University of Georgia, Genetics Department updated 1/15/2019
4990R Thesis writing guidelines

1. SUMMARY OF EXPECTATIONS

GENE4990R is intended to provide highly motivated juniors and seniors with an opportunity to communicate to a scientific audience the findings, methods, and significance related to their original scientific research project performed while taking GENE4960R, 4970R, 4990R, and, possibly, 4980R (4980R is optional). It is often the case that students perform some of the research while writing the thesis when they are enrolled in GENE4990R. The thesis should be more than a simple summary of the student's work; rather, it should be an extended written treatment of the subject of research. In particular, a student dissertation should substantiate a specific view. The student should construct an argument, not just regurgitate results. A properly written thesis should summarize the background literature for a project to adequately prepare a scientific reader otherwise unfamiliar with the specific field. For example, the student should pretend that they are writing a review of the field for another new undergraduate student who has just joined the lab. The student should then describe their own work in a single document. Since the thesis should describe the results of 9-15 credits of research, the length of the thesis is typically 25-60 pages of double-spaced type (12-point font). The student should consult their research sponsor regarding the length and scope of the thesis. The thesis should thoroughly discuss the experiments and how they were performed. Keep in mind that your thesis will be one of the first resources that your mentor will grab when he or she needs to look up something about your work long after you are gone from the lab.

We recommend using the continuous style for the thesis. It should include an "Introduction" section to explain the rationale of the thesis and describe the necessary background literature, a "Materials and Methods" section specific for the experiments described, a "Results" section in which the student walks the reader through the narrative of the experiments in a logical fashion, and a discussion section that discusses the meaning of those results.

The following outline is recommended:

- Title Page
- Acknowledgements Page (optional)
- Table of Contents
- Abstract (limited to 1 page)
- Introduction (typically 6-12 pages; it can be broken into sections with subheadings)
- Materials and Methods (typically 2-8 pages)
- Results (typically 5-15 pages)
- Discussion (typically 3-8 pages)
- Appendix (optional, could be anywhere from 1-20 pages)
- References (typically 20-70 references, with the majority being primary references rather than being mostly reviews)

2. FORMATTING/ORGANIZATION

- **Margins:** 1" top, bottom, left and right (use 1.5" left margin if printing/binding)

- **Header/Footer:** 0.5-1”
- **Page numbers:** Bottom middle, beginning on the first page (1, 2, 3, etc.).
- **Font:** 12pt. easily read fonts like Times New Roman or Arial.
- Follow proper nomenclature and terminology rules for your discipline. Abbreviations should be defined the first time you use them in the text.

- **Title page:**
  - ✓ Title (a meaningful, accurate description of the content of your research).
  - ✓ Your full, legal name.
  - ✓ “Submitted to the Department of Genetics in Partial Fulfillment of the Requirements for the Degree of,” then list your degree and major.
  - ✓ “University of Georgia, Department of Genetics”
  - ✓ “Written under the direction of” then your thesis advisor’s name, degree, and departmental and university affiliation.

- **Abstract page**: Provides a succinct summary of the dissertation, summarizing clearly the problem or problems examined, the methods employed, and the major findings. This should be no longer than one double-spaced page.

- **Acknowledgement and/or Dedication** (optional): This is typically a single page recognizing colleagues that supported the work, provided reagents, et cetera. The acknowledgement page is also a place to thank family and friends for their support.

- **Table of contents** (with page references for each item):
  - ✓ Includes all preliminary and main text sections.
  - ✓ Includes subsections of Introduction and Results
  - ✓ Page numbers should form an even column on the right-hand side of the page.

- **Main Text Section**

  Introduction:
  - ✓ This will often be broken into subsections that cover all of the background topics relevant to the research, that support the hypothesis, and that provide the reader with information required to understand the experiments in the thesis.
  - ✓ This would ideally read like a review article in the field.
  - ✓ This will often include multiple figures that help summarize the background material.

  Main body:
  - ✓ Divided into sections, each having a title page beginning on a new page.
  - ✓ If some of your data has been published, you need to say so. This should be indicated on the title page, with reference to specific figures or sections that have been published.
  - ✓ If some of the data presented in this section is not yours, you should indicate this at the beginning of the Results section, noting the names of the contributors of such data, and with reference to specific figures or sections that were done by these individuals.

- **Appendices** (optional):
  This is the place for experiments and data that do not fit well into the overall narrative of the thesis, but should be included for archival reasons. The format can follow that of the individual sections, but flexibility can be used here.

- **Figures:** Figures must fit within the margins and must be identified. Figures must be uniquely numbered and captioned, using consecutive numbering throughout the thesis/dissertation (e.g. Figure 1, 2, 3, 4, etc.). The number and caption of a figure must be placed below the figure in a consistent manner (i.e. always justified left of figure edge).

- **Tables:** Tables must fit within the 1" margins and must be identified. Tables must be uniquely numbered and captioned, using consecutive numbering throughout (e.g. Table 1, 2, 3, 4, etc.). The number and caption must be placed above the table in a consistent manner (i.e. always justified left of table edge).

- **Citations:** It is preferable to use "author, date" format in the text and follow style for the journal *Cell*. Example of citation format in in "References" section:
  - ✓ Riolo, R.L., Cohen, M.D., and Axelrod, R. (2001). Evolution of cooperation without reciprocity. Nature *414*, 441–443.

  Guidelines for this style can be found at: https://paperpile.com/s/cell-citation-style/

  Note: It is often useful and more expedient to use a **citation manager** program that can integrate/work with your word processing application. For example, Endnote is a program available free of charge from the UGA libraries site (Student login required). It has plug-ins that allow it to work with word processing applications such as Microsoft Word and Apple Pages. Refworks is another available citation manager that may be useful. Information available at: http://guides.libs.uga.edu/citationmanagement

Portions of these guidelines have been adapted from Guidelines from Rutgers University:

https://genetics.rutgers.edu/images/documents/honors_thesis_guidelines_2008.pdf