

4/8/16

## 1. General Information

1a. Submitted by the College of: MEDICINE

Date Submitted: 4/7/2016

1b. Department/Division: Dept of Toxicology and Cancer Biology

1c. Contact Person

Name: Davy Jones

Email: djones@uky.edu

Phone: 257-5412

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Specific Term/Year <sup>1</sup> Spring 2016 if possible, otherwise Fall 2016

1e. Should this course be a UK Core Course? No

## 2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: TOX 395

2c. Full Title: Independent Research

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

RESEARCH: 9

OTHEREXPLAIN: 9-18 contact hrs corresponding to range of credits enrolled for 3 to 6

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3-6

2i. Is this course repeatable for additional credit? Yes

If Yes: Maximum number of credit hours: 12

If Yes: Will this course allow multiple registrations during the same semester? No

**2j. Course Description for Bulletin:** An independent experimental research project for 3-6 credits in a contemporary area of Toxicology or Cancer Biology, under the mentorship of a department faculty member. May be repeated up to a maximum of 12 credits. A course research contract agreed to by the student and faculty mentor must be approved by the Course Coordinator (who is the Instructor of Record).

**2k. Prerequisites, if any:** Must have passed at least 60 credit hours of coursework leading towards a Bachelor of Science or other degree in a life sciences- or health-related curriculum, or as otherwise in special cases approved by the Course Coordinator, in compliance with Senate policies. NOTE: To be offered Fall, Spring, Summer (the eCATS New Course Report has an error, it only shows Fall offering when Fall, Spring and Summer are selected)

**2l. Supplementary Teaching Component:**

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Summer,

Will the course be offered every year?: Yes

If No, explain:

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 5 initially, based on 7 below

**7. Anticipated Student Demand**

Will this course serve students primarily within the degree program?: No

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: Every year, members of the department are solicited by students in other programs, including international exchange programs, to serve as mentors of a research experience in Toxicology or Cancer Biology.

**8. Check the category most applicable to this course:** Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

**9. Course Relationship to Program(s).**

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

**10. Information to be Placed on Syllabus.**

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

## Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|MARYV|Mary V Iwamoto|TOX 395 NEW Dept Review|20150505

SIGNATURE|DDBEAT1|Dorcas D Beatty|TOX 395 NEW College Review|20150626

SIGNATURE|JMETT2|Joanie Ett-Mims|TOX 395 NEW Undergrad Council Review|20151014

SIGNATURE|JEL224|Janie S Ellis|TOX 395 NEW Senate Council Review|20151016

SIGNATURE|MARYV|Mary V Iwamoto|TOX 395 NEW Approval Returned to Dept|20151020

SIGNATURE|JEL224|Janie S Ellis|TOX 395 NEW Senate Council Review|20151111

SIGNATURE|MARYV|Mary V Iwamoto|TOX 395 NEW Approval Returned to Dept|20151116

### New Course Form

<https://myuk.uky.edu/sap/bc/soap/rfc?services=>

[Open in full window to print or save](#)

Generate R

**Attachments:**

	ID	Attachment
Delete	5489	TOX 395 Contract.rtf
Delete	6638	TOX 395 Syllabus Jan 28 2016 Revise April 7 2016

(\*denotes required fields)

**1. General Information**

a. \* Submitted by the College of:  Submission Date:

b. \* Department/Division:

c.

\* Contact Person Name:  Email:  Phone:

\* Responsible Faculty ID (if different from Contact):  Email:  Phone:

d. \* Requested Effective Date:  Semester following approval OR  Specific Term/Year

e.

Should this course be a UK Core Course?  Yes  No

If YES, check the areas that apply:

Inquiry - Arts & Creativity       Composition & Communications - II  
 Inquiry - Humanities       Quantitative Foundations  
 Inquiry - Nat/Math/Phys Sci       Statistical Inferential Reasoning  
 Inquiry - Social Sciences       U.S. Citizenship, Community, Diversity  
 Composition & Communications - I       Global Dynamics

**2. Designation and Description of Proposed Course.**

a. \* Will this course also be offered through Distance Learning?  Yes  No

b. \* Prefix and Number:

c. \* Full Title:

d. Transcript Title (if full title is more than 40 characters):

e. To be Cross-Listed <sup>2</sup> with (Prefix and Number):

f. \* Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours<sup>3</sup> for each meeting pattern type.

<input type="checkbox"/> Lecture	<input type="checkbox"/> Laboratory <sup>4</sup>	<input type="checkbox"/> Recitation	<input type="checkbox"/> Discussion
<input type="checkbox"/> Indep. Study	<input type="checkbox"/> Clinical	<input type="checkbox"/> Colloquium	<input type="checkbox"/> Practicum
<input type="text" value="9"/> Research	<input type="checkbox"/> Residency	<input type="checkbox"/> Seminar	<input type="checkbox"/> Studio
<input type="checkbox"/> Other	If Other, Please explain: <input type="text"/>		<input type="text" value="9-18 contact hrs corresponding to range of credits enrolled for 3 to 6"/>

g. \* Identify a grading system:

Letter (A, B, C, etc.)  
 Pass/Fail  
 Medicine Numeric Grade (Non-medical students will receive a letter grade)  
 Graduate School Grade Scale

h. \* Number of credits:

i. \* Is this course repeatable for additional credit?  Yes  No

If YES: Maximum number of credit hours:

If YES: Will this course allow multiple registrations during the same semester?  Yes  No

## j. \* Course Description for Bulletin:

An independent experimental research project for 3-6 credits in a contemporary area of Toxicology or Cancer Biology, under the mentorship of a department faculty member. May be repeated up to a maximum of 12 credits. A course research contract agreed to by the student and faculty mentor must be approved by the Course Coordinator (who is the Instructor of Record).

## k. Prerequisites, if any:

Must have passed at least 60 credit hours of coursework leading towards a Bachelor of Science or other degree in a life sciences- or health-related curriculum, or as otherwise in special cases approved by the Course Coordinator, in compliance with Senate policies.

NOTE: To be offered Fall, Spring, Summer (the eCATS New Course Report has an error, it only shows Fall offering when Fall, Spring and Summer are selected)

l. Supplementary teaching component, if any:  Community-Based Experience  Service Learning  Both3. \* Will this course be taught off campus?  Yes  No

If YES, enter the off campus address:

## 4. Frequency of Course Offering.

a. \* Course will be offered (check all that apply):  Fall  Spring  Summer  Winter

b. \* Will the course be offered every year?  Yes  No

If No, explain:

5. \* Are facilities and personnel necessary for the proposed new course available?  Yes  No

If No, explain:

## 6. \* What enrollment (per section per semester) may reasonably be expected? 5 initially, based on 7 bsk

## 7. Anticipated Student Demand.

a. \* Will this course serve students primarily within the degree program?  Yes  No

b. \* Will it be of interest to a significant number of students outside the degree pgmt?  Yes  No

If YES, explain:

Every year, members of the department are solicited by students in other programs, including international exchange programs, to serve as mentors of a research experience in Toxicology or Cancer Biology.

## 8. \* Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

## 9. Course Relationship to Program(s).

a. \* Is this course part of a proposed new program?  Yes  No

If YES, name the proposed new program:

b. \* Will this course be a new requirement<sup>5</sup> for ANY program?  Yes  No

If YES<sup>5</sup>, list affected programs:

## 10. Information to be Placed on Syllabus.

a. \* Is the course 400G or 500?  Yes  No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) identify additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b.  \* The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable 10.a above) are attached.

<sup>5</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

<sup>6</sup> The chair of the cross-listing department must sign off on the Signature Routing Log.

- Ⓜ In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, requires two hours per week for a semester for one credit hour. (from SR 5.2.1)
- Ⓝ You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.
- Ⓞ In order to change a program, a program change form must also be submitted.

Rev 8/09

# TOX 395 Independent Research (3-6 Hours)

## Research Contract (Effective January 2016)

For Instructor of Record  
Date Received:  
Approved/Disapproved  
Signature:

In order to receive credit for TOX395, students and their research mentors must complete a contract. *If a contract is not completed each semester by the add/drop date THE STUDENT WILL NOT BE ABLE TO REGISTER FOR THIS CLASS.* If the contract is NOT approved, the TOX 395 Instructor of Record will contact the student and/or the research mentor. **Return completed contract to the Instructor of Record listed in the UK Bulletin for TOX 395.**

**Semester/Term/Session in which the research will take place:**

(Circle one) Fall    Spring    4-week    8-week    YEAR: \_\_\_\_\_

**Credit Hours:** \_\_\_\_\_

Research mentors may be any person with a faculty appointment to the Department of Toxicology and Cancer Biology, or with an appointment to the Graduate Program Faculty in Toxicology. A list of these persons is at the departmental web site. Students must attach to this contract an unofficial copy of their UK transcript.

*Research mentors agree to provide lab space, resources (e.g. chemicals), and guidance. Guidance includes safety training as well as training in scientific methods, techniques, and presentation of data. Mentors will be asked to grade the student's independent work.*

**Please provide the following information:**

<b>Your Name</b>	<b>Student ID</b>	<b>Email</b>	<b>Telephone</b>
<b>Mentor Name</b>	<b>Department</b>	<b>Email</b>	<b>Telephone</b>

Your signature: \_\_\_\_\_

Mentor's signature: \_\_\_\_\_

**This section to be filled in by the Mentor.** Please indicate what activities (and their weighting) will be used in the determination of the student's grade in the course. (For example, Attendance 25%, oral reports 25%, final paper 50%, etc). The contract will not be approved if this information is missing/incomplete.

A= 90-100; B= 80-89; C=70-79; D=60-69; F= 59 and below

**Please attach to this form a description of the proposed research work:** You must follow the indicated 3-point format. If your project is a continuation from a previous semester of BIO 395 you should provide a short description of the results of the previous semester's work and indicate that it is a continuation. **Complete this section in consultation with your mentor.**

1. State your hypothesis or driving principle.
2. Briefly describe the sorts of experiments you intend to perform, including brief technical details.
3. What might the results of these experiments be and how could these results support or refute your hypothesis?

For additional information contact Dr. Davy Jones, [djones@uky.edu](mailto:djones@uky.edu)

*We will contact you ONLY if we have questions regarding your research.*

UK Department of Toxicology and Cancer Biology  
TOX 395 – Independent Research

Course Coordinator: Dr. \_\_\_\_\_  
Campus Address: \_\_\_\_\_; email: \_\_\_\_\_@uky.edu

### Syllabus

**Course Description:** An independent experimental research project for 3-6 credits in a contemporary area of Toxicology or Cancer Biology, under the mentorship of a department faculty member. May be repeated up to a maximum of 12 credits. A course research contract agreed to by the student and faculty mentor must be approved by the Course Coordinator.

**Prerequisites.** Must have passed at least 60 credit hours of coursework leading towards a Bachelor of Science or other degree in a life sciences- or health-related curriculum, or as otherwise in special cases approved by the Course Coordinator, in compliance with Senate policies.

**Course Activities.** Common activities for all enrollees are (i) submission and approval (by the Course Coordinator) of a Research Project Contract, (ii) completion of the agreed research project under the mentorship of a department faculty member, and (iii) submission of a final research report that is approved by the faculty mentor. The specific research activities and the nature of the final reporting will vary depending upon the mentoring faculty member.

**Learning Outcomes.** The student will learn how research projects in Toxicology or Cancer Biology are formulated and designed around specific testable hypotheses. By completing this learning, the student will have consequently

1. Performed a review of pertinent literature in a specific subfield of either Toxicology or Cancer Biology and explained on that basis an unresolved scientific question existing in that subfield.
2. Designed experiments to test the unresolved scientific issue by way of hypothesis testing.
3. Interpreted the experimental outcomes in terms of the hypothesis being tested.
4. Elaborated 1-3 in a research report and presentation.

**Teaching Strategy.** The instructional format will be primarily mentored oversight of 'mind-on'/'hands-on' research activity by the student. Mentoring includes guidance of the student toward the pertinent background reading material, in how to maintain a data

notebook, and in how to write a final report (and possibly in how to prepare and deliver an oral powerpoint presentation or poster presentation, see below).

**Required Materials.** No textbook is required. The faculty mentor will provide guidance as to pertinent background literature bearing upon the assigned project.

**Grading Policy.**

The course grade is determined by the assigned faculty mentor. Grades are based on the following items. The final research report will be a written research report in a scientific journal style determined by the mentor. The specific percentages attributable to each are specific to the nature of the project and are determined by the faculty mentor as elaborated in the Research Project Agreement.

Attendance	_____ %
Data Notebook	_____ %*
Final Written Research Report	_____ %
Oral or Poster Presentation	_____ %**

\*Including electronically maintained data

\*\*The mentor shall identify in the Research Project Agreement the format of the oral or poster presentation.

**Course Policies:**

Attendance

The schedule of attendance in performing specific stages of activity will be determined by the mentoring faculty member and be articulated in the Research Project Contract. The schedule may be irregular as becomes required by the nature of the biological phenomenon being investigated and the response of the phenomenon to experimental treatment.

Excused absences

Excused absences from class/laboratory will be given only for absences as defined by *University Senate Rules V.2.4.2*. Documentation of the excusable nature of the absence must be presented to the mentor in advance of the absence or within one week following the absence. Scheduling make-up of missed work (for excused absences) will be determined on a case-by-case basis by the mentor.

Students need to notify the mentoring faculty member of absences prior to missed occasions of attendance. S.R.5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances

found by the professor to fit “reasonable cause for nonattendance.”

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

### **Verification of Absences**

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

### **Academic Integrity**

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else’s work, whether it be a published

article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

**Please note:** Any assignment the student turns in in may be submitted to an electronic database to check for plagiarism.

#### **Accommodations due to disability**

If the student has a documented disability that requires academic accommodations, please see the mentoring faculty member as soon as possible during scheduled office hours. In order to receive accommodations in this course, the student must provide the mentoring faculty member with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: [jkarnes@email.uky.edu](mailto:jkarnes@email.uky.edu)) for coordination of campus disability services available to students with disabilities.

#### **Research Location Behavior Policies**

Students will comply with the policies of the mentoring faculty member concerning conduct in laboratories or other space or facilities for which the faculty member is responsible.