

## Supplementary material 1. Peer-Review of Essay

Manuscripts published in scientific journals usually undergo a severe peer-review process before they are accepted for publication. This exercise mimics that peer-review process.

You will receive 5 review manuscripts written by 5 of your peers on your Turnitin Web Site during the semester break. Those 5 manuscripts have to be evaluated according to the following guidelines by Thursday, May 13<sup>th</sup>, 5pm. Each peer reviewer will get 1 point for each properly peer-reviewed article (max. 5 points = 5% of the final mark). You need to provide corrections and suggestions in the text and supporting explanation why you give the mark, otherwise you may not get the full mark for the peer-review process.

Guidelines for peer-review process:

The following criteria shall be applied:

1. 5 or more original research articles have been used?
2. Do the original research articles and other supporting information address the topic?
3. Was the required format applied (required word numbers for Abstract and body text, correct reference format, in-text referencing, etc)?
4. Is spelling and language of high scientific quality?
5. Does the Introduction, the main body text and the Conclusion flow well and does the author tell a nice and coherent story?
6. Does the abstract summarize the main body text?

According to the above criteria and your evaluation, rank the 5 essay manuscripts (1<sup>st</sup> = best, 5<sup>th</sup> = worst) according to their quality and then mark each manuscript using the following scale:

**3 points:** The essay covers all criteria as mentioned above, is excellent and is highly recommend for publication without changes

**2 points:** The essay is good and is recommend for publication with changes (e.g. too many or too few words in abstract and/or body text, reference list or other format has to be adjusted, some editing is required for spelling and language, etc.)

**1 point:** The essay has major deficiencies and is not recommend for publication (e.g. it is very difficult to follow and understand, has a lot of spelling mistakes, did not cover properly the topic or integrated the original research articles in a proper way, etc.)

**0 points:** the article is of very poor quality, most of it is difficult to read and does not make sense, and is therefore not recommended for publication.

You should also include comments (positive and/or negative) in the corresponding part of the peer-assessment paper.

## **Supplementary material 2.** Course topics.

1. What makes cells of the human body keep their shape and move? Cytoskeleton
2. What keeps the structure of cellular nuclei organized? Nuclear skeleton and other structures
3. How do cells of the human body generate and manage energy? Mitochondria
4. How are cellular protein synthesis, turnover and degradation regulated?
5. How does a cell know when it should divide and when not? Can cells of the human body be immortal? Cell cycle, telomeres
6. What holds cells and tissues together? Extracellular matrix, adhesion molecules
7. How do cells communicate? Cell signalling, cell-to-cell interaction, paracrine and endocrine factors/receptors
8. How do cells, tissues and whole organisms monitor time? Clock mechanisms
9. What is bone marrow? Bone marrow stem cells and lineages
10. How do immune cells know where to go in the body? Chemokines and their receptors
11. What protects the human body from infections? Immunity and infection
12. Why and how do cells kill each other? Cytotoxic immune cells and factors
13. Why is HIV still not curable? Viruses – host interaction
14. Why does inflammation cause pain?
15. What is breast cancer?
16. What makes blood vessels sick? Healthy vessels and arteriosclerosis
17. What makes males and females different in phenotype and function? Genes, hormones and other issues defining biological gender
18. Why do some people become diabetic? Pancreatic islets
19. Osteoporosis: bone biology
20. Why do humans age and eventually die? Why do women live longer than man, on average? Aging at whole organism level

### **Supplementary material 3. Essay – Assignment**

Write a book chapter about a given topic in cell and tissue organisation.

**A book theme and chapter topic will be allocated to each student through WebCT.**

#### **Search and select at least 5 original research journal articles and up to 5 journal review articles:**

Search for original journal articles and review articles, that contain new research data that are related to the topic that you have chosen, published on the **last 10 years**. Use the online tools that are available on the Web site of the library. If not familiar with the library tools and online search facilities for journal articles, please use the IRIS online program that is provided by the library. The link is available through WebCT. If desperate, ask your supervisors (E-mail: ...). \*

#### **Essay outline:**

Write a title, an abstract, a main text and a reference list. Try to focus on the original research articles that you have chosen. Describe first the basic knowledge about the topic using the articles and/or additional sources, such as books, lecture notes and web sites. Explain the main question(s)/issues for the topic that have been addressed in the articles and describe the most important findings of the research published since 2000.

**Use the format template available on WebCT (Essay Folder).**

Please, consider the following outline for writing the essay:

**Do not put your name or student number in the text!!! So peer-assessment can be anonymous.**

Title: maximum 300 characters

Abstract: 150 to 300 words

Main text: 3000-4000 words. The main text should have first an introduction to help the reader to understand what the topic is about and to supply basic information about the topic to the reader. The main part of the main text should deal with the journal articles that you found for the topic. At the end of the main text, a summary and conclusion shall briefly summarize the main statements and how science has advanced in the area of the chosen topic over the last 10 years.

Reference list, including the 5 to 10 original research articles, the review articles and maybe other references, e.g. books, lecture notes, web sites, etc. (use the format template on WebCT). You may use the following library web site to get more information about referencing:

You may create and include figure(s) that explain the topic that you write about (in addition to the 3000-4000 words of the main text), but they have to be your own, newly created figures.

There are some example book chapters on WebCT (Essay Folder) that can be used as a template.

Consulting of books about scientific writing in the reserve collection is highly recommended. See also notes to scientific writing on the WebCT site (Essay Folder). An excellent reference if you have any confusion about the use of commas and apostrophes is *Eats, Shoots and Leaves (the zero tolerance approach to punctuation)* by Lynne Truss (2003), Profile Books, London, UK. Available from bookshops.

Those with English as a second language or deficiencies in writing are highly recommended to ask for help, either to peers or teachers.

The following Web Site offers courses to improve your academic writing skills:

**Electronic submission:**

Submission of the essay in week 7, by April 21<sup>st</sup>, 5pm on WebCT and Turnitin ([www.turnitin.com](http://www.turnitin.com)). You can submit and resubmit before deadline on Turnitin and check for plagiarism.

\*modified from original text.