

EMA 6165 - FALL 2008
POLYMER PHYSICAL SCIENCE
RESEARCH PROPOSAL

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Recommended Reference: "Successful Grant Writing – 2nd Edition," Laura N. Gitlin and Kevin J. Lyons, Springer Publishing Company, 2004, ISBN 0.8261.9261.0

The objective of a research proposal is to demonstrate a proficiency in a particular technical area. This particular proposal is a tool for evaluating the student's ability to apply the principle theories and experimental methods taught in the course to a specific problem associated with their personal area of research. It therefore can be closely associated with the required research proposal for either the Ph.D or M.S. degree, but should be a focused on an aspect that requires the principles presented in this course and **distinctly different from the requirements of the PhD Candidacy Exams.**

Research proposal subjects must be approved by the instructor. Therefore, select an area early and discuss with the instructor early. The deadlines are given in the course schedule. It is also strongly recommended that the subject and scope of the proposal be discussed with your research advisor (Supervisory Committee Chair).

The common parts to a research proposal are as follows:

- I. **Title**
- II. **Abstract**
- III. **Introduction**
- IV. **Goals/Objectives/Specific Aims**
- V. **Background/Significance/Importance**
- VI. **Literature Review/Theoretical Foundation**
- VII. **Methodology/Research Plan**
- VIII. **Investigator Qualifications**
- IX. **References**

Normally, these sections are considered the main portions of the research grant. One should consult with the specific agency guidelines to ensure that the format is appropriate. For purposes of this course, these sections are to be included. You should consult with the recommended textbook above or on-line at www.nih.gov for the appropriate information of each section. The overall length of the technical proposal is not to exceed 25 pages. This includes all the sections listed above.

Evaluation of the proposal will be based upon the following criteria:

- X. **20% Significance – Does this study address an important problem?**
- XI. **20% Approach – Are the conceptual framework, design and methods appropriate?**
- XII. **20% Innovation – Does the project introduce novel methods, analyses or approaches to the problem?**
- XIII. **20% Literature – Does the proposal demonstrate advanced understanding of the problem based upon literature review/analysis?**
- XIV. **20% Structure – Is the proposal written succinctly with proper grammar and structure?**