

BIO 7413 RESEARCH ETHICS AND RESPONSIBLE CONDUCT OF RESEARCH

SUMMER 10 WEEK SEMESTER [JUNE 1 - AUGUST 8]

TEXTS: I: Responsible Conduct of Research, A.E. Shamoo, D.B. Resnik

II: Principles of Experimental Design for the Life Sciences, M.Selwyn

III: Practical Research Planning and Design, P.D. Leedy

INSTRUCTOR: Clyde Phelix, Correspond via Blackboard Mailbox only.

OFFICE HOURS: Arrange through Blackboard.

NOTE FOR ON LINE COURSES (No attendance required): All course materials and performance assessments will be completed and administered entirely on-line through the world wide web internet and via Blackboard software of UTSA (currently via webct.utsa.edu). The introductory lecture discussing the syllabus and all other lectures will be recorded and posted on the Blackboard Homepage as streaming video. All performance assessments, i.e., lecture quizzes, will be administered on-line beginning the week indicated on the syllabus; an email will be sent via Blackboard Mailbox to all enrolled students notifying them of availability and end date/time for completion of on line assessment materials. All assignments will be submitted to the instructor through file attachment on Blackboard Mailbox. Schedules for performance assessments and assignments will also be posted on the [Calendar](#) on the Blackboard Homepage. All lecture presentations will be posted, e.g., Powerpoint and pdf slides, and pdf handouts for printing, on the Blackboard course site. All correspondence will be conducted via the Blackboard Mailbox function on the course site. Grades are posted automatically upon completion of performance assessment materials. Final grades are posted during the final week of the semester.

CLASS WEEK

TOPIC

MODULE I: BASIC CONCEPTS AND RESPONSIBILITIES IN RESEARCH

I Introduction & Conceptual Basis of Ethics [I. pp.3-24]

I Conducting Research (Case Studies) [I&II. Chpt1&2]

II Recording and Reporting Research (Case Studies); Authorship [I Chpt3. pp. 48-67]

II Definition and Determination of Plagiarism [I. pp. 50-52]

*.....ASSIGNMENT I: INTERNET RESOURCES

MODULE II: RESEARCH DESIGN AND DATA MANAGEMENT

III Principles of Experimental Design for Life Sciences [II. & III. Ch.2/3]

III Statistics and Reliable Research Data [II. & III. Ch. 4/5/8]

IV Statistics and Reliable Research Data [II. & III. Ch. 4/5/8]

IV Ownership of Research Data; Peer Review [I. Chpt6. & pp. 68-92]

*.....ASSIGNMENT II: EXPERIMENTAL DESIGN SAMPLE

MODULE III: RESEARCH ETHICS AND RELATED LAWS

V Experimentation on Humans [I. pp. 181-213]

V Animal Research [I. pp. 214-232]

VI Animal Rights and the IACUC

VI Prepare Animal Use OR Biosafety Protocol Proposal

*.....ASSIGNMENT III (ON-LINE SUBMISSION OF Protocol PROPOSAL)

VII Mentoring and Laboratory Supervision (Case Studies) [I. pp. 59-63]

*.....ASSIGNMENT IV (OUTLINE OF ALL CHAPTERS FROM TEXT #1)

MODULE IV: RESPONSIBILITIES IN RESEARCH

VIII & IX Misconduct in Research; Conflicts of Interest [I. pp. 93-118; 139-162]

X The Scientist in Society

OTHER TEXTBOOKS AND SOURCES FOR LECTURES:

1. Ethics and its applications by Baruch A Brody
2. Ethics by William K. Frankena
3. General Ethics by Agnes Heller
4. Philosophy of Natural Science by Carl G. Hempel
5. Animal Rights. Opposing Viewpoints by David Bender & Bruno Leone
6. A Guide to Argumentative Writing by Byron L. Stay
7. Understanding Medical Research. A practitioner's Guide by Jane L. Garb
8. Statistics & Experimental Design. An introduction for Biologists & Biochemists by Geoffrey M. Clarke
9. Essentials of statistics for scientists and technologists by C. Mack
10. The Responsible Conduct of Research - Case Studies, AAMC

GRADING:

CASE STUDY (1)	30%
ASSIGNMENTS (4)	60%
PARTICIPATION	<u>10%</u> (*participation required)
	100%

*There will be a quiz for each lecture administered through Blackboard.

• Note: there will be additional video lectures to supplement those listed on the syllabus.

There are four (4) modules in this course [I. Basic Concepts and Responsibilities in Research; II. Research Design and Data Management; III. Research Ethics and Related Laws; IV. Responsibilities in Research]. The performance of student participants will be assessed by three mechanisms. 1) Supervision, preparation and presentation of three case studies; 2) Four assignments that will challenge your resourcefulness and ability to utilize the internet, write a grant proposal, and outline a textbook; 3) View all lectures with completion of corresponding quiz and participation via on-line discussions.

1) One case studies will be discussed each week via the Discussion function on Blackboard. Each student will have to prepare and present ONE case study in the semester, as well as supervise the discussion (These will be on-line submissions and discussions.). The case studies can be taken from text I or from internet, library, or public media sources. The presenter will be responsible for finding the case study as part of Assignment I.

2) Assignments: (Due dates noted on syllabus above and posted on the Calendar)

1 - Find an internet site that lists a code of ethics for research, five internet sources on teaching responsible conduct in research, and one case study on your area of interest in science:

-describe each and list bibliography and other resources

-prepare MS Word file for on-line presentation of case study to class

2 -Write an experimental design in NIH format

3 - Prepare an IACUC Animal Use Protocol OR Biosafety Protocol application for experiments in #2.

4 -Outline each paragraph in each chapter of textbook #1.

*Each assignment can be submitted through Blackboard.

4) Attendance: You must complete at least 90% of scheduled lectures and corresponding quizzes including case study sessions to get the credit in this category. Documented excused absences and delinquencies on work will be tolerated.