

COURSE SYLLABUS

FALL 2015

INSTRUCTOR: DR PHILIP HICKS

OFFICE: Centennial Building, Room 4051
OFFICE HOURS: 1:00 pm to 2:00 PM, Mon & Thurs;
OFFICE PHONE: 343-8106 (leave a message if there's no answer; please speak loudly enough to be well heard as well as slowly and clearly enough for your message to be understood)
E-MAIL ADDRESS: phicks@lakeheadu.ca (school e-mail address)
WEB PAGE: http://timetable.lakeheadu.ca/2015FW_UG_TBAY/biol.html
CLASS HOURS: 2:30-5:30 pm, Thurs.,
CLASS LOCATION: RB3024
LABORATORY: There is no laboratory component for this class

A. DESCRIPTION

This course is designed to explore a wide range of issues that may periodically face laboratory-oriented researchers working in the experimental and clinical sciences of biology and biomedical disciplines, within a variety of professional/disciplinary and community contexts. It seeks to examine and edify appropriate vs inappropriate attitudes and approaches illuminated by ethical considerations which will inevitably be called upon to guide one's professional and humane decision-making in the research environment from a moral stage-point. This is not a course which explores the works and thoughts of the ancient classical philosophers (Arabic, Greek or Roman thinkers); nor is the class one that deals to any great depth directly with issues of public health. The subject matter is rather approached through situational examples for classroom discussion and debate and an emphasis is placed on biological and biomedical questions. It will require one to think about and develop values positions in relation to scientific practices (current and past); giving students ample opportunity to discuss, debate and perhaps role-play to gain deeper appreciation of complex issues dealing with critical assessments of laboratory-based knowledge creation by biomedical and biological researchers in life science.

OFFERING: 3-0; 0-0

Note: Only students who have taken a laboratory-based biology class will be permitted to register.

B. ORGANISATION

This is a course which requires intensive oral participation from students. The format is not rigidly fixed as it may at times alter between didactic presentation by the instructor, role-playing by students, class division into debating teams of different sizes, or student-led presentations and discussion groupings. You will not be required to possess in-depth mathematical knowledge beyond elementary statistics. You will not be required to have background knowledge related to classical (or modern) philosophy, although such background and exposure would be helpful if it were gained previously. Successful students will be those who are able to see ethically complex issues from a variety of perspectives and who have proficiency in the arts of debate and persuasion. The grading system is outlined below. Biol 4372 students generally are expected to arrive at class already having read necessary background materials (assigned or otherwise independently sourced) relevant to the theme to be discussed that day. Students will be most successful if they are able to demonstrate to their classmates and their instructor that they have read extensively on the relevant topic of the class and can refer to extant literature supporting their articulated ethical positions.

C. COURSE OBJECTIVES To provide students opportunities to:

1. Develop their values and viewpoints relating to ethics as applied to commonly-encountered situations in the life sciences, the “hard” laboratory sciences, and biomedical disciplines dependent upon laboratory research methods.
2. Learn to lucidly offer, defend, and be prepared to change their perspectives relating to the above according to the quality of argument offered.
3. Become familiar with and utilise effectively in debate, sources of ethical perspectives as related to biological and biomedical research scenerios.
4. Obtain, refine and defend viewpoints relating to complex and sometimes mutually-contradictory ethical standpoints relating to deriving value judgements as applied to situational cases.

D. COURSE TOPICS

The course may or may not include all the following topics, time and weather permitting: (Note: This list is entirely provisional; topics other than these may be introduced from time to time):

Oversight of research. Design of experimental studies. Animals used in labs. University Animal Care Committee status. Issues related to providing informed consent to participate in studies (e.g., human subjects). Appropriateness of subject(s) selection. Conflicts of interest. Social effects of research (e.g., assisted suicide, mandatory vaccination). Species de-extinction issues. Data fabrication or exaggeration. Genetic modification research. Do animals have rights? Publication and authorship issues.

E. TEXT AND REQUIRED SUPPLIES

The text used to promote and inform discussions and debate in the class is “Case Studies in Biomedical Research Ethics”, by Timothy F. Murphy 2003 (MIT Press). Various other readings and materials will be used to supplement the required course text. These will be available either as photocopies distributed to the class or by downloading from the course D2L site.

F. GRADING PLAN

A combination of evaluative methods will be employed in calculating performance.

1. **In-class assessment** – 60 points (schedule of criteria developed/used by instructor)

Because decisions based on ethical judgement, right/wrong considerations, preferred & not-preferred actions in biological & medical science, are often difficult to define as entirely correct or incorrect -- shades of interpretation can be found nearly everywhere – student grade assignments cannot easily be given based on black/white, right/wrong sorts of measures usually provided through conventional written or oral exams.

Accordingly, other assessment strategies are required. Preparation in each class & meaningful participation in a well-considered manner during discussions & debates will be important indicators of high performance; hence will be graded in as objective a manner as is possible, by the instructor, class by class, using a grid format prepared for each student using common variables & criteria.

Student preparation will be assessed by evident indications of the extent to which he/she has performed readings on the issue prior to class, by demonstrating thought-through ramifications of the details of the case(s) or topic at hand, even by demonstrating that he/she has accessed information sites & pertinent literature beyond the assigned. Additionally, one’s ability to use & display overt competence & maturity of viewpoint, flexibility in thought & judgement, & skill/knowledge in debates supported by academic rigour, will be assessed & graded. Please refer to the grid criteria.

Each of the proposed (draft) criteria for assessment by the instructor will be disclosed & discussed the first time class convenes. Students will be given every opportunity to agree or disagree with these criteria. The instructor will negotiate with students a fair set of standards to be used until full agreement is achieved by all registered in the class.

Moreover, early on in the class, in the first week or two when discussion is held, verbal feedback on individual performance will be openly provided, so students can learn how the grading system is being employed.

2. Critical essay on one of two provided topics – 40 points.

Each student will choose, (or be assigned, if are unable to come up with a topic), a topic of relevance to the course materials & objectives, & will write & submit for grading a critical essay dealing with that topic. It is expected that the written treatment will assess the value of the most salient arguments on either side of the debate/issue & support for your viewpoint will be offered by a set of weighted facts, justified opinions & as far as possible, semi-quantitative measures applied to your weightings & opinions. The position you take as your favoured side is of far less importance to me in grading your paper than is your rationalisation, quality & sophistication of the defence you offer for your position. Use references to published materials in support/refutation of arguments for each side of the topic you select.

Examples of topics you may choose to write about:

Provided topic #1:

- a). Humans should be able to exercise their right to use animals both as food & in biological/biomedical research contexts, including in ways where even very minor pain to the animal may occasionally occur.
- b). Humans should never feel entitled to use animals either for food or in biological/biomedical research contexts.

Provided topic #2:

The current university “publish or perish” & co-authorship system for faculty hiring & academic promotion in biomedical science is unfair. It readily leads to dishonesty in many guises. It can lead to direct data fabrication &/or manipulation. It also can lead to mistreatment & non-recognition of junior-level researchers such as collaborating graduate students, PDFs & technicians, as well as introducing disciplinary bias for promotion & tenure committees, plus it promotes excessive authoring of poorly-justified/trivial papers as well as double-publishing of same/very similar papers. It furthermore reinforces a self-perpetuating hierarchical status of a small coterie of elite scientists who can often wind up dominating decision-making in committees charged with evaluating grant proposals. If changes for improvement were to be made to this situation, what would they be, in order to make the new system fair, equitable & more honest?