CWU College of the Sciences Undergraduate Research Grants

Proposal Writing Guidelines:

Include:

A) Title of Project

Titles seem like the easiest part of the project, but be careful to ensure this is descriptive of the research that you'll actually do. Sometimes the title is set in your mind first and is left unchanged as your project undergoes substantial revision and development. Before submitting the final version of your proposal, go back and make sure that your title still matches with your project.

B) Goals and Objectives (include a clear statement of the hypotheses being tested or the research problem being explored)

Include here what you plan to accomplish in your project. For example, what relationships between variables are being explored? In the case of descriptive projects, what is the expected end product of your research? Are you developing a new technique or approach? If so, briefly describe that here.

C) Background and Significance

In this section, include a description of how your project relates to the current state of knowledge on your topic. This section should cover what is already known, and how your project will add to or change that body of knowledge. For example, your project may be intended to fill a gap in our knowledge of a particular subject, you may have a fresh perspective on information that is already available (reanalysis or reinterpretation), you may be working on a descriptive project that will form the basis for future research by you and/or by others, or you may be developing a new technique or methodology that makes it easier, less expensive, more productive, etc. to achieve a particular scientific end.

The works you cite and describe in this section should ideally be published in peer-reviewed journals (see Literature Cited below). In <u>very</u> rare cases, such as in the exploration of a new topic, peer-reviewed sources may be scarce. If that is the case, you should address that in this section. Non-experts reviewing your proposal may be unaware of the lack of research in this area and interpret the lack of peer-reviewed sources as a reflection of poor library database research skills on your part.

D) Research Design and Methods (include a timeframe for completion of the project)

This section includes the details of how your project will be carried out. Keep in mind that some of the reviewers of your proposal may be unfamiliar with procedures and techniques specific to your field. Include sufficient detail that the reviewer can visualize how each step of your project will be carried out, but avoid using jargon.

Be sure to include a basic timeline for your project (in words or as a figure or diagram).

E) Dissemination Plan

In this section, address how will you inform the CWU and the broader scientific communities of your project results. Minimally, you must present the results of your work at SOURCE. If you and your faculty mentor plan to present the project at a professional conference or to publish it, describe those plans. Publication outlets could include peer-reviewed journals (the most desirable), chapters in edited books, professional newsletters, etc.

F) Literature Cited (include fully-cited, peer-reviewed sources)

Peer-reviewed journals (and sometimes chapters in edited books) are those that publish articles that have been reviewed by experts in that field. Recommendations of the reviewers have been considered by (and probably incorporated into) the work by the author before it is published. The most important journals in your field are peer-reviewed. Information about the process and type of peer-review is usually included on the front and/or back covers of each journal issue or on the journal's website. Because of the peer-review process, scientists are more confident of the validity of the results presented in these journals, versus publication outlets that require minimal or no review of the article by experts in the field. Wherever possible, you should rely on peer-reviewed sources throughout your proposal.

Several popular style manuals include details on how to format and cite literature sources. Choose the one most relevant to your field of study and consistently follow the formatting throughout your proposal. Your faculty mentor can provide guidance on which to use.

The Chicago Manual of Style: The Essential Guide for Writers, Editors, and Publishers. 15th Edition, 2003.

Council of Biology Editors, *Scientific Style and Format: The CBE Style Manual for Authors, Editors, and Publishers*, 6th Edition, 1994.

Joseph Gibaldi, *MLA Handbook for Writers of Research Papers*, 6th Edition, 2003.

Publication Manual of the American Psychological Association, 5th Edition, 2001.

Kate L. Turabian, *A Manual for Writers of Term Papers, Theses, and Dissertations*, 6th Edition, 1996.

The ACS Style Guide: A Manual for Authors and Editors, 2nd Edition, J. S. Dodd, ed., 1997.