



## MICRO 707 MICROBIOLOGY LABORATORY ROTATION

**Course Description:** This course is designed to acquaint the student with ongoing research and research methodologies within the department. To accomplish this, the student will actively take part in ongoing research projects in two laboratories during the quarter.

**Credit Hours:** 3 semester hours

**Course Prerequisites:** None, Microbiology graduate students only.

**Course Dates:** Spring, Summer, Winter, Fall

**Course Times:** > 40 hours per week are expected.

**Course Location:** The investigator's laboratory.

**Instructor:** The investigator of the laboratory.

**Required Text and Other Learning Resources:** Publications pertaining to the area of research. Equipments and protocols used in the laboratory.

**Course Overview:** The student will participate in the research and learn research methods relevant to each laboratory.

**Course Objectives:** To acquaint the student with ongoing research and research methodologies within the department.

### **Grading Policy and Rubric.**

The laboratory director will judge the efforts made by the student and progress made by the student. The following items will be taken into consideration:

- a. does the student pursue readings related to the research?
- b. does the student participate in discussions of the project with others in the lab ?
- c. does the student spend time aggressively performing research?
- d. does the student keep legible notes on the experiments?

In addition, the student will turn in a written report (3 pages) that will be graded by three independent faculty members using the attached rubric.

### **Course Policies:**

Students are expected to actively participate in all the appropriate duties of the laboratory.

### **University Policies:**

Students with disabilities (ADA) statement: See UMC policy

Academic honesty statement: See UMC policy

## Evaluation of the Laboratory rotation report (Revised April 9, 2009)

Student's Name: \_\_\_\_\_ . Date: \_\_\_\_\_ .

| SCORE | CATEGORY                                 | √ | CRITERIA FOR ASSESSMENT   |
|-------|--|---|---|
|       | <b>SUMMARY</b>                           |   | <b>Does the summary contain a concise description of the work performed, a brief statement of the goals/specific aims/hypotheses related to the work, a brief description of research methods used?</b> |
|       | <b>BACKGROUND AND SIGNIFICANCE</b>       |   | <b>Does the written narrative reflect a thoughtful review of relevant information, rather than a collection of random facts?</b>  |
|       |  |   | <b>Does it provide the reader with the background needed to understand the significance of the project?</b>   |
|       | <b>EXPERIMENTAL DESIGN AND METHODS</b>   |   | <b>Are the experimental methods presented in sufficient detail to allow the reader to understand the work?</b>  |
|       |  |   | <b>Were the necessary positive and negative controls performed?</b>   |
|       | <b>PRELIMINARY DATA AND DISCUSSION</b>   |   | <b>Are the results/expected results presented in a clear and complete manner, i.e., why was the study done ("Rationale"), how was it performed, what was found/expected, and what did it mean?</b>      |
|       |  |   | <b>Are future directions outlined?</b>  |
|       | <b>GENERAL FEATURES AND BIBLIOGRAPHY</b> |   | <b>Are references included and appropriately cited?</b>   |
|       |  |   | <b>Does the report contain no or few grammatical and typographical errors?</b>  |
|       | <b>OVERALL SCORE</b>                     |   |   |

**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 report.

### Definitions of Ratings for Report Rubric

#### Acceptable:

- 5- Approved with commendation, this report is outstanding.
- 4- Acceptable as written, all crucial elements are included and adequately described.
- 3- Acceptable, although revisions are strongly suggested in one or more important components.  
Comments on how to enhance quality may be provided.

**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 essential components are not satisfactorily described.

The space below is provided for your comments. This space can be used to give specific guidance for revision, and it should also be used to praise strong work. More extensive notes can be submitted as a separate attachment or as a marked-up copy of the report.