

ABT 301: WRITING AND PRESENTATION IN THE LIFE SCIENCES

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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

- An e-mail address issued by the University of Kentucky
 - Note that all electronic communications with 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.
- Optional Textbook: Pechenik, J. A. (2007). A short guide to writing about biology. New York, Addison-Wesley Educational Publishers, Ltd. (6th edition)

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: If an emergency arises in this classroom, building or vicinity, your instructor will advise you of actions to follow to enhance your safety. If a situation requires emergency shelter (i.e., during a severe weather event), the nearest shelter location is in the hallways leading to the auditorium area of Ag North (for classroom N10) or in the laboratories and hallways in the inner portion of the building away from windows (for N320). If building evacuation occurs (i.e., fire alarm), follow posted evacuation routes and assemble at the Greenhouse building just east of Ag North so the instructor can help ensure their students have evacuated the building safely and they are not hindering emergency personnel access to the building. If you may require assistance during an emergency, notify the instructor at the beginning of the semester. In order to prepare for emergencies while on campus please continue to the below links for detailed emergency response guidelines: the UK Division of Crisis Management & Preparedness website (<http://www.uky.edu/EM/emergency-response-guide.html>) and the College of Agriculture, Food and Environment (<http://www.ca.uky.edu/>). To receive emergency messages, sign up for UK Alert (<http://www.uky.edu/EM/UKAlert>). Always turn cellular phones to silent mode when entering the classroom. If you observe or receive an emergency alert, immediately and calmly inform your instructor.

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 Communication 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.