



College of Arts & Science  
Department of Chemistry Graduate Program

Chemistry

## Guidelines for Written Proposal for Second-Year Qualifying Exam

(Adapted from CH643 Guidelines for Preparation and Submission of Synthesis Project, Prof. J. S. Panek)

**General.** Your second-year qualifying exam has two parts, the written and oral. You must concisely write and defend orally the background of your project, what you have done, and what you plan to do. The purpose of this exam is to demonstrate to the committee your intellectual advancement in high-level chemistry discussions in the approximately eighteen months you have spent in graduate school. Your proposal is based on your independent interpretation, and is not a duplication of another person's effort (i.e. previously published work or others' unpublished work in your research group).

**Form.** Your oral presentation should be no longer than 30 min (20 min for speaking and 10 min for questions). The paper should be 7-10 pages, single spaced, 12 point font, 1 inch margins. References are not included in the total pages required and should be in proper journal format, images should be publication quality.

**Contents of the Proposal.** All sections of the proposal should be presented in a concise manner and with clarity of expression. An introductory section should be given, placing the proposed work in the proper context and clearly stating the purpose and objectives. The background discussion should be brief and restricted to pertinent material. A review of prior work in the area is appropriate and required documentation and literature cited should be selective rather than exhaustive. The discussion and experimental design sections should be clearly distinguished with a separate heading for each section. The discussion should include a narrative of the proposed experiments and their anticipated results with references made to appropriate schemes, equations or tables.

**Structural Drawings.** Reaction schemes and equations should be prepared with care using ChemDraw, with structures numbered consecutively with Arabic numerals from left to right.

**Nomenclature.** Should conform with English usage. A systematic name may be employed, either *chemical abstracts* or IUPAC, for each compound in the experimental design section. It is also acceptable to use "semi-systematic names" for certain specialized classes of compounds, such as steroids, peptides, amino acids, and carbohydrates. If the structures of the compounds in the report are sufficiently complex that determination of their systematic name is impractical they must be referred to in some unambiguous manner, such as "methyl ketone **17** or amino acid **29**". The latter usage may be particularly convenient in the narrative section.

**Abbreviations.** You are encouraged to use abbreviations and acronyms appropriate to your field of chemistry. For example, a list of standard abbreviations is given in the first issue of the *Organic Letters* ([cfhttp://pubs.acs.org/journals/orlef7/index.html](http://pubs.acs.org/journals/orlef7/index.html)) and *The Journal of Organic Chemistry* (<http://pubs.acs.org/journals/joceaah/index.html>) following the instructions for the submission of a *NOTE*. A template for the *Journal of Organic Chemistry Note* can be found at (<http://pubs.acs.org/paragonplus/submission/joceaah/i>). The ACS Style Guide is another excellent source.

### Evaluation of the Proposal.

In addition to the clarity of oral and written presentation, and masterful understanding of the chemistry involved, the proposal will be judged on the following criteria: (i) potential overall impact, including strengths and weaknesses (ii) significance to the wider field of chemistry, and (iii) innovation and originality.