

Guidelines For and Evaluation of the NSC Comprehensive Examination

- a. All NSC PhD students, MUST complete the comprehensive examination within 2.5 years after start of Program (December of year 3).
- b. The exam will be to write and defend a research proposal
- c. The proposal could be on the student's research project (providing it is not a currently funded project in the lab). Ancillary projects arising from a currently funded project by the lab are acceptable, since we expect students to use proposal to apply for external funding.
- d. The proposal should be no more than 12 pages, including a Specific Aims page (1+ 11). Recommendations for proposal body
 - i. Up to 2 pages of background including justification for the work/what gap on our knowledge is this project filling
 - ii. Up to 1 page explaining the novelties and innovations of the project
 - iii. Up to 4 pages of preliminary data that support the working hypothesis for the project
 - iv. Up to 4 pages of experimental approaches. Must include a power analysis to justify the use of animals including males and females, expected outcomes and alternative strategies should planned experiments not work
- e. The proposed project should be discussed with the student thesis committee during the biannual meeting at start of 3rd year.

- f. The specific aims for the proposal **MUST** be sent to the thesis committee at least 10 weeks before planned examination date.
- g. Committee members are expected to provide feedback to the student within two weeks of receiving the specific aims
- h. Students are expected to provide a final copy of the research proposal to the committee four weeks prior to the examination date
- i. On the day of the examination, students are expected to provide no more than 15 minute overview of their proposed research and how they plan to execute it using a powerpoint format. Thereafter, the thesis committee will begin the questioning to determine the student's
 - 1. breadth of understanding of the research area. This is an open-ended area and faculty can ask questions outside the proposed research to gauge depth of knowledge.
 - 2. ability to interpret the scientific literature and determine gaps in knowledge to be filled
 - 3. ability to design, plan and execute experiments
 - 4. written and oral communication skills
- j. All students **MUST** be graded by all members of his/her examining (thesis) committee after the oral examination.

Attached are recommendations for grading. Please be constructive with comments/concerns. These signed forms must be provided to the student with a copy sent to the NSC Program Associate, Mr Reed Felderman for filing
- i. Students may receive a high pass, pass or inadequate grade after the first examination. Examiners (committee members) with scores of ≤ 3

MUST provide specific information for improvements. If three or more examiners provide scores of ≤ 3 , the exam will be graded as inadequate and a reexamination will be required. The re-examination should be done within two months of the date of the inadequate grade. The examination retake will again be graded high pass, pass or inadequate.

- j. Not all students may be granted to PhD candidacy, and the examining committee after the retake may recommend a terminal Master's if minimal improvements were made. There is only one retake of the comprehensive exam

Comprehensive Examination Report*

To be completed by the student's PhD Supervisory Committee upon completion of the Comprehensive Examination

The PI (mentor) and the student should not be in the room during the grading of the student.

Committee Member's Name: _____

1 to 5 scale, 1= strongly disagree, 5= strongly agree, 3 = neutral	1	2	3	4	5
1. The student displays a strong general scientific background in their chosen discipline					
2. The student displays a strong in-depth understanding of their research area					
3. The student displays a strong capacity to think logically and creatively in the construction of experiments and interpretation.					
4. The student has strong written communication skills					
5. The student has strong oral presentation skills.					

Include written comments for all scores ≤ 3 .

Specify supplemental training recommendations if needed