## Toxicology (PhD)

### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
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<tr>
<td>TOX 701</td>
<td>Fundamentals of Toxicology</td>
<td>33</td>
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<tr>
<td>TOX 710</td>
<td>Molecular and Biochemical Toxicology</td>
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<td>TOX 715</td>
<td>Environmental Toxicology</td>
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<tr>
<td>TOX 801</td>
<td>Toxicology Seminar (enroll every semester)</td>
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<tr>
<td>TOX 820</td>
<td>Special Problems In Toxicology (Lab Rotations)</td>
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<tr>
<td>TOX 820</td>
<td>Special Problems In Toxicology (Responsible Conduct of Research)</td>
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<tr>
<td>ST 511</td>
<td>Statistical Methods For Researchers I (or equivalent)</td>
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<tr>
<td>GN 701</td>
<td>Molecular Genetics</td>
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<tr>
<td>CBS 770</td>
<td>Cell Biology</td>
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<tr>
<td>TOX 895</td>
<td>Doctoral Dissertation Research</td>
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<tr>
<td><strong>Elective Courses</strong></td>
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<td>39</td>
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</tbody>
</table>

*See "Elective Courses" listed below*

**Total Hours**

72

### Elective Courses

<table>
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<tr>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>&quot;Elective Courses&quot;</td>
<td>are approved in conjunction with the academic committee to meet 72 total hours</td>
<td>39</td>
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</tbody>
</table>

- TOX 704 Chemical Risk Assessment
- CBS 771 Cancer Biology
- BIO 588 Neurobiology
- BIT 510 Core Technologies in Molecular and Cellular Biology
- BIT 562 Gene Expression Analysis: Microarrays
- BIT 567 PCR and DNA Fingerprinting
- BIT 568 Genome Mapping
- BIT 569 RNA Purification and Analysis
- BIT 595 Special Topics
- BCH 553 Biochemistry of Gene Expression
- BCH 701 Macromolecular Structure
- BCH 703 Macromolecular Synthesis and Regulation
- BCH 705 Molecular Biology Of the Cell
- BCH 761 Advanced Molecular Biology Of the Cell
- CBS 754 Epidemiology II
- CBS 762 Principles of Pharmacology
- CBS 795 Special Topics in Comparative Biomedical Sciences
- CH 572 Proteomics
- GN 735 Functional Genomics
- HS 707 Environmental Stress Physiology
- MB 751 Immunology
- MEA 540 Principles of Physical Oceanography
- PHY 503 General Physiology I
- PHY 504 General Physiology II
- PHY 780 Mammalian Endocrinology
- ST 512 Statistical Methods For Researchers II

*Other courses must be approved in conjunction with the academic committee.*

### Faculty

#### Full Professors

Ronald E. Baynes
James C. Bonner
Matthew Breen
David Buchwalter
William Gregory Cope
Jane A. Hoppin
Cathrine Hoyo
Michael Hyman
Detlef R. Knappe
Seth William Kullman
Jerry “Mac” Law
Gerald Andre LeBlanc
Carolyn Jane Mattingly
Elizabeth Guthrie Nichols
Jun Ninomiya-Tsuji
Heather Patisaul
Emilie Francesca Rissman
Richard M. Roe
Robert Charles Smart
Yoshiaki Tsuji
Fred Andrew Wright
Jeffrey A. Yoder

Associate Professors
David Lawrence Aylor
Scott M. Belcher
Shobhan Gaddameedhi
Nanette M. Nascone-Yoder
Antonio Planchart
David Michael Reif
Hong Wang
Yihui Zhou

Assistant Professors
Michael S. Bereman
Michael Anthony Cowley
Denis Fourches

Practice/Research/Teaching Professors
Jonathan Hall
David Allen Skaar
Elizabeth E. A. Thompson
Kurt Marsden