



MICRO 798 DISSERTATION AND DISSERTATION RESEARCH

Course Description: Research and preparation of a dissertation required to earn a PhD degree.

Credit Hours: 1 semester hour; may be repeated for credit.

Course Prerequisites: 45 graded credit hours; passage of program qualifying exam in Microbiology, and admission into candidacy. The student must also have a first author publication in a peer-reviewed journal published or accepted for publication prior to working on dissertation.

Course Dates: TBA

Course Times: > 40 hours per week are expected.

Course Location: Mentor's Lab

Instructor: Mentor

Required Text and Other Learning Resources: Publications pertaining to the area of research.

Course Overview: In consultation with their mentors and advisory committees, students will write a PhD dissertation in which they describe the findings and importance of their research project. The dissertation has five parts: A review of the literature, a description of the methods used, the results, a discussion of those results, and a bibliography. In most cases, the results and discussion section will be divided into sections reflecting the different (but related) research projects worked on during the course of their degree studies.

Course Objectives: Upon completion of this course, students will be able to:

- 1) Form hypotheses and design experiments to answer those questions,
- 2) Technically perform the intended experiments,
- 3) Interpret the results,
- 4) Describe the significance of these studies in a well-reasoned Discussion, and
- 5) Defend their approach, methods, and interpretation in an oral defense before their advisory committees.

Grading Policy and Rubric. The dissertation should be submitted to the Advisory committee (composed of at least five members of the graduate faculty, at least four from within the Department of Microbiology and at least one from outside the department) two

weeks prior to the committee meeting at which it will be determined whether or not the dissertation is defensible. The committee member's will evaluate the dissertation and a pass/fail grade will be determined by a majority vote of the advisory committee. Grading is based on the quality of the writing and research. An agreed upon rubric will be used, see attached.

Course Policies:

Requirements for successful completion of the PhD are three-fold: (1) a written dissertation describing the student's original research submitted to each member of the student's Advisory Committee who will in private deliberation determine the acceptability of the dissertation and the defense of the dissertation, (2) a public oral presentation of the dissertation research, and (3) at least one peer-reviewed, first author publication describing original research done by the student in a major scientific journal. The dissertation should be submitted to the committee two weeks prior to the committee meeting at which it will be determined whether or not the dissertation is defensible. At this meeting the closed oral examination and thesis defense will take place. If the dissertation is deemed acceptable the student shall submit a letter to the director of the graduate program and the chairman of the department providing the title of the dissertation, the expected date of the public dissertation defense, and a list of publications

The student or program director will inform the Office of the Dean of the intended date of the dissertation defense, the title of the dissertation, and copies of his/her published manuscripts. Manuscripts accepted for publication but not yet in press are acceptable, but must be accompanied by a letter from the editor attesting to their acceptance. On receipt of that letter, the director of the graduate program will schedule the student's public defense and notify the School of Graduate Studies in the Health Sciences .

University Policies:

Students with disabilities (ADA) statement Refer to UMC policy
Academic honesty statement Refer to UMC policy

School of Graduate Studies in the Health Sciences
Written Dissertation Scoring Rubric

Policy & Instructions

The PhD dissertation is the ultimate educational product and reflects the training of its author and the technical, analytical, and writing skills developed in the doctoral program. The purpose of the rubric is to guide students and dissertation supervisory committees as they work together to develop high quality proposals and dissertations. Ultimately, the rubric will be used by the dissertation committee to determine if the dissertation has met acceptable standards. In addition, the rubric results will be analyzed to help advisers and departments identify strengths and weaknesses in many different areas. This information can then be used to build on the strengths of graduate programs and modify their weaknesses.

Prior to the writing process, the committee chair should provide a copy of the rubric and discuss the level of quality expected from the student.

Before the dissertation defense, each member of the committee should complete the rubric and submit to the committee chairperson. If there are significant differences of opinion within the committee, the chair can schedule a meeting to reach consensus.

After the dissertation defense, and once the student has completed any requested revisions to the dissertation, the committee will sign the Dissertation Signature Form. The dissertation Signature Form along with the individual rubric score sheets should be forwarded to the SGSHS office.

Using the rating scale: A five level rating scale is used for scoring each of the quality indicators in the rubric. In general, ratings of 3 or higher are considered acceptable, while ratings of 1 or 2 do not achieve minimal standards for passing. An "NA" (not applicable) category is also used when an indicator on the rubric is not relevant to the manuscript.

A space for comments is provided. This space can be used to provide specific guidance for revision, and it should also be used to praise strong work or noteworthy improvements. More extensive notes can be submitted as a separate attachment or as a marked-up copy of the dissertation.

Definitions of Ratings for Dissertation Rubric

Acceptable:

- 5- Approved with commendation, the level of scholarship in this dissertation is exceptional.
- 4- Acceptable as written, all crucial elements are included and adequately described.
- 3- Approved, although revisions are strongly suggested in one or more important components that are of markedly lesser quality than the other sections. Comments on how to enhance quality are provided by the mentor.

Unacceptable:

- 2- Must be revised and resubmitted because one or more essential components are not satisfactorily described.
- 1- Must be revised and resubmitted because one or more required elements are missing or previous requests for revision were ignored.

Dissertation Rubric		
Date _____		Rating
Student _____		
Evaluator _____		
Does the published Abstract adequately summarize the work contained within the dissertation? Does it contain a concise description of the study, a brief statement of the goals/specific aims/hypotheses, a brief description of research methods, and a summary of the findings and their significance? Note: The Abstract is limited to 350 words.		
Does the Introduction provide a rationale for the dissertation project and summarize the salient points of the project? The Introduction should contain a clear statement describing the focus of the study and its significance. In addition, there should be a brief summary of relevant literature, the student's findings, and their significance. The Introduction should be limited to 2 - 3 double-spaced pages.		
Does the Literature Review provide the reader with the background need to make the dissertation project understandable? Does it adequately demonstrate the extent of the current state of knowledge and the role of the dissertation project in expanding that body of knowledge? The Literature Review should not be a mere assembly of facts, but rather an integrated, critical essay on the most relevant and current published knowledge on the topic.		
Are the Experimental Methods used in this study fully explained and documented? Could a reasonably proficient researcher replicate this work based on what is written in the dissertation?		
Are the Results clearly explained, i.e., why a given study was done ("Rationale"), how it was performed, what was found, and what it meant? Are the Figures and Tables displayed in the Results section clear and informative?		
Is the interpretation and significance of the work adequately treated in the Discussion ? Does the work advance the field? What studies will be necessary to further advance the field?		
Is the Bibliography complete and written in an acceptable format? References should include all authors, date of publication, title, journal, and inclusive page numbers.		

<p>Overall. Is the dissertation written in a standard form and does it have a scholarly appearance? Is it written with correct grammar, punctuation, and spelling? Is the writing accurate, balanced, and objective? Is it free of typographical errors and spelling mistakes, and written in grammatically correct English? While the mentor will work closely with the student to ensure this, it is the student's responsibility to ensure that the document submitted to the committee is scholarly and error-free.</p>	
<p>Additional Comments</p>	