

**Graduation Composition and Communication Requirement (GCCR)  
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM**

**I. General Information:**

College:	<u>Agriculture, Food and Environment</u>	Department (Full name):	<u>Interdepartmental program</u>		
Major Name (full name please):	<u>Agricultural Biotechnology</u>	Degree Title:	<u>B.S.</u>		
Formal Option(s), if any:	_____	Specialty Field w/in Formal Options, if any:	_____		
Requested Effective Date:	<b>FALL 2014, IF RECEIVED BY SENATE COUNCIL BY MONDAY, APRIL 7.</b>				
Contact Person:	<u>Sharyn Perry</u>	Phone:	<u>218-0732</u>	Email:	<u>sperr2@uky.edu</u>

**II. Parameters of the Graduation Composition and Communication Requirement (GCCR):**

The new GCCR replaces the old Graduation Writing Requirement. It is fulfilled by a course or courses specified within a B.A./B.S. degree program. As outlined in draft Senate Rule 5.4.3.1, the GCCR stipulates that students must successfully complete this requirement after achieving sophomore status and prior to graduation. To satisfy the GCCR, students must earn an average grade of C or better on the designated Composition and Communication (C&C) intensive assignments produced in any given course designated as fulfilling some or all of the GCCR. The requirements for GCCR courses include:

- at least 4500 words of English composition (approximately 15 pages total);
- a formal oral assignment *or* a visual assignment;
- an assignment demonstrating information literacy in the discipline;
- a draft/feedback/revision process on GCCR assignments.

The program requirements for the GCCR include:

- at least one specific Program Student Learning Outcome for C&C outcomes;
- a plan for assessing both the writing and oral *or* visual components of the GCCR;
- clear goals, rubrics, and revision plans for GCCR implementation.

Upon GCCR approval, each program will have a version of the following specification listed with its Program Description in the University Bulletin:

*“Graduation Composition and Communication Requirement. Students must complete the Graduation Composition and Communication Requirement as designated for this program. Please consult a college advisor or program advisor for details. See also ‘Graduation Composition and Communication Requirement’ on p. XX of this Bulletin.”*

**III. GCCR Information for this Program (by requirement):**

<b>A. List the courses currently used to fulfill the old Graduation Writing Requirement:</b>
<u>ABT201 and ABT301</u>
<b>B. GCCR Program Outcomes and brief description:</b>
1. Please specify the Major/Program Student Learning Outcomes (SLOs) pertaining to Composition & Communication and the GCCR requirement. These are <i>program</i> outcomes, not <i>course</i> outcomes. Please specify the program-level SLOs for C&C in your program:  <u>Communicate about research: ABT students will demonstrate their ability to communicate about science via oral presentations and written papers. For example, all Agricultural Biotechnology students participate in research projects including the requirements of the independent study course ABT 395, or experiential learning course ABT 399. Presentation (oral and written) is an integral part of this research requirement. The administration of the ABT program is very proud that many of the ABT students will have the opportunity to become authors and co-authors on suitable outlets for communication of their research results including abstracts presented at professional meetings and peer-reviewed scientific research publications.</u>
2. Please provide a short GCCR description for your majors (limit 1000 characters): Please explain the GCCR requirement in language appropriate for undergraduate majors to understand the specific parameters and justification of your program’s GCCR implementation plan:

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Students write a paper on an area of biotechnology of interest to them in ABT201 and this paper is drafted, peer reviewed, and revised prior to final submission. In ABT301 students write research proposals and this exercise, along with the paper in 201 meets the length requirement for the written component of the GCCR. The paper in ABT301 also undergoes a draft, review by the instructor and two peers, and revision process. Both the ABT201 and 301 papers require literature searches and reference citations, thereby demonstrating student information literacy. The oral component for the GCCR will be fulfilled by research proposal presentations in ABT301 (20 minute time limit and presentations are at least the required 10 minutes) that include feedback to the student. The SLO is assessed in ABT201 and ABT395 where students give their final written and oral presentations.

**C. Delivery and Content:**

**1. Delivery specification:** for your major/program, how will the GCCR be delivered? Please put an X next to the appropriate option. (Note: it is strongly recommended that GCCR courses be housed within the degree program.)

- a. Single required course within program
- b. multiple required or optional courses within program
- c. course or courses outside program (i.e., in another program)
- d. combination of courses inside and outside program
- e. other (please specify): \_

**2. Basic Course Information:** Please provide the following information for course(s) used to satisfy the GCCR, either in whole or in part:

**Course #1:** Dept. prefix, number, and course title: ABT201

- new or existing course? existing (new courses should be accompanied by a New Course Proposal)
  - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? required
- shared or cross-listed course? no
- projected enrollment per semester: 40-50 - offered fall semester only

**Course #2 (if applicable):** Dept. prefix, number, and course title: ABT301

- new or existing course? existing (new courses should be accompanied by a New Course Proposal)
  - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? required
- shared or cross-listed course? no
- projected enrollment per semester: 12-14 per section; two sections offered in fall and one section in spring semesters

**Course #3 (if applicable):** Dept. prefix, number, and course title: \_\_\_\_\_

- new or existing course? \_\_\_\_\_ (new courses should be accompanied by a New Course Proposal)
  - if a new course, check here that a New Course Proposal has been submitted for review via eCATS
- required or optional? \_\_\_\_\_
- shared or cross-listed course? \_\_\_\_\_
- projected enrollment per semester: \_\_\_\_\_

**3. Shared courses:** If the GCCR course(s) is/are shared from *outside* the program, please specify the related department or program that will be delivering the course(s). Please provide the following:

- **Contact information of providing program:**  
\_\_\_\_\_
- **Resources:** what are the resource implications for the proposed GCCR course(s), including any projected budget or staffing needs? If multiple units/programs will collaborate in offering the GCCR course(s), please specify the resource contribution of each participating program.  
\_\_\_\_\_
- **Memorandum of Understanding/Letter of Agreement:** Attach formal documentation of agreement between the providing and receiving programs, specifying the delivery mechanisms and resources allocated for the specified GCCR course(s) in the respective programs (include with attachments).  
**Date of agreement:** \_\_\_\_\_

**4. Syllabi:** Please provide a sample syllabus for each course that will be designated to fulfill the GCCR. Make sure the following things are clearly indicated on the syllabi for ease of review and approval (check off each):

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- the GCCR assignments are **highlighted** in the syllabus and course calendar;
- the GCCR assignments meet the minimum workload requirements as specified by the Senate Rules for GCCR courses (see the draft Senate GCCR rule linked [here](#));
- the elements are specified in the syllabus that fulfill the GCCR requirement for a clear draft/feedback/revision process;
- the grade level requirements for the GCCR are specified on the syllabus (i.e., an average of C or better is required on GCCR assignments for credit);
- the course or sequence of courses are specified to be completed after the first year (i.e. to be completed after completing 30 credit hours) for GCCR credit;
- the course syllabus specifies “This course provides full/partial GCCR credit for the XXX major/program”
  - if the course provides partial GCCR credit, the fulfilled portion of the GCCR must be specified and the other components of the GCCR for the program must be specified: e.g. “This course provides partial credit for the written component of the GCCR for the XXX major/program in conjunction with Course 2”

**5. Instructional plan:** Summarize the instructional plan for teaching the C&C skills specified in the program SLOs and delivered in the course(s). Include the following information in **brief** statements (1000 characters or less). Information can be cut-and-pasted from the relevant sample syllabus with indications **where** on the syllabus it is found:

- overview of delivery model: summarize how the GCCR will be delivered for **all** program majors: explain how the delivery model is appropriate for the major/program and how it is offered at an appropriate level (e.g. required course(s), capstone course, skills practicum sequence of courses, etc.):

ABT201 and ABT301 together will meet the requirements of the GCCR. These two courses have been approved for the GWR. An assignment that meets the oral communication requirement was always part of ABT301, even under the GWR.

- assignments: overview or list of the assignments to be required for the GCCR (e.g. papers, reports, presentations, videos, etc.), with a summary of how these GCCR assignments appropriately meet the disciplinary and professional expectations of the major/program:

In ABT201, the formal paper must be a minimum of 5 pages, with an additional page(s) allowed for references. In ABT301, a research proposal of at least 10 pages is required (with additional pages for references). Statements must be properly documented with citations from the scientific literature. In both classes there is a peer review (ABT201) or review by peers and the instructor (ABT301) to provide feedback. Students must then revise appropriately. The oral communication portion of the GCCR is met by the oral research presentations in ABT301 (20 minutes per presentation). Besides these two classes, students hone their written and oral presentation skills in ABT395/399 (final formal research paper and 15 minute public presentation), and in ABT495 (formal lab reports).

- revision: description of the draft/feedback/revision plan for the GCCR assignments (e.g. peer review with instructor grading & feedback; essay drafting with mandatory revision; peer presentations; etc.):

Papers in ABT201 undergo a peer review and revision process and the final and draft paper with comments from the peer reviewer are submitted to the instructor. The paper in ABT301 also undergoes a draft, review by the instructor and two peers, and revision process. Both the ABT201 and 301 papers require literature searches and reference citations, thereby demonstrating student information literacy. The oral component for the GCCR will be fulfilled by research proposal presentations in ABT301 (20 minute time limit and presentations are at least the required 10 minutes) that include feedback to the student. The final research presentation is given in ABT395 (15 minute, public presentation).

- other information helpful for reviewing the proposal:

**D. Assessment:**

In addition to providing the relevant program-level SLOs under III.B, please specify the assessment plan at the program level for the proposed course(s) and content. Provide the following:

- specify the assessment schedule (e.g., every 3 semesters; biennially):

ABT has four SLOs. The assessment schedule is such that all SLOs are assessed within three years (one the first year of the cycle; one the second year; and two the third year).

- identify the internal assessment authority (e.g. curriculum committee, Undergraduate Studies Committee):

Co-directors for undergraduate studies for ABT (M.Goodin, S.Perry), Chair of the coordinating committee (D. Howe) and faculty attending the ABT395/399 presentations.

- if the GCCR course(s) is/are shared, specify the assessment relationship between the providing and receiving programs: explain how the assessment standards of the receiving program will be implemented for the provided course(s):

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**Signature Routing Log**

**General Information:**

GCCR Proposal Name (course prefix & number, program major & degree):	ABT 201 + ABT 301 for Agricultural Biotechnology (ABT) B.S.
Contact Person Name:	Sharyn Perry
Phone:	859-218-0732
Email:	sperr2@uky.edu

**Instructions:**

Identify the groups or individuals reviewing the proposal; record the date of review; provide a contact person for each entry. On the approval process, please note:

- Proposals approved by Programs and Colleges will proceed to the GCCR Advisory Committee for expedited review and approval, and then they will be sent directly to the Senate Council Office. Program Changes will then be posted on a web transmittal for final Senate approval in time for inclusion in the Fall 2014 Course Bulletin.
- New Course Proposals for the GCCR will still require review and approval by the Undergraduate Council. This review will run parallel to GCCR Program Change review.
- In cases where new GCCR courses will be under review for implementation after Fall 2014, related GCCR Program Changes can still be approved for Fall 2014 as noted "*pending approval of appropriate GCCR courses.*"

**Internal College Reviews and Course Sharing and Cross-listing Reviews:**

Reviewing Group	Date Reviewed	Contact Person (name/phone/email)
Home Program <i>review by Chair or DUS, etc.</i>	2/21/14	Daniel K. Howe / 218-1113 / dkhowe2@uky.edu
Providing Program <i>(if different from Home Program)</i>	—	/ /
Cross-listing Program <i>(if applicable)</i>	—	/ /
College Dean	2/21/14	Larry J. Grabau / 257-3469 / lgrabau@uky.edu
		/ /

**Administrative Reviews:**

Reviewing Group	Date Approved	Approval of Revision/ Pending Approval <sup>1</sup>
GCCR Advisory Committee	2/26/14	

**Comments:**

<sup>1</sup> Use this space to indicate approval of revisions made subsequent to that group's review, if deemed necessary by the revising group; and/or any Program Change approvals with GCCR course approvals pending.

**Scientific Method in Biotechnology****Overview**

This course introduces scientific research, writing and presentations emphasizing agricultural biotechnology and related areas.

**Description**

A course designed to acquaint students with common experimental methods and techniques used in agricultural and general biotechnology. Students will be exposed to research programs that embody basic scientific reasoning, experimental strategies, the role biotechnology plays in society, and careers in biotechnology and science in general. Presentations will be delivered by individuals recognized for their scientific endeavors as well as in some cases the role they have played as research mentors for ABT students.

Students will use a collection of objective evaluation tools to assess the relative merits of individual programs as exemplified by publications, competitive funding, and societal contributions. Each student will be required to provide two written evaluations using the aforementioned tools. In addition this course meets part of the University's upper division writing requirement (**ABT 201 and ABT 301 together meet the upper division composition and communication requirement**). A detailed description of the writing requirement is below. The class will provide the student with the basic skills needed for objective evaluation of research programs that might be of interest to them as an environment for completion of their ABT 395/399 requirement. It also introduces by example and assignment the scientific writing and presentation skills that are essential for success in the discipline.

**Instructor**

Dr. Sharyn Perry

Department of Plant and Soil Sciences

307 Plant Science Building

859-218-0732

sperr2@email.uky.edu

### ABT201-Fall 2013 – Speaker Schedule

Date	Speaker	Title/Topic	Affiliation
Aug. 29	Dr. Sharyn Perry	Introduction, overview and how to write/review papers	Plant and Soil Sciences
Sept. 5	Dr. Sharyn Perry	Database searches	Plant and Soil Sciences
Sept. 12	Dr. John D’Orazio	Combining pediatric oncology with melanoma research”	Drury Pediatric Research Endowed Chair Associate Professor, Univ. KY College of Medicine Pediatric Hematology-Oncology
Sept. 19	Dr. Olga Tsyusko	Genetic responses of plants and animals to radiation	Plant and Soil Sciences
Sept. 26	Dr. Anthony Sinai	Autophagy in the parasite <i>Toxoplasma gondii</i> : essential for life while triggering death	Dept. of Microbiology Immunology and Molecular Genetics
Oct. 3	Dr. Jennifer White	It’s what’s inside that counts: bacterial endosymbionts affect insect ecology, evolution and behavior	Dept. of Entomology
Oct. 10	Dr. Kevin Sarge	Gene Bookmarking: how transcription pattern memories persist through mitosis	Dept. of Molecular and Cellular Biochemistry
Oct. 17	Dr. Mary Rossano	Possums, Protozoa and other Parasites – an Unusual Career Path	Dept. of Animal and Food Sciences
Oct. 24	Dr. Chuck Fox	Ecology and genetics of inbreeding depression: lessons from a model insect	Dept. of Entomology
Oct. 31	Dr. Joe Chappell	The wonderful world of plant natural products	College of Pharmacy, Professor and Chair of Pharmaceutical Sciences
Nov. 7	Dr. Arthur Hunt	The Ends of It All	Plant and Soil Sciences
Nov. 14	Dr. Craig Miller	Research in Oral Health Sciences	College of Dentistry, Oral Medicine
Nov. 21	Dr. J. Zwischenberger	Artificial lungs: A new inspiration	Johnston-Wright Professor of Surgery, Chairman, Dept. of Surgery, Professor of Pediatrics
Nov.28	Thanksgiving	Happy Thanksgiving!!!!	
Dec. 5	Dr. Michael Goodin	Have virus, will travel....	Dept. of Plant Pathology
Dec. 12	Dr. S. Perry	On being a MADS-scientist: plant development and MADS-box genes; TCE forms	Plant and Soil Sciences
Dec.	Finals week – no		

**Evaluation**

Student evaluations will be based on the writing requirement paper, written research evaluations and classroom participation.

**Grading**

Attendance	10 points	(10%)
Class participation	25 points	(25%)
Critique of presentations	20 points	(20%)
Paper topic/justification	5 points	(5%)
Written report (30) and peer review (10)	40 points	(40%)
<b>Total</b>	<b>100 points</b>	<b>(100%)</b>

Letter grades will be based on the percentage of total points earned.

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- E <60%

**Class Attendance/Participation.** Success in college and at work requires consistent and reliable effort. I place great emphasis on identifying speakers representing a range of subject areas and material. To understand the biotechnology field you require this breadth of experience. Therefore, I expect attendance and class participation. **One unexcused absence is allowed.** Each **unexcused** absence past this will cost 5 points (up to 10 points total). There is no penalty if you have an acceptable excuse for absence. If you know you will be absent, please let me know ahead of time. Attendance will be recorded by you signing in each meeting. It is your responsibility to sign the attendance sheet.

Class participation points will be awarded by you asking questions of the speakers. The minimum required number of questions and distribution will be discussed at the introductory classes.

**Cell phones and texting/e-mail in class:**

Please remember to turn your cell phone **OFF** while in class. Please do **NOT** send or read text or e-mail messages while in class, or read the newspaper or do other homework. We have many guest speakers who are very enthusiastic to visit with you and these types of activities would be disrespectful to the speaker and would distract from their lectures and your participation.



### **Critique of presentations.**

Each student is required to evaluate two speaker presentations. The evaluation should include a brief synopsis of the research interests of the speaker and an evaluation of productivity and quality of the research program. You will need to do some background review of the speaker and will be directed to tools to accomplish this task. You will also be provided with a sample review. **These are due by December 5<sup>th</sup> but if you submit by November 21<sup>st</sup> I will get back to you if there are any problems.**

### **ABT 201 Writing Requirement**

**STUDENT ELIGIBILITY PREREQUISITES:** This is a writing-intensive course approved to partially fulfill the upper tier of the graduation composition and communication requirement (GCCR). To receive GCCR credit for this course, you must have successfully completed the first-year writing requirement (CIS/WRD 110 and 111 or their equivalent) and have completed at least 30 hours of coursework.

### **LEARNING OUTCOMES:**

1. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
2. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
3. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
4. Write a capable, interesting essay about a complex issue (discipline-specific) for a general university audience.

### **WRITING ASSIGNMENTS:**

In this course, students will be required to write a minimum of 5 pages of formal writing that is drafted, peer reviewed, and revised before grading by the instructor. An additional page may be used for references. If you have questions about your topic, please contact the instructor but topic and one to two sentences explaining the significance of the topic are due to Dr. Perry by **October 17th**. The formal paper, along with the two one-page written evaluations of research programs, will fulfill the writing requirement for ABT201. The formal paper for ABT201 may focus on one of the research presentations, or may address other current issues or research questions in science. Statements must be appropriately documented by references from the literature. **Web references should not be used. Please note: This course provides partial fulfillment for the written component of the GCCR for the ABT major in conjunction with ABT301.**

### **Draft-and-review process:**

Writing and revision of drafts is essential to effective composition and scientific writing. Scientific writing also differs from some other styles of composition in that it contains highly technical language with scientists placing great emphasis on precise, clear and

concise writing. In order to be successful at effective writing, you will need to write and revise your draft yourself, before giving it to your reviewer. You want to provide your reviewer with a well-written cohesive document on which they can provide further suggestions. You will be assigned a classmate as your peer reviewer and will be provided with e-mail addresses to facilitate communication. I would like you to use “Track Changes” in Word to comment on your classmate’s document and will provide information on how to use this feature. If for any reason this is not possible, please see me to arrange an alternate review process. You will provide the edited document to the author who will revise as appropriate and submit: 1.) the draft with the tracked changes and 2.) the final revised paper to the instructor.

When you submit your paper, please name the draft with tracked changes as: **your name\_draft\_your reviewers name**. Please name the final revised paper as: **your name\_FINAL**.

Receipt of all assignments will be confirmed by email. If you do not get this confirmation in a reasonable amount of time (by 2-3 days), please check with the instructor.

#### **GRADING POLICIES:**

To pass the course, you must submit all formal assignments (in draft and final form) and earn a grade of C or higher on each. Assignments other than the formal writing enter into the final grade determination *only if you have achieved grades of C or higher on graded assignments*. Any major assignment that receives a D or below must be revised to reflect competency and resubmitted. You may resubmit such assignments 2 times. If you fail to achieve a C grade on the final version of any major writing assignment, you will receive a failing grade for the course.

At the discretion of the instructor, students who fail to achieve competency may receive I (incomplete) grades, but in no case may a student whose writing fails to reach the level of C (competent) receive a passing grade in a course that satisfies the University Writing Requirement.

#### **PLAGIARISM**

Part II of *Student Rights and Responsibilities* (6.3.1; online at <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 a question of plagiarism involving their 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 acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work, whether it is a published article, chapter of a book, a paper from a friend or some file, or whatever. 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 or information, the student must carefully acknowledge exactly what, where and how he/she has 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.

### **Writing assignment schedule:**

**October 17<sup>th</sup>** - topic and significance of the topic due to Dr. Perry.

**Before November 7<sup>th</sup>, 2013** – write and revise your draft.

**November 7<sup>th</sup>, 2013** – deadline for draft version. Please e-mail your paper to your designated reviewer by this date.

**November 21<sup>st</sup>, 2013** – comments on drafts are due. Return the document with comments and changes tracked to the author by this date.

**December 5<sup>th</sup>, 2013** – the revised paper as well as the draft with comments must be sent to the instructor by this date.

### **What should you cover in your paper?**

You may discuss any scientific issue or research area of interest to you in your paper. You may also choose to write on one of the faculty that present a seminar about their research program. If you choose the later, your paper should provide a biography on the presenter (not more than one of the five pages) and a synopsis of the research program including a discussion about why the research is important. Please include your opinion on possible future directions for the research, and/or comment on a project that you would like to pursue in the presenter's lab. **Regardless of whether you write about a presenter's program or on another scientific issue of interest to you, please remember that your paper should be written for a general university audience and should demonstrate an ability to clearly present and evaluate evidence. Also important is a discussion about why the research area is important (why should funding agencies give you taxpayer money for the research?).**

## ABT 301: WRITING AND PRESENTATION IN THE LIFE SCIENCES

**Dr. LING YUAN**

123 KTRDC; phone 257-4806; email: lyuan3@uky.edu

Office Hours: by appointment

**Dr. DAN HOWE**

437 Gluck Equine Research Center; phone 257-4757 ext. 81113; email: dkhowe2@uky.edu

Office Hours: by appointment

**Dr. JAMES HARWOOD**

S225F Agricultural Science Center; phone 257-4264; email: james.harwood@uky.edu

Office Hours: by appointment

### Course Description

This class is intended to refine skills in communicating and evaluating science-based knowledge. Specific focus is given to the agricultural, biological, and bio-medical sciences. One major goal is to facilitate the writing of an Agricultural Biotechnology Independent Research Proposal. In the process, students will learn how to evaluate relevant literature, think about science and the scientific process, and communicate scientific results and implications. This course should further the students' experience with science, enhance their appreciation for the scientific process, and what it means to conduct scientific research. The specific goals for students are:

- Asking and addressing the questions, "What is 'science'?" and "What is involved in planning a scientific investigation?";
- Reading and evaluating the science of others, with specific reference to the skills needed to communicate experimental design, results and data interpretation;
- Orally presenting scientific research methods and results;
- Writing a research proposal and learning how to write effective scientific reports and papers.

One of the requirements to obtain an Agricultural Biotechnology degree is the successful completion of an independent research project (through either ABT 395 or ABT 399). *ABT 301 is specifically intended for ABT students who are either actively engaged in research in a lab or are in the process of formulating a research project with their mentor. **Much of the course is structured around the preparation and presentation of a formal research proposal, so it is essential that all students have a faculty research mentor.***

*It is the responsibility of each student to identify a research mentor and a research project. If you have not already identified a mentor, you should do this as soon as possible!*

The main activities will include: (i) devising a research project proposal in cooperation with a faculty research mentor; (ii) writing and presenting the research proposal; (iii) critiquing oral presentations of fellow students and scientists; and (iv) reviewing the proposed projects of other students.

**This course partially fulfills the University's upper division composition and communication requirement (ABT 201 and ABT 301). A detailed description of the communication requirement is found at the end of this document.**

### Learning Outcomes

Upon completion of this course, students will have:

- Been exposed to and discussed the general aspects of scientific inquiry.
- Demonstrated an ability to acquire and evaluate scientific literature (especially primary literature) that is relevant to their specific field of interest.
- Orally presented a 20 minute presentation that provides relevant background information and describes their proposed research project.
- Written draft and final versions of a formal research project proposal that fulfills one of the requirements for ABT 395 or ABT 399.

*Description of the learning outcomes pertaining to the upper division-writing requirement is provided below.*

## What Students need to Get, Know, and Learn First

- Textbook: Pechenik, J. A. (2007). A short guide to writing about biology. New York, Addison-Wesley Educational Publishers, Ltd. (6th edition)
- An e-mail address issued by the University of Kentucky
  - Note that all electronic communications between the instructor should be via the student's uky.edu address.
- Good familiarity with:
  - Microsoft Word
  - Microsoft Powerpoint
  - Microsoft Excel or another program for preparing graphs.

## Grading Scheme and Assignments

Grades will be based on assignments, class attendance, and participation. A summary listing of Due Dates for individual assignments is provided in the ABT 301 Calendar. *Note that these due dates are subject to revision and that additional assignments and dates may be announced during class.* All assignments, whether submitted as hardcopy or electronic documents, must be available to the instructor by the due date and time. There are penalties for late submissions (see Policies section).

***Note that failure to submit the "Final Proposal Draft" on time will result in automatic failure of the course.*** This is a consequence of the fact that the course partially fulfills the upper division composition and communication requirement (see below).

Note that most written assignments will be submitted electronically as specified by the instructor. Some assignments may require simple e-mail message submissions while others will require documents prepared using Microsoft Word with attachment to an electronic mail message. **For MS-Word documents, use 1-inch margin on all sides, 1.5- or 2-line spacing (unless otherwise indicated), 12 point font size, and a header on all pages showing page number(centered) and student's name (right hand corner).** Late submissions will be penalized as outlined in the "Policies" section.

- Reading Exercises, Proposal Title, Literature Exercises, Critiques  
**30 points**
  - Assignments based on readings, *sub-total: 10 points*
    - Question sets will be assigned based on readings.
    - Note that unless otherwise stated, complete sentences must be provided.
    - Unless otherwise stated, submissions must be as MS-Word files.
  - Proposal title; mentor's information; literature citations, *sub-total: 5 points*
    - A descriptive and focused proposal title (even if tentative) must be provided.
    - Your research mentor's name, department, and e-mail address must be provided.
    - Literature citations relevant to the proposed project must be provided.
      - Citations (five in total) must be from the *primary* scientific literature.
      - Citations must come from at least *three different* scientific journals.
      - Use a standard citation format that includes all authors, year of publication, full article title, journal name, journal volume, and inclusive page numbers. You will be graded on the accuracy with which you follow the format style.
      - In a list separate from the citations, include the UK Libraries call number for each of the journals cited. If a journal is not available at UK, note that fact. If a journal is available electronically, also provide the URL address.
    - All of this information must be submitted as a single MS-Word file.

- Agricultural Information Center Database Exercise. *Sub-total: 10 points*
  - Potential search terms must be submitted prior to the deadline announced in class.
  - The database exercise must be completed and submitted electronically prior to the deadline announced in class.
  
- Outside Seminar Critique *sub-total: 5 points*
  - Each student must attend a professional seminar on campus and submit a written critique of the seminar. The critique must include the date, time, location, speaker and topic, what was good and what was not good about the presentation style, organization, and use of visual or audio aids (maximum, 2 pp. submitted as an MS-Word file).
  
- **Discussion during class**  
**10 points**
  - participation in class discussions is expected.
  - note that class attendance is critical for success in this and other graded parts in this course.
  
- **Presentations**  
**20 points**
  - Each student will make an oral presentation to the class of their research proposal.
  - A practice session will be scheduled by the instructor. Students are welcome to invite their research mentor to the practice presentation. Students are *required* to schedule a meeting with the instructor after the practice session to review performance and slides.
  - The presentation is to be done using PowerPoint via the Smart Classroom instrumentation.
  - **The PowerPoint file for the draft (practice) presentation must be provided to the instructor at least 24 hours prior to the practice session.** This can be accomplished either by providing a disk or sending the file as an e-mail attachment. This file will assist the instructor in providing constructive comments about the presentation. *In addition, the student should bring a copy of the file on a flashdrive on the day of the presentation.*
  - The PowerPoint file for the actual (formal) presentation must be provided to the instructor at least 24 hours prior to the scheduled presentation. This can be accomplished either by providing a disk or sending the file as an e-mail attachment. This file will assist the instructor in providing constructive comments about the presentation. *In addition, the student should bring a copy of the file on a flashdrive to class on the day of the presentation.*
  
- **Questions based on students' formal presentations**  
**5 points total;** due in writing immediately following each formal presentation session.
  - Each student must provide a list of three questions pertaining to the presentation or ensuing discussion. The questions must be specific to the presentation. If the same question could be posed for multiple presentations (that is, if it appears generic), it will not be given credit. It will be acceptable for the lists of questions to include those raised by other students or the instructor during the presentation or ensuing question period.
  - Students scheduled to serve as peer evaluators need not submit questions at the end of the presentations.

- **Peer evaluation of presentations**

- **5 points**

- The practice and formal presentations of each student will receive comprehensive peer evaluations by two fellow students. Overall, every student in the class will critique two practice and two formal presentations in total. The evaluators must attend *both the* practice and formal presentations of the student they will be evaluating.
- Evaluations are due electronically ***within 48 hours*** following the presentations and must follow the format provided in the Critiques for the Presentations.
- The evaluation of the practice presentation should focus on the specific strengths and weaknesses of the presentation.
- The evaluation of the formal presentation should focus on the relative improvement over the practice presentation. *The improvement and level of effort made in revising practice slides is an important consideration.*
- Peer evaluations will not be used to assign a grade for the presentation, so be completely honest and critical, but in a constructive way.
- Peer evaluations will be graded on their thoroughness. Student evaluations should not be so general and vague that they are of little value to the presenter; they should make specific comments and recommendations.

- **Research Proposal**

- **25 points\***

- Each student will write a research proposal outlining the project they plan to conduct for ABT 395/399.
- The proposal must be prepared using the prescribed format. This format is acceptable for eventual submission of the proposal to the ABT program in partial fulfillment of ABT 395 or 399 requirements.
- Each student will submit to the instructor three copies of the proposal first draft during class on the due date. Copies will be distributed to two fellow students for peer review. The instructor will also provide a written review. Draft proposals should then be revised based on the review comments received from the instructor and the peer reviewers.
- The final version of the research proposal is due by the date noted in the ABT 301 Calendar
- *Draft = 10 points*
- *Final Proposal = 15 points.*

***\*Note that failure to submit the "Final Proposal Draft" on time will result in an automatic failure of the course.*** This is a consequence of the fact that the course partially fulfills the upper division-writing requirement (see below).

- **Peer reviews of ABT proposals**

- **5 points**

- Peer review format and criteria will be distributed with the draft proposals. All reviews are to be submitted to the instructor so that they can be made available to the author by two weeks before the due date for the final draft.
- Reviews should be constructive in nature.

**Total: 100 possible points**

**Grade Assignments\***

91% and above = A

81% to 90% = B

71% to 80% = C

61% to 70% = D

60% and below = E

***\*Note that failure to submit the "First Proposal Draft" or "Final Proposal Draft" on time will result in an automatic failure of the course.*** This is a consequence of the fact that the course partially fulfills the upper division-

writing requirement (see below).

## **Policies**

Classroom Safety: Students should immediately exit the classroom when the fire alarm sounds. Use only stairwells and do **not** use elevators. Students in N-10 should exit the building using the east doorway at the end of the main hallway. Students in N-320 should exit using the stairwell located east of the classroom and exit the north side of the building. If these primary routes are blocked, students should exit using secondary routes. Once outside the building, students should assemble at the Greenhouse building just east of Agricultural Sciences North.

If you become aware of gunfire occurring in or near the building, remain in the classroom and lock or barricade the door(s). Stay away from windows. Hide under a desk or in the corner. **Do not unlock the door for anyone.** A UK Police Officer or other official will unlock the door and provide instructions once the situation is resolved.

Late assignments: Late submissions of the "Final Proposal Draft" will *not be* accepted. ***Note that failure to submit the "Final Proposal Draft" on time will result in an automatic failure of the course.*** This is a consequence of the fact that the course partially fulfills the upper division-writing requirement (see below).

Late submissions for other assignments will result in a loss per each day late of 15% of that assignment's maximum possible grade. Assignments due on days of class will be due at the beginning of the class period. Assignments due on other days will be due at times specified by the instructor. *It is strongly suggested that electronic submissions be made at least several hours before the formal assignment deadline.*

Attendance: Attendance is mandatory and will be monitored. Since an important component of this class is active participation and observation of presentations, class attendance is essential to success in the course. Policies for excused absences are those of the University.

The expectation is that all students will be present and seated by the beginning of class and that all students will remain until the end of the scheduled class period. Students who expect to be late or need to leave class early for valid reasons must notify the instructor prior to the class period. Students who habitually arrive late or leave before the class period ends will be warned by the instructor. If the behavior persists, a 5% deduction will be applied to the student's overall grade at the end of the course.

Classroom Decorum: All class participants are encouraged to voice their opinions regarding material presented in class. All discourse will be carried out in a respectful and professional manner. Personal attacks or statements of any sort will not be tolerated and such instances will be referred to the University Ombud's Office.

Students are asked to switch off and pack away all electronic devices prior to the beginning of class. The use or monitoring of cell phones, pagers, music players, personal desk assistants, and any other electronic device will not be tolerated. Ignoring this policy will be considered a lack of active participation in classroom activities and students will receive a grade penalty and/or will be asked to leave the classroom.

Cheating and Plagiarism: The minimum penalty for an academic offense, such as cheating or plagiarism, is a "0" on the assignment. Repeated offenses will result in more serious penalties. Students should be aware that failure of the course, suspension and dismissal from the University are also possible sanctions associated with either of these academic offenses.

For clarity, plagiarism is defined in your text, and would include (but is not limited to) copying phrases, blocks of text, tables, or graphics from any source without citing the source. Obvious paraphrasing of text will also be construed as plagiarism. Furthermore, in no instance is a student permitted to copy from a fellow student, and no student is permitted to paraphrase another student's work except in the explicit context of critiquing that work (proposal reviews and presentation evaluations).

If there is any doubt in the student's mind of whether work to be submitted might be construed as plagiarized material, the student should consult with the instructor well before the deadline for submission of the assignment. It is the student's responsibility to write and present material that is free of plagiarism.



*Additional information on plagiarism as it to the upper division-writing requirement is provided below.*

### **ABT 301 Writing Requirement**

This course partially fulfills the University's upper division composition and communication requirement (GCCR).

- **Prerequisites.** This is a communication-intensive course approved to fulfill the University's GCCR. To receive credit for this course, you must have (i) successfully completed the first-year writing requirement (CIS/WRD 110 and 111), (ii) completed at least 30 hours of coursework, and (iii) successfully completed ABT 201.
- **Learning Outcomes.** Upon successful completion of this course, students will be able to:
  1. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
  2. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
  3. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
  4. Write a capable, interesting essay about a complex issue (discipline-specific) for a general university audience.
- **Writing Assignment.** In this course, students will be required to write a 10 page formal research proposal that is drafted, peer reviewed, and revised before grading by the instructor. This writing assignment will focus on description of a specific research project and will include relevant background information from the peer-reviewed scientific literature, formal statement of hypothesis and/or goals, experimental rationale, experimental methods, data analysis methods, and expected experimental results and implications. In combination with ABT 201, students will meet or exceed the 15 pages needed for completion of the University's GCCR.
- **Draft and Review Process.** Writing and revision of drafts is essential to effective composition and scientific writing. Scientific writing also differs from some other styles of composition in that it contains highly technical language with scientists placing great emphasis on precise, clear and concise writing. The writing assignment will be submitted in draft form for review by the instructor and two peer (student) reviewers. Drafts are expected and must be complete documents that satisfy all of the specific criteria outlined by the instructor. The instructor retains the option to also distribute the draft to scientists with specific expertise in the area of study. Before submission of the final paper, it must be read, revised if necessary and approved by another student who will be assigned by the instructor.
- **Grading of Assignment.** To pass the course and fulfill the GCCR, you must submit the research proposal (draft and final versions) and earn a grade of C or better on each. If you receive a D or below on the draft version of the research proposal, it must be revised to reflect competency and resubmitted. In the event that the draft version received a D or below, you have one (1) opportunity to resubmit this assignment; this must be immediately done in close consultation with the instructor. **If you fail to achieve at least a C grade on either this second draft version or the final version of the research proposal, you will receive a failing grade for the course.** Note that assignments or requirements other than the formal writing become a factor in the final determination of your course grade *only* if you have achieved a grade of C or higher on *both* the draft *and* final versions of the research proposal.

- **Plagiarism.** Part II of *Student Rights and Responsibilities* (<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 a question of plagiarism involving their 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 acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. 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 or information, the student must carefully acknowledge exactly what, where and how he/she has 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).

The minimum penalty for an academic offense, such as cheating or plagiarism, is a "0" on the assignment. Repeated offenses will result in more serious penalties. Students should be aware that failure of the course, suspension and dismissal from the University are also possible sanctions associated with either of these academic offenses.