

Ph.D. Qualifying Exam Committee

The Ph.D. Qualifying Exam Committee should be formed at least three months before the anticipated written exam date. This provides adequate time for study and arrangement of dates for written and oral exams.

The Qualifying Examination normally occurs near the end of the second year of the student's graduate program. Students who fail to schedule a qualifying exam within a three year period, will be evaluated on a case by case basis by the Executive Committee for continuation in the program. The student, working in consultation with the Major Professor, chooses the Chair of the Committee, the outside member, and two other CMDB faculty members. The student must speak to each faculty member nominated for the Qualifying Examination Committee and confirm his/her willingness to serve in this capacity. The student then completes the online Qualifying Examination Committee Nomination Form at:

<https://ucrbsgsac.wufoo.com/forms/cmdb-qualifying-exam-committee-nomination-form/>

The CMDB Executive Committee selects the final member of the committee, the SSA prepares the nomination form, the Graduate Advisor signs, and the committee is submitted for Graduate Division Approval. Graduate Division notifies the student and the program when the committee is approved.

Scheduling the Exams

Once the Qualifying Exam Committee is approved, the student consults with the members of the Qualifying Examination Committee to establish specific dates for the written and oral examinations. Students should be aware that it is often difficult to find dates for the oral and written exams due to the busy travel schedules of faculty. An early commitment to exam dates helps to avoid scheduling difficulties. The student (in consultation with the Committee Chair) is responsible for identifying and reserving rooms for the written and oral exams. The CMDB Graduate Student Services Advisor will help with room scheduling if needed.

The student notifies the Committee members of the date and location by e-mail as soon as they are established. Students should set study plans with committee members approximately 3-4 months prior to the exam. The expected time dedicated to preparation for the exam should be discussed with the student's major professor. At least 4 weeks prior to the Written Qualifying Examination, the student is required to provide a hard copy of the research proposal to each member of the Qualifying Examination Committee.

The Written Examination

All of the Qualifying Examination Committee Members except the Outside member must submit questions for the written portion of the examination to the Chair of the Qualifying Examination. The Outside member has the option to contribute questions for the written examination.

Each Committee Member submits questions that the student is expected to answer over a maximum three hour period. Most Committee members require the student to answer the Written Exam questions without the aid of notes, books, Internet, or other resources. Each Qualifying Committee Member may waive some or all of these conditions. Cell phones or any other device

that can access information are not permitted unless specifically approved by the committee member whose set of questions is being answered.

The student has two options for recording their answers to the written examination questions. They may write their answers on paper or use a departmental computer that lacks internet access. If drawings, tables or graphs are needed to answer a question, they will need to be hand drawn and referred to in the text.

On each morning of the Written Examinations, the student should go to the Committee Chair's office. The student will choose the order of the exams. The Chair will bring the student to the examination room and ensure that only admissible items enter the room. After the student completes the first exam, the student returns the answers to the Chair. The student will then take a break and arrange for a time to begin the second exam. The Chair will let the student know the outcome of the exams and direct the student to speak with Committee members. A course of action to remedy any deficiencies in the Written Exam should be discussed with the student.

Students "Pass" or "Fail" this exam; there is no "qualified" pass or fail.

1. Written Exam - A Pass: To proceed to the oral exam, a student may fail no more than one of the written exams.
2. Written Exam - A Failure: If the student fails two or more exams, the Qualifying Examination Committee will determine if the student should be allowed to retake the Written Examination. The Committee will recommend a timeframe for the second attempt. Based on the overall performance, the Qualifying Examination Committee will decide how many and which of the exams will be retaken. A student may retake the Written Exam once.

The Research Proposal

The focus of the Oral Examination will be a Research Proposal written by the student that s/he proposes to carry out for her/his Ph. D. dissertation. This document serves as a basis for examination and assessment by the Oral Qualifying Examination Committee of the following: (a) the ability of the student to write a concise and clearly written research proposal, (b) the student's fundamental knowledge in the area of her/his research, (c) the student's ability to identify a meaningful research project, (d) the student's ability to design and carry out productive meaningful research, and (e) the student's sophistication in describing the scientific literature germane to the proposed project.

The Proposal should not exceed 12 pages not counting the Title Page and the Literature Cited section. The space required for all figures and Tables is included in the 12 page limitation. The entire document should be typed single spaced in a 11 or 12 point font.

The Title Page

The following Statement must be placed at the top of the Title page: Research Proposal for CMDDB Qualifying Examination on 'month, 'day', 'year'. This should be followed by the following items, spaced neatly down the Title page.

- a) An informative title that captures the essence of the proposed research project
- b) The official UCR name of the Candidate.

- c) The statement 'Major Professor' followed by the name of the candidate's Major Professor, followed by a signature line. Underneath the signature line the following should be typed "Approved for distribution".
- d) The full name and departmental affiliation of each of the five members of the Oral Qualifying Examination Committee.

Section A: HYPOTHESIS AND SPECIFIC AIMS.

An Abstract (limited to 400 words) that includes the following:

- a) A concise articulation of the dissertation's overall objectives and the specific goal(s) of the research proposed, e.g., to create a novel experimental design, to solve a specific problem, or to address a specific barrier in your field. You may choose to formulate your own hypothesis. This information is then immediately followed on the same page by the following;
- b) An explicit listing of the titles of the Specific Aims in Section D of your Research Proposal. These titles should exactly match (word for word) the wording that is contained in Section D of the research proposal.

Section B: BACKGROUND

This section is limited to no more than three pages. This section should provide the following background information to the proposed Research Proposal.

- a) A brief review of the literature that is appropriate to bring the Committee members up to speed with the 'state of the art' of recent research in the general area of your research proposal.
- b) Appropriate citation of the available literature in this area. See comments on the bibliography formatting below.
- c) This section may include figures and tables as are deemed to be helpful; their area must be included in the three pages allowable for this section.
- d) All Figures and Tables should be separately numbered, in sequence, throughout the entire document.
- e) Each Figure and Table must have a title, and, if needed, a legend that provides appropriate further description to assist the reader in understanding the figure/table; e.g. reference to experimental methodology, that may or may not require reference citation(s).

Section C: SIGNIFICANCE OF THE PROPOSED RESEARCH

This section can be up to one page in length. In this section, the Candidate should include the following:

- a. A concise description of the background leading up to the Research Proposal,
- b. A critical evaluation of existing knowledge and identification of the gaps that the project is intended to fill.
- c. A description of the importance of the proposed research by relating the Specific Aims to the long-term direction of research in the field.

Section D: RESEARCH DESIGN AND RESULTS OBTAINED TO DATE

This section may be up to seven pages in length. It should include a layout in a logical fashion of the method of prosecution of the overall research objective being proposed for your Ph.D. dissertation and, also, it should include the preliminary data you have already obtained. The section should contain the following.

- a) This section should be subdivided into as many primary sub-sections as the Specific Aims that were listed in section A.
- b) Each primary Specific Aim may be broken down into as many or few secondary sub-Specific Aims as the candidate feels appropriate or necessary for the experiments being proposed.
- c) Each Aim and sub- Aim should provide some kind of Rationale statement, followed by a brief introduction and then a section titled Experimental design(s).
- d) The presentation of Preliminary Data should include appropriate Tables with titles and brief legends and Figures and with figure titles followed by informative succinct legends.
- e) Remember that all figures and all tables should be separately numbered sequentially throughout the entire proposal.

Section E: LITERATURE CITED

The pages of this section are not included in the page limitation of 12 pages.

Citations and references may be formatted either in a numbered sequence or alphabetically. Scientific journals can provide examples of these styles, and students are encouraged to use programs such as Endnote to begin to learn to manage their references.

Other information

The following standard sections of NSF and NIH grants should not be included in the candidate's Research Proposal: Table of Contents; Budget Information, Biographical Sketches; Available space and equipment; Animal use assurances; Checklist, and Appendix.

Approval of Research Proposal by your Major Professor.

Prior to distribution of your Research Proposal to your Committee, you must obtain your Major Professor's signature on the Title Page indicating that it is "Approved for distribution".

Distribution of final Research Proposal

After signature approval has been obtained, a hard copy of your proposal should be given to all members of the Qualifying Exam Committee at least four weeks (30 days) before the scheduled written examination. Also, send one scanned electronic copy of your Proposal to Mr. Julio Sosa (julio.sosa@ucr.edu) in the CNAS Graduate Student Affairs Center at this time.

At least one week before the Written Qualifying Examination the chair of the committee will poll the committee members to determine if the quality of the submitted Research Proposal is of sufficient quality to allow the examination to proceed as scheduled. If there are concerns, then the chair will communicate these to the students and their Major Professor and they will reschedule the examination. The revised Research Proposal must then be resubmitted using the same schedule as described above. Students are only allowed one revision of the Research Proposal following which the Oral Exam will be held.

The Oral Examination

The Oral Examination must be held on a single day. All members of the Examination committee must be present for the entire exam. The student begins with a presentation of 45-60 minutes on his/her Dissertation Research Proposal. During and/or following the presentation, the committee asks the student questions about the research proposal and his/her dissertation research. The

student should also be prepared to answer questions on broader topics in the field of cell, molecular, and developmental biology, especially if any particular area of concern arising from the Written Qualifying Examination has been identified by a member of the Oral Qualifying Examination Committee.

A “Pass” requires that no more than a single Committee member vote to fail. If a student fails the Oral Qualifying Examination, the Committee is required to make a recommendation either for or against a second examination. Ordinarily a second exam is not administered until at least three months have elapsed and within six months of the original exam. A third examination is not permitted. A student who does not pass the oral qualifying exam may be dismissed from the program or may be allowed to complete a M.S. degree. The CMDDB Executive committee, in consultation with the student’s Oral Qualifying Examination Committee, will determine if transfer to the M.S. program is recommended.

More information about the Graduate Council policies concerning Ph.D. Qualifying Examinations may be found in the Graduate Advisor’s Handbook published on the Graduate Division website.