

Procedures for the Second Year Research Evaluation (SYRE)

Department of Chemistry
University of California Riverside
September 2017

1. Purpose and Expectations

Every graduate student in Chemistry must demonstrate proficiency in his/her dissertation research area and the ability to communicate these ideas both in written form and orally. The Second Year Research Evaluation (SYRE) **must be taken prior to the end of Fall quarter in the second-year** of residence in the Ph.D. program. See also the *Requirements for the M.S. and Ph.D. Degrees* document for more details.

2. Exam Structure and Content

The exam consists of a written research proposal describing the student's current and future research and an oral defense of that proposal. The document and presentation should include discussion of research progress to date, but they should be prepared **as a research proposal with a significant emphasis on the larger context and future work, rather than as a progress report.**

The student may consult the Chair of the SYRE Committee regarding the exam structure and expectations. **The student shall not obtain feedback from the dissertation advisor or other faculty regarding the written proposal or oral presentation materials prior to the exam.**

2.1. Written Proposal

The written document is a proposal of no more than **five pages** in length (including all figures and tables), **1-inch margins, single spacing, and 12-point font.** The bibliography does not count against the page limit. A good proposal will describe:

- **Specific Aims:** What are your broad, long-term goals? What **specific hypothesis** will be tested?
- **Significance:** What is the state of existing knowledge, and what gap(s) will your project fill? What impact will your project have on the field if successful?
- **Innovation:** What makes your proposed project innovative in the field? How does it differ from current research?
- **Approach:** Describe the experimental design/analyses that will be used to achieve your specific aims. What are your expected results? What potential difficulties or limitations do you anticipate, and how might these be overcome?

The discussion of the longer-term proposed research plan should be a significant component of the document. It must be well-written, communicate ideas clearly, and be scientifically sound. The written proposal must be completely standalone and will be evaluated directly on its merit.

2.2. Oral Presentation

The student should prepare a brief **Powerpoint-style presentation (~15 minutes)** to assist in the exam. Students should think carefully about how to present their key results and proposed research concisely, avoiding the use of excessive numbers of slides. Students should be prepared to answer questions at any time before, during, or after the presentation. The slides may be used to help

organize the presentation and to show data or complicated schemes. However, Powerpoint slides may not be used as a substitute for the student's own knowledge. Students must be familiar with the details of anything presented on a slide, and the committee may instruct the student to explain such details without referring to the slide(s) at any time.

The oral component of the exam should last about one hour in total, including questions. The student should be prepared to cut his/her presentation short to select the most relevant information as needed if the exam is running late.

3. Exam Administration

Six weeks before the desired exam date, the student should arrange a date and time for the exam with the committee members. Once the exam has been scheduled, the student should reserve a room for the exam. ***The student must formally notify the Graduate Affairs Officer and the Committee members of the exam date, time, and location in writing at least three weeks prior to the exam date.***

At least one week prior to the SYRE date, digital copies of the final written proposal must be emailed to:

- 1) All members of the SYRE Committee.
- 2) The Chemistry department Graduate Student Affairs Officer, who will add it to the student's file for record keeping purposes.

Ask the committee members if they would also like a paper copy of the proposal, and if so, provide it to them at the same time as the electronic copy.

These student obligations prior to the exam are summarized in the attached check list. ***It is the student's responsibility to ensure that all tasks and deadlines are met.***

The committee chair will direct the SYRE exam. The exam will begin with the student presenting his/her proposal. The committee may ask questions at any time. The committee may ask questions which test the student's knowledge of the general field as well as the related fields and areas of special interest. The advisor may ask questions, but he/she is strongly discouraged from answering any questions posed by the committee or otherwise intervening during the exam (even if the student's answers grossly misrepresent the advisor's research). The student should demonstrate communication skills, independent thinking, and scientific knowledge that would be expected for a student seeking a Ph.D. degree.

4. Evaluation, Reporting of Results, and Feedback policy.

The oral and written components will be evaluated based on the student's demonstrated understanding of the research area, the ability to explain the research objectives clearly in the context of the field, the research progress to date, and the longer-term research plan. The written document must demonstrate a level of writing ability, scientific knowledge, and creative thought that are commensurate with a student seeking to earn a Ph.D

The combined written and oral examination will be graded on a Pass, Qualified Pass, or Fail basis. A ***Pass*** signifies that the student is on track for passing the Qualifying Exam; a ***Qualified Pass*** signifies that a student is largely on track, but needs to remedy certain deficiencies in order to pass the Qualifying Exam; a ***Fail*** signifies that a student is not on track to pass the Qualifying Exam unless steps are taken to correct severe deficiencies. Receiving a Qualified Pass or Fail does not directly

impact the student's standing in the Ph.D. program, but the student should take it as a warning that improvements need to be made in order to pass the Qualifying Exam.

The only criteria for determining if the student has passed or failed the exam are the student's performance during the test and the quality of the written proposal. Note that **failure to adhere to the exam guidelines specified here provides sufficient grounds for failing the student on the SYRE**. The student may request additional feedback regarding his/her performance on the written and oral components from the chair and other members of the SYRE Committee.

Formal notification of the exam results will be shared verbally with the student at the end of the exam. Written records will be sent to the Chemistry department.

Student Checklist for the Second-Year Research Evaluation (SYRE)

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- _____ **6 weeks in advance:** Schedule an exam date & time with your exam committee during the month assigned to you (October/November/December). **Formally notify your committee members of the final date/time as soon as possible.**
- _____ Reserve a room for the exam (through Barbara Outzen) as soon as the exam date is set.
- _____ **At least 3 weeks before the exam date:** Notify Christina Youhas of your exam date, time, & location in writing.
- _____ Prepare your written research proposal in accordance with the instructions found in Section 2.1 of this *Procedures for the Second-Year Research Exam* document.
- _____ **At least 1 week before the exam date:** Email digital copies of your written proposal to your committee members and to Christina. Ask your committee members if they also want a paper copy, and if so, provide that as well.
- _____ Prepare your presentation slides in accordance with the instructions found in Section 2.2 of this *Procedures for the Second-Year Research Exam* document.

Faculty Instructions for Administering the SYRE

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The SYRE has both written and oral components that need to be evaluated.

The chair of the SYRE Committee leads the exam. The committee first evaluates the written document, then proceeds to the oral portion. The SYRE exam should last approximately one hour in total, including questions.

Criteria: *The only criteria for determining the outcome of the SYRE are exams are the student's performance during the oral portion and the quality of the written proposals.* The proposal should be evaluated based on the student's demonstrated understanding of the research area, the ability to explain the research objectives clearly in the context of the field, the research progress to date, and the longer-term research plan. The written proposal must demonstrate a level of writing ability, scientific knowledge, and creative thought commensurate with a student seeking to earn a Ph.D.

Grading: The combined written and oral examination will be graded on a Pass, Qualified Pass, or Fail basis. A **Pass** signifies that the student is on track for passing the Qualifying Exam; a **Qualified Pass** signifies that a student is largely on track, but needs to remedy certain deficiencies in order to pass the Qualifying Exam; a **Fail** signifies that a student is not on track to pass the Qualifying Exam unless steps are taken to correct severe deficiencies.