The University Of Toledo
New Graduate Course Proposal

* denotes required fields

1. College*: College of Pharmacy
   Department*: Pharmacology

2. Contact Person*: Ezdihar Hassoun
   Phone: 383-1917 (xxx-xxxx)
   Email: ezdihar.hassoun@utoledo.edu

3. Alpha/Numeric Code (Subject area - number)*: PHCL7770

4. Proposed title*: Current Topics in Toxicology
   Proposed effective term*: 201340 (e.g. 201140 for 2011 Fall)

5. Is the course cross-listed with another academic unit?
   Yes [ ] No [ ]
   Approval of other academic unit (signature and title)

   Is the course offered at more than one level?
   Yes [ ] No [ ]

   If yes, an undergraduate course proposal form must also be submitted. If the undergraduate course is new, complete the New Undergraduate Course Proposal; if the undergraduate course is existing, submit an Undergraduate Course Modification Proposal.

6. Credit hours*:
   Fixed: 1 or Variable: ____________________________
   to ____________________________

7. Delivery Mode:
   a. Activity Type *
      Primary* Independent Study
      Secondary Web Assisted Instruction
      Tertiary

   b. Minimum Credit Hours *
      1

   c. Weekly Contact *
      1
8. Hours *
   Terms offered: ✓ Fall  ☐ Spring  ☐ Summer
   Years offered: ☐ Every Year  ☐ Alternate Years

9. Are students permitted to register for more than one section during a term?
   ☐ No   ☑ Yes

   May the courses be repeated for credit? ☐ No   ☑ Yes

   Maximum Hours

10. Grading System*:
    ☑ Normal Grading (A-F, PS/NC, PR, I)
    ☐ Passing Grade/No Credit (A-C, NC)
    ☐ Credit/No Credit
    ☐ Grade Only (A-F, PR, I)
    ☐ Audit Only
    ☐ No Grade

11. Prerequisites (must be taken before): i.e. C or higher in (BIOE 4500 or BIOE 5500) and C or higher in MATH 4200
    PHCL-4730 or PHCL-5730 with a minimum grade of B-
    ☐ PIN (Permission From Instructor)  ☐ PDP (Permission From Department)

   Co-requisites (must be taken together):
   PHCL-5730, if the prerequisite course has not been completed

12. Catalog Description* (75 words Maximum)

   The course is designed for students in the Ph.D. program who earned a number of graduate credits that does not allow them to take PHCL-5770. The course focuses on the most recently published studies that cover advances in the field of toxicology, including, risk assessment of toxic chemicals, toxicokinetics, chemically-induced mutations, cancer and developmental toxicity, toxic responses of various body systems to different chemicals and drugs, toxicity of pesticides and heavy metals.
Hours *
8. Terms offered: ☑ Fall ☐ Spring ☐ Summer

Years offered: ☑ Every Year ☐ Alternate Years

9. Are students permitted to register for more than one section during a term? ☑ No ☐ Yes

May the courses be repeated for credit? ☑ No ☐ Yes

Maximum Hours

10. Grading System*:
   ☑ Normal Grading (A-F, PS/NC, PR, I)
   ☐ Passing Grade/No Credit (A-C, NC)
   ☐ Credit/No Credit
   ☐ Grade Only (A-F, PR, I)
   ☐ Audit Only
   ☒ No Grade

11. Prerequisites (must be taken before): i.e. C or higher in (BIOE 4500 or BIOE 5500) and C or higher in MATH 4200

   PHCL-4730 or PHCL-5730 with a minimum grade of B-

   ☐ PIN (Permission From Instructor)
   ☒ PDP (Permission From Department)

Co-requisites (must be taken together):

   PHCL-5730, if the pre-requisite course has not been completed

12. Catalog Description* (75 words Maximum)

   The course is designed for students in the Ph.D. program who earned a number of graduate credits that does not allow them to take PHCL-5770. The course focuses on the most recently published studies that cover advances in the field of toxicology, including, risk assessment of toxic chemicals, toxicokinetics, chemically-induced mutations, cancer and developmental toxicity, toxic responses of various body systems to different chemicals and drugs, toxicity of pesticides and heavy metals.
13. Attach a syllabus and an electronic copy of a complete outline of the major topics covered. Click here for template.

<table>
<thead>
<tr>
<th>File Type</th>
<th>View File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllabus</td>
<td>View</td>
</tr>
</tbody>
</table>

**Course Approval:**

**Department Curriculum Authority:**

Ezdihar Hassoun  
Date: 2012/11/02

**Department Chairperson:**

William S. Messer, Jr.  
Date: 2012/11/02

**College Curriculum Authority or Chair:**

Surya Nauli  
Date: 2012/12/04

**College Dean:**

Wayne Hoss  
Date: 2012/12/04

**Graduate Council:**

Date: 2-5-2013

**Dean of Graduate Studies:**

Date: 2-5-2013

**Office of the Provost:**

Date: 

---

**Administrative Use Only**

Effective Date:  
CIP Code:  
Subsidy Taxonomy:  
Program Code:  
Instructional Level:  

https://curriculumtracking.utoledo.edu/GradNewCourse.aspx?Mode=View&ID=PHCL7770
The following requirements will be differentiated for courses that are co-listed for Masters (5000 or 6000) and Ph.D. (7000 or 8000) levels:

Masters students will need to complete successfully all course requirements as indicated in the syllabus. They should be able to achieve and demonstrate comprehensive understanding of course topics through class discussion, assignments, quizzes and exams.

To complete the course requirements, Ph.D. students will need to demonstrate an extended expertise in the course topics. They also should demonstrate independent scholarly activity and creativity to the class instructor. The ability of the Ph.D. level students to synthesize scientific data/information, develop original ideas/hypotheses and Formulate independent research studies/proposals will be evaluated through additional assignments and readings, or by demonstrating leadership roles in class discussion or other collaborative settings."
University of Toledo
Course PHCL-7770 / Current Topics in Toxicology I
Fall /Every Year (1 credit)

SYLLABUS

Instructor: Ezdihar Hassoun
Faculty Office: HEB 284 B
Faculty/Department web site: http://www.utoledo.edu/pharmacy/depts/pharmacology/index.html
Class meeting time: Tuesday 1:00-1:50
Office Hours: Tuesday and Thursday from 3-5 p.m.
Phone: 419-383-1917
E-Mail: ezdihar.hassoun@utoledo.edu
Class Meetings Location: NOT YET DETERMINED (new course)

*Course Description including course pre-requisites or co-requisites:

The course focuses on the most recently published studies that cover advances in the field of toxicology, including, risk assessment of toxic chemicals, toxicokinetics, chemically-induced mutations, cancer and developmental toxicity, toxic responses of various body systems to different chemicals and drugs, toxicity of pesticides and heavy metals.

The course is designed for students in the Ph.D. program who earned a number of graduate credits that does not allow them to take PHCL-5770. PHCL-5730 is either pre- or co-requisite. However, if the course is taken as co-requisite, the earned credit for PHCL-5730 will not count towards the required credit for the Ph.D. degree.

*Texts (Required and Recommended, Reserve Materials, etc.):

The material will include the most recent articles published in peer-reviewed scientific journals in regard to the subjects indicated in the course description.

Course Requirements: Expectations of students in course:

The students are to read the articles provided to them on weekly basis by the instructor and are expected to submit a written summary about the articles to the instructor before meeting in the classroom. The students will receive a grade for that. The studies and summaries will be discussed with the students attending the class, and the discussions will be coordinated by the course instructor. Students will be also graded for the quality of the discussions, as well as the answers they provide in response to the questions asked by the instructor during those discussions. Students are also encouraged to do self-search for the most current articles in the subjects provided and also to discuss those during the meetings.

*Grading policy or criteria:

The final grade will be the average of the grades of all the 15 written assignments and the oral discussions earned during the semester. Grades for the oral discussions will be based on the percentages of class participation. Grades can range from A-F.
**Assessment of Learning:**

1. Assignments grades
2. Group discussions grades
3. Writing skills

**Classroom Procedures:**

1. A student will miss the oral discussion grade for a class that is not attended and will obtain a zero grade for that class. However, if the student provide a legitimate excuse for not being able to attend, then that grade will not be averaged in the final grade calculations.
2. Deadlines will be provided every week for the submission of the written summaries. Late assignments are not acceptable unless the student provides a legitimate excuse.

3. **Academic Accommodation/Accessibility:**
   Students with disabilities who believe they may need academic accommodations are encouraged to speak with me after class and will need to contact the Office of Accessibility (Rocket Hall 1820; 419-530-4981; officeofaccessibility@utoledo.edu) as soon as possible for more information and/or to initiate the process for accessing academic accommodation.

**Tentative Class Schedule/Activities/List of Topics Covered**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Some recent studies about risk assessment of chemicals/drugs</td>
</tr>
<tr>
<td>2</td>
<td>Recent studies about the toxicokinetics of some important toxic agents</td>
</tr>
<tr>
<td>3</td>
<td>Recent studies about the bioactivation of some important toxic chemicals</td>
</tr>
<tr>
<td>4</td>
<td>Studies about the toxic outcome of toxicologically-important mixtures</td>
</tr>
<tr>
<td>5</td>
<td>Examples of recent studies about chemical-induced carcinogenesis</td>
</tr>
<tr>
<td>6</td>
<td>Examples of recent studies about chemical-induced mutagenesis</td>
</tr>
<tr>
<td>7</td>
<td>Advanced studies on chemical-induced developmental toxicity</td>
</tr>
<tr>
<td>8</td>
<td>Recent studies/examples on chemicals with potential for hematotoxicity</td>
</tr>
<tr>
<td>9</td>
<td>Recent studies/examples on chemicals with potential for hepatotoxicity</td>
</tr>
<tr>
<td>10</td>
<td>Recent studies/examples on chemicals with potential for pulmonary toxicity</td>
</tr>
<tr>
<td>11</td>
<td>Recent studies/examples on chemicals with potential for nephrotoxicity</td>
</tr>
<tr>
<td>12</td>
<td>Recent studies/examples on chemicals with potential for ocular toxicity</td>
</tr>
<tr>
<td>13</td>
<td>Recent studies/examples on chemicals with potential for neurotoxicity</td>
</tr>
<tr>
<td>14</td>
<td>Recent studies/examples on pesticides toxicity</td>
</tr>
<tr>
<td>15</td>
<td>Recent studies/examples on heavy metal toxicity</td>
</tr>
</tbody>
</table>
Assessment of Learning:
1. Assignments grades
2. Group discussions grades
3. Writing skills

Classroom Procedures:
1. A student will miss the oral discussion grade for a class that is not attended and will obtain a zero grade for that class. However, if the student provide a legitimate excuse for not being able to attend, then that grade will not be averaged in the final grade calculations.
2. Deadlines will be provided every week for the submission of the written summaries. Late assignments are not acceptable unless the student provides a legitimate excuse.

3. Academic Accommodation/Accessibility:
   Students with disabilities who believe they may need academic accommodations are encouraged to speak with me after class and will need to contact the Office of Accessibility (Rocket Hall 1820; 419-530-4981; officeofaccessibility@utoldeo.edu) as soon as possible for more information and/or to initiate the process for accessing academic accommodation.

Tentative Class Schedule/Activities/List of Topics Covered

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Some recent studies about risk assessment of chemicals/drugs</td>
</tr>
<tr>
<td>Week 2</td>
<td>Recent studies about the toxicokinetics of some important toxic agents</td>
</tr>
<tr>
<td>Week 3</td>
<td>Recent studies about the bioactivation of some important toxic chemicals</td>
</tr>
<tr>
<td>Week 4</td>
<td>Studies about the toxic outcome of toxicologically-important mixtures</td>
</tr>
<tr>
<td>Week 5</td>
<td>Examples of recent studies about chemical-induced carcinogenesis</td>
</tr>
<tr>
<td>Week 6</td>
<td>Examples of recent studies about chemical-induced mutagenesis</td>
</tr>
<tr>
<td>Week 7</td>
<td>Advanced studies on chemical-induced developmental toxicity</td>
</tr>
<tr>
<td>Week 8</td>
<td>Recent studies/examples on chemicals with potential for hematotoxicity</td>
</tr>
<tr>
<td>Week 9</td>
<td>Recent studies/examples on chemicals with potential for hepatotoxicity</td>
</tr>
<tr>
<td>Week 10</td>
<td>Recent studies/examples on chemicals with potential for pulmonary toxicity</td>
</tr>
<tr>
<td>Week 11</td>
<td>Recent studies/examples on chemicals with potential for nephrotoxicity</td>
</tr>
<tr>
<td>Week 12</td>
<td>Recent studies/examples on chemicals with potential for ocular toxicity</td>
</tr>
<tr>
<td>Week 13</td>
<td>Recent studies/examples on chemicals with potential for neurotoxicity</td>
</tr>
<tr>
<td>Week 14</td>
<td>Recent studies/examples on pesticides toxicity</td>
</tr>
<tr>
<td>Week 15</td>
<td>Recent studies/examples on heavy metal toxicity</td>
</tr>
</tbody>
</table>