The purpose of the SURF proposal that you are required to write and to submit is to explain to other people:

- what you plan to do in your research
- why this work is necessary or desirable
- specifically, how you will do it
- to persuade, by your preparation and by force of argument, that you are the right person for the job and have the time commitment and mentor’s support to complete the project successfully.

The committee who will read the proposal will include professors with some familiarity with your field and members with other areas of expertise. While some committee members have substantial knowledge about your project, and will be best able to judge the merits of your objectives and research design, other evaluators will be less well informed about the background and motivation of your research, so you will have to provide information that will help them put the details in perspective.

No two proposals are alike, and there is no general recipe which, if followed to the letter, will guarantee a good proposal. Most proposals do share -- or can share -- a few common structural features, however. These are indicated by the headings below.

You should work closely with your mentor to develop this proposal. They should review and comment on your proposal. This step is critical in establishing the collaborative process. Be sure you give them ample time to do so. A good proposal will anticipate and answer questions that an informed (and somewhat skeptical) person might ask. Examples of such questions are given below each heading. These examples are not exhaustive, and are not meant to be a checklist. They are included to stimulate your thinking about the questions that you should raise and answer in your proposal that are especially pertinent to your task.

A proposal of three to four pages, carefully thought out and precisely worded, should be sufficient to make all the important points. Some excellent past proposals have been contained on a single page.

**Introduction/Background** What is the research or creative question on which you will be working? What is the problem that you are trying to solve? Why is its solution interesting or worthwhile? If you are
working collaboratively with one of your professors, what is the status of related work by the professor that you will be joining, and what will be the contribution or significance of your research if it is successful?

**Objectives** What do you aim to accomplish in your project? What will you measure, and under what conditions; or, what will you calculate, model, or simulate? What are your starting assumptions, and what will be the result or product of a successful research project? What are the criteria for success? (In other words, how will you know when you have accomplished what you set out to do?)

**Approach/Methodology** How will you accomplish your objective? What will you do? What are the principal steps or milestones along the path? How long will each take? What steps promise to be the most difficult, and how will you overcome the difficulties? What equipment or other resources will you need? Will you need to travel? If so where, when and why? Will completion of your project depend on results from other people in related tasks? (That question may be especially pertinent for team projects.)

**Timetable of Project Activities** Making a schedule of the principal activities and events is a good way of showing readers that you have taken a systematic approach to planning your work.

**References** List all pertinent papers or reports that you have consulted to prepare your proposal.