**Short essay guidelines**

Terrestrial Ecosystems (BIOL 416) Fall 2019

**Essay assignment**

This exercise is designed to be an opportunity to further develop your ability for critical and original thinking, and for presentation of those ideas in concise written form. Each of you has spent considerable time preparing your seminars, developing an interesting focal seminar question, and doing background reading around your seminar’s core question. You will have learnt a substantial amount during these processes, and in the interactions with the rest of the group (including the questions they presented to you), and in your own post-seminar reflections. For this short essay, I want you to take that work to the next step so as to further advance your learning by writing an interesting and creative short essay in support of (or against) the following thesis argument:

***Terrestrial ecosystem ecology contains unique biological concepts whose implementation would significantly help farmers to develop more ecologically and/or economically sustainable agricultural practices.***

**Essay exercise**

Generate your own original perspective on the argument utilizing your understanding of the course material delivered in the initial seminars by Paul, and those by your colleagues, your study of the Chapin textbook and other background readings, and relevant material from other courses. Be original and creative. Demonstrate your capacity for independent critical thinking. Discussing it with classmates may really help you to develop your perspectives and evidence in support or against the argument (- the latter could be REALLY interesting).

The essay (~1200 words and not more than 4 pages of double-spaced font size 12 text) should be suitable for an interested, educated, but not scientifically-trained, general public audience, and should include the following components:

a) Introduction to the argument. (~0.5 page) Outline necessary background information on the particular relevance of the argument, and why it is novel/interesting. This section should lead up to, and conclude with, a precise and explicit articulation of the argument and how you are going to support (or refute) it. “In this essay, I will argue that terrestrial ecosystem ecology contains unique biological concepts whose implementation would significantly help farmers to develop more ecologically and/or economically sustainable agricultural practices. My evidence will include the following three concepts....(brief outline).”

b) Evaluation of the evidence. (~2.5 pages) Describe and evaluate ~3 clear and distinct terrestrial ecosystem ecology concepts that you think would benefit the sustainability of particular agricultural practices. Be as detailed and specific as possible, and be sure to explain why those insights or concepts would be useful – this is a great opportunity to demonstrate creative and original thinking. Try to envisage and describe how your concept would actually be applied on-farm. For example, if you wish to focus on the farming practices we saw on the field trips, try and write in a way that would prompt Charlie, Chris or Titia to actually implement the terrestrial ecosystem ecological concept that you are highlighting.

c) Conclusions. (~0.5 page) Identify and discuss constraints associated with any major assumptions that have been included in your evidence, and implications/future directions that arise from your conclusion.

Final essays will be graded ‘blind’ by the rest of the student group (i.e. anonymous peer-review), and by me, according to the following criteria:

1. Evidence of original, critical thinking (quality of the ideas presented in relation to the argument)
2. Development of argument (logical structure and flow of evidence and ideas to introduce and address the argument)
3. Background reading (evidence of relevant reading, and its intelligent use in developing the argument)
4. Synthesis of ideas (evidence of bringing together related ideas to developing unifying original perspectives)
5. Writing quality (overall evaluation of how stimulating and accessible the text is for the reader)

**Please carefully study the full marking rubric which is supplied at the end of this document.**

**Preparation**  
The very broad nature of the essay argument means that it will be very easy to generate some text as an essay answer. As the marking criteria above indicate, I am looking for a lot more than that. Remember that those criteria (above) will be the basis of your grade: appropriate preparation means preparing to address each and all of those criteria.

Consider the essay argument carefully. Take some time to reflect on it, and discuss with classmates. Review all of the relevant seminar and reading material and other lab and field experiences that you have been exposed to in this course, and in other courses as appropriate. Take some time to develop thoughtful and creative ideas as evidence to support the argument. I am looking for original thinking and perspectives that are substantiated by good background knowledge. Make an outline of the evidence that you will use to address the argument, and structure it as three logically linked sections based on the components described above. Include in it any relevant references that you are intending to use in the final essay.

**Submission logistics**

Please submit hard copies of your outline essays to me by the beginning of our class on **Thursday November 14th** at the latest (- no exceptions allowed without clear, formally authorized, documentation). You can include as little or as much as you want – just argument ideas, maybe simple bullet points or short sections of draft text for each of the three sections above, and/or any queries you may have on which you want feedback from me. You could submit just three bullet points with those insights and how and why they would be useful, or you could submit a whole draft essay, or something in between – it is up to you, and I will make comments and suggestions on all your text, but you will only be marked on the depth and originality of thought in relation to the 3 insights/concepts.

I will work through these outline drafts and provide feedback, and will return these by the evening of **Friday November 15th**. These initial drafts will be worth 8% of your course grade and will be marked for ‘depth of thought’ (i.e. on the basis of ‘perceptiveness’ and ‘relevance’ – just like your seminar questions). Treat the outline submission primarily as a way to get feedback on your best ideas and original thinking. Please make all text double-spaced etcetera as required of your final submission (formatting details below).

Final essays should be submitted to me by email as a WORD (not PDF) document by midnight on **Wednesday November 27th** (at the latest – earlier is fine!). Please make sure that your identity cannot be determined from the file, so that it can be graded ‘blind’ by the rest of the class.  Each essay should have the grading rubric at the end of the ‘Essay guidelines’ document added as an appendix within the WORD file.  I will circulate the final essays to all of you shortly afterwards and ask you to letter grade the essays on the basis of the marking criteria indicated by midnight on **Thursday December 5th** at the latest (earlier would be great, but that is the final deadline).

In grading the essays, you should rate the performance on each aspect of the rubric by highlighting over whatever you conclude is the most appropriate text description in each section of the rubric – which is included as an appendix at the end of each essay. I anticipate that the range of grades you will assign across the group will range from C+ to A+. Note that assigning identical or very similar high grades for the whole class is not being fair to those whose essays really excelled – i.e. if you have some really, really good ones, then you probably should also have some B- or lower essays too. I also want you to write 3-4 brief sentences of feedback (in the attached excel grading sheet), indicating the particularly strong and the weaker aspects of the essay. Constructive criticism will be very helpful and much appreciated by your colleagues (- and will be circulated anonymously to them after the course). Note that there is no need to send me the highlighted rubric – that’s there to assist you as a marker in evaluating and comparing the essays. Please send me your assessment of all of the essays (in the attached excel spreadsheet) as soon as you get them all completed, but definitely not later than midnight on Thursday December 5th. On the basis of the group’s assessment of the final essays, and my own assessment, I will award a mark (worth 22% of your overall course grade).

**Formatting requirements and recommendations:**

* Please type your draft outline and final essay in Times New Roman font size 12 and double space the text with 2 cm margins. As indicated above the complete text of the final essay should be no longer than 4 double-spaced pages (~1200 words).
* All references cited in your essay should be listed in a bibliography at the end as an appendix (i.e. this section is not included in the 4 page limit). The bibliographic style used in the journal Ecology would be very appropriate.
* Section and subsection headings within the essay are strongly encouraged.
* Please develop an interesting, challenging and engaging essay title and put it on a separate front page (i.e. not part of the 4 page main text limit), but do not add any author identity information.
* Figures and graphs should only be included where they provide essential background information or evidence to the argument. They should be incorporated as appendices (and so are not part of the page limit).
* Writing well is not easy, and feedback always helps. - I **strongly recommend that you have at least one friend or relative proof-read your essay** to make sure it is all clearly comprehensible.
* Academic integrity is a crucial component of university undergraduate education, and is fully described at the following website <https://www.queensu.ca/artsci/students-at-queens/academic-integrity>. Student use of ‘Turnitin’ software is not intended in BIOL 416, but however, please note that any suspicion of a breach of academic integrity in your essay will be carefully assessed, and full penalties will be applied if a breach is determined.

**Resources (for this exercise, but also for your future reference)**

Note that there are substantial resources at Queen's to help you in developing your learning and writing skills (- see <http://sass.queensu.ca/topics/>) to view their online resources or to make an appointment for one-on-one tutorial assistance). Plan ahead because it can take weeks to get an appointment late in the term when things get busy. See the Writing Resources tab within the above link for access to PDF handouts with very useful sets of short guidelines on many aspects of writing including how to develop a thesis statement, how to structure a good paragraph, and how to develop an essay outline.

In addition, the following guidebooks on writing skills are particularly good, and may be useful to you not just for this exercise but long into the future:

* Schimel, J. 2012. Science: How to Write Papers That Get Cited and Proposals That Get Funded. Oxford University Press.
* Strunk, W. Jr. 2000. The Elements of Style (4th Edition)
* Williams, J.M. and Colomb, G.G. 2010. Lessons in Style and Grace in Writing (10th edition)

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|  | **Weak** | **Average** | **Very good** | **Excellent** |
| **Knowledge/Understanding** - - ideas, concepts, themes, content  - synthesis/integration | - Shows minimal understanding of ideas, concepts, themes, content  - Little evidence of integration of knowledge to achieve synthetic understanding | - Shows moderate understanding of ideas, concepts, themes, content  - Some evidence of integration of knowledge to achieve synthetic understanding | - Shows considerable understanding of ideas, concepts, themes, content  - Clear evidence of integration of knowledge to achieve synthetic understanding | - Shows thorough understanding of ideas, concepts, themes, content  - Integration of knowledge to achieve synthetic understanding readily apparent |
| **Thinking/Inquiry**  - thesis statement  - analysis/interpretation  - inferences  - use of textual evidence | - Text contains no clearly stated evidence to support thesis  - Develops ideas with minimal logic and critical analysis  - Minimal inferences made  - Incorporates minimal relevant evidence | - Text contains thesis evidence that is vague and unoriginal  - Develops ideas with some logic and critical analysis  - Some inferences made  - Incorporates some well-chosen relevant evidence | - Text contains clear thesis evidence components, some of which need deeper thought  - Develops ideas with considerable logic and critical analysis  - Multiple inferences made of varying effectiveness  - Incorporates considerable well-chosen relevant evidence | - Text is focussed on clear, original and has challenging thesis evidence components that have real potential to make novel contributions to sustainability practices  - Develops ideas with a high degree of logic and critical analysis  - Highly effective inferences made  - Incorporates highly effective and well-chosen relevant evidence |
| **Organisation/ Structure**  - thesis linkage  - introduction, body, conclusion  - transitions | - Little progression of ideas  - Minimal structural organisation  - Resembles a written form of speech | -May have abrupt or illogical shifts and ineffective flow of ideas  - Some clear signs of logical organisation, but conclusion fails to address thesis adequately  - Linkages weak in many places | - Sequence of ideas generally appropriate to thesis  - Organisation supports thesis and purpose with conclusion referring directly to thesis  - Some effective transitions | - Logical flow of ideas is well-suited to thesis  - Clear introduction, body and conclusion that that together achieve a unity of purpose in relation to the thesis  - Effective transitions |
| **Application**  - language conventions  - citations, references | - Applies grammar, usage, spelling and punctuation with limited accuracy and effectiveness  - Follows required style for few citations and references | - Applies grammar, usage, spelling and punctuation with some accuracy and effectiveness  - Follows required style for some citations and references | - Applies grammar, usage, spelling and punctuation with considerable accuracy and effectiveness  - Follows required style for most citations and references | - Applies grammar, usage, spelling and punctuation with high degree of accuracy and effectiveness  - Follows required style for all citations and references |