECOL)(FISH)(WASR) 8610 3 h
 - Biomarkers: Public Health, Clinical, and Environmental Toxicology Applications
EHSC(EPID) 8250 3 h
 - Comparative Mammalian Physiology (fall) VPHY 6090 3 h
 - Comparative Mammalian Physiology (spring) VPHY 6100 3 h
- **Computational Toxicology:**
 - Environmental Risk Assessment and Communication EHSC 8510-8510L 3 h
 - Fundamentals of Chemical and Microbial Risk Assessment EHSC 8110 3 h
 - Predictive Toxicology Using Mathematical Models EHSC 8220-8220L 4 h
 - Pharmacokinetics PHRM 8260 4 h
 - Contemporary Concepts in Pharmacokinetics PHRM 8270 3 h
 - Comparative Mammalian Physiology (fall) VPHY 6090 3 h
 - Comparative Mammalian Physiology (spring) VPHY 6100 3 h
- **Mechanistic Toxicology:**
 - Comparative Mammalian Physiology (fall) VPHY 6090 3 h
 - Comparative Mammalian Physiology (spring) VPHY 6100 3 h
 - Organ Systems Toxicology PHRM(VPHY) 8940 4 h
 - Developmental and Reproductive Toxicology EHSC 8550 3 h
 - Occupational and Environmental Diseases EHSC 8400 3 h
 - Cancer Etiology and Prevention EHSC 8210 3 h

Dissertation Research (9000) and Elective Courses: 6 or more credit hours Students will choose from one of the three Areas of Emphasis. To fulfill the requirement for their chosen Area, they must take a minimum of 3 courses (9-12 credit hours) from the courses listed for that emphasis. In addition, students will be required to choose at least one additional course from one of the remaining two Areas of Emphasis.

Proposed starting date: 16 August 2010

Signatures:

Julius A. Gifford
Department Head

Toxicology Program
Department

7/30/2010
Date

Thomas C. Flynn
Toxicology Curriculum
Committee Chair

ΣHS/CPH
School/College

7/30/2010
Date

Maureen Grasso/KH
Dean of Graduate School

8/13/10
Date

University Curriculum Committee Chair

Date



The University of Georgia

Interdisciplinary Toxicology Program

February 23, 2010

To: Dr. Maureen Grasso, Dean, Graduate School
Re: Submission of proposed revision to PhD Curriculum

Approved 3/1/10

Dear Dean Grasso,

The Interdisciplinary Toxicology has submitted a proposed revision to its PhD curriculum. Below please find an overview of these revisions. Thank you for your consideration and support.


Overview and comparison of existing and proposed PhD curricula.

The existing PhD program consists of two 'tracks', the Human/Animal Toxicology track, and the Environmental Toxicology track. The current curriculum is heavy in coursework. There are four core course requirements for all students (15-17 credit hours). In addition, each track has its 'core' requirements, as well as suggested elective courses. The Environmental Toxicology track requires an additional 14 hours of core courses, plus electives; while the Human Animal Track requires an additional 13-15 hours of core courses, plus electives. Further, the existing curriculum as written is unclear, not to mention outdated, as it was established approximately 14 years ago. Students in the Environmental Toxicology track express frustration at taking courses that they feel are not relevant to their field of study (e.g. 'organ systems toxicology'), while not having enough access to/time for more relevant environmental courses. Students in the Human/Animal track are concerned that there is too much overlap in the core courses offered for that track. Students in both tracks as well as ITP faculty express concern about the heavy course load requirement.

The goals of the curriculum revision are to reduce and balance the required course load for all students, provide the flexibility in course choice necessary to meet their future needs as toxicologists, and increase the time available to spend in the laboratory pursuing their research projects. To this end, the two tracks would be eliminated. In their place we are proposing 3 core courses (revamped Introductory Toxicology; Molecular Toxicology; Biostatistics; for a total of 9 credit hours) and 3 Areas of Emphasis. The Areas of Emphasis are chosen based on the strength of the faculty within the program, and the current and future trends in the field of toxicology. They include Ecological Toxicology, Computational Toxicology, and Mechanistic Toxicology. All PhD students will begin their program of study with the same three core courses to provide the basis upon which the rest of their program of study will be built. Students will choose an Area of Emphasis, and will be required to take a minimum of three courses (9-12 cr) from that area. This will provide the students the ability to strengthen their knowledge base within their area of interest. Students will also take at least one additional course from one of the two remaining Areas of Emphasis (3-6 cr). This will enhance the interdisciplinary nature of their program of study. Students will also take six additional credit hours from electives of their choosing in consultation with their advisory committee. We feel that this proposal best meets our goals of reducing course load and providing students with a flexible, interdisciplinary curriculum. As proposed, this curriculum meets all of the Graduate School requirements for a PhD program of study. The proposed curriculum has been approved unanimously by the ITP faculty and Executive Committee.

Sincerely,


Julie A. Coffield, Assoc Professor
ITP Graduate Coordinator


Jeffrey W. Fisher, Professor
ITP Director

**Ph.D in Toxicology
New Curriculum Proposal
Spring 2010**

Ph.D IN TOXICOLOGY

Doctoral students in the Interdisciplinary Toxicology Program (ITP) shall choose an Area of Emphasis prior to matriculation. For administrative purposes only, ITP students are currently 'housed' in the academic department of their faculty mentor. However, ITP students are only required to meet the ITP program of study (coursework) detailed below. ITP students are not required to meet home department programs of study in addition to ITP requirements.

1. Proposed Core Toxicology Requirement for all ITP Ph.D students: 9 credit hours**

PHRM 6910	Introduction to Toxicology	3 h
BIOS 7010 or 20	Introduction to Biostatistics I or II (or equivalent)	3 h
VPHY 8960	Molecular Toxicology	3 h

****Pre-requisite:**

- Biochemistry course: BCMB 6000 level (or equivalent)
Please note: Will not count toward the 30 credit hours for the program of study.

2. Proposed Areas of Emphasis for the ITP: (12 credit hours minimum)

- Ecological Toxicology
- Computational Toxicology
- Mechanistic Toxicology

Students will choose from one of the three Areas of Emphasis. To fulfill the requirement for their chosen Area, they must take a minimum of 3 courses (9-12 credit hours) from the courses listed for that emphasis. In addition, students will be required to choose at least one additional course from one of the remaining two Areas of Emphasis.

Ecological Toxicology

- | | | | |
|---|--------------|-----|-----|
| • EcoToxicology | FORS 8350 | 3 h | |
| • Quantitative EcoToxicology | EHSC 8630/L | 4 h | |
| • Aquatic Toxicology | EHSC 8610(L) | 3 h | |
| • Biomarkers | EHSC 8250 | 3 h | |
| • Comparative Mammalian Physiology (fall) | VPHY 6090 | 3 h | } ★ |
| • Comparative Mammalian Physiology (spring) | VPHY 6010 | 3 h | |

Computational Toxicology:

- Environmental Risk Assessment & Communication EHSC 8510/L 3 h

- Chemical and Microbial Risk Assessment EHSC 8110 3 h
- Predictive Toxicology Using Mathematical Models EHSC 8220 4 h
- Pharmacokinetics PHRM 8260 4 h
- Contemporary Concepts in Pharmacokinetics PHRM 8270 3 h
- Comparative Mammalian Physiology (fall) VPHY 6090 3 h
- Comparative Mammalian Physiology (spring) VPHY 6010 3 h } ★

Mechanistic Toxicology:

- Comparative Mammalian Physiology (fall) VPHY 6090 3 h
- Comparative Mammalian Physiology (spring) VPHY 6010 3 h } ★
- Organ Systems Toxicology PHRM 8940 4 h
- Developmental & Reproductive Toxicology EHSC 8550 3 h
- Occupational & Environmental Diseases EHSC 8400 3 h
- Cancer Etiology and Prevention EHSC 8210 3 h

★VPHY 6090/6010 are offered in series covering different body systems; students may take one or both in the series, however, only one course can be used towards the emphasis requirement.

Dissertation Research (9000) and Elective Courses: 6 or more credit hours

Elective courses should be chosen in conjunction with the student’s Faculty Mentor and Advisory Committee. A sample of potential elective courses is provided below:

- Genome Technologies EHSC 8450 3 h
- Cell Pathology VPAT 8020 4 h
- Mammalian Cell Physiology VPHY 8010 3 h
- Design of Experiments for Research Workers STAT 8200 3 h
- Microbial Quantitative Risk Assessment EHSC 8450/L 4 h
- Drug Targets in Signal Transduction Pathways PHRM 8400 3 h
- Neurophysiology VPHY 8400 3 h

Other courses as recommended by the student’s Advisory Committee.

Dissertation Writing: 3 hours

- Dissertation Writing (Departmental Prefix) 9300 3 h

Minimum credit hours required for this program: 30 h

This proposed PhD program of Study in Toxicology meets the Graduate School requirements as given below.

Doctoral Degrees. “The residence requirement for the Doctor of Philosophy degree is interpreted as 30 hours of consecutive graduate coursework that is included on the program of study”.

“This program of study must carry a minimum of 30 hours of course work, three hours of which must be dissertation writing (9300)”. “A doctoral program of study should consist of 16 or more hours of 8000- and 9000-level courses, *exclusive of 9000 (research) or 9300 (dissertation writing)*”. “The doctoral program of study for a student who bypasses the master's degree must contain a minimum of 16 hours of 8000- or 9000-level courses and four additional hours of University of Georgia courses open only to graduate students. Courses not allowed on a program of study are directed study courses, 9005 (Graduate Seminar), GRSC 7770, GRSC 9270, and ELAN 7768/7769.”