**Master's Thesis Evaluation Standards**

**Part 1: Minimum thesis requirements that must be met at the defense time**

Successfully defending a thesis requires that the student has obtained sufficient data to make a **significant contribution to a research paper** that will be published in a peer-reviewed journal. Such contribution could consist of one or more of the following:

- The student produces at least one figure or a table that could be included in a peer-reviewed research paper.
- The student's work lays a significant foundation for further research (for example, the student conducted a genetic screen).
- The student develops a new technique or improves an existing method, producing a significant, applicable technical advance.

**Part 2: Thesis Assessment Criteria**

The following general criteria should be applied when assessing the overall quality of a Master's thesis:

**Abstract** *(Must not exceed 250 words)*

Does the student briefly and clearly state the focus of the described research, experimental design and methods of data collection?

Does the abstract provide a summary of the most important findings and conclusions?

**I. Introduction:**

Does the student provide the background information for understanding the problem, its significance, and how it fits in biology at large?

Does the student support the background information, ideas, and hypotheses with citations of the appropriate scientific sources?

Does the student identify the gap of knowledge and clearly state the questions being answered/hypotheses being tested?

**II. Materials and Methods**

Are the experimental or analytical/modeling approaches appropriate to tackle the specific biological question?

Are the methodologies described in sufficient detail for another researcher to be able to repeat the experiments?

**III. Results**

Are the experiments clearly described, and their results presented in the appropriate visual formats (graphs, tables)?

Are the figures and tables of sufficiently high quality and well labeled? Are figure legends...
concise and informative? Are the figures and tables appropriately referred to and described in the text of the thesis?

Were the appropriate control experiments carried out?

Were the appropriate statistical analyses employed?

Are the interpretations of the experiments supported by the data?

Are the data collected adequate for the solution of the problem?

Has the student obtained sufficient data to make a significant contribution to a research paper that will be published in a peer-reviewed journal?

**IV. Discussion**

Does the discussion provide a thoughtful summary of the data and draw the appropriate conclusions?

Does the student discuss whether the questions posed at the beginning of the study have been answered, and address the adequacy of the obtained data in answering these questions?

Are there any discrepancies/unexpected results and, if such were encountered, addressed?

Does the student discuss how her/his findings contribute to our understanding of the area of study?

Does the student cite relevant literature sources?

Does the student identify questions that remain unanswered and suggest possible follow-up directions?

**V. References**

Does the student use a sufficient number of primary and secondary, peer-reviewed literature sources?

Are all citations in a uniform, accepted reference format?

**Part 3: Thesis Formatting Criteria**

UCSD Office of Graduate Studies (OGS) has very specific requirements for formatting a Master’s Thesis. These requirements, along with examples of thesis formats, can be downloaded as a pdf file from OGS website:  
[http://www-ogsr.ucsd.edu/](http://www-ogsr.ucsd.edu/)