Project Report Guidelines for All Programs

Topics

- DOE descriptor of project report requirement and the online location of DOE guidelines
- Document naming convention
- Report guidelines, summary form
- Special requirement for CCI interns
- "I," "we," vs. impersonal constructions

DOE descriptor of project report requirement and the online location of DOE guidelines

All participants must complete and submit a 1500 – 3000 word research report paper describing their project related internship activities, using appropriate elements excerpted from the <u>Style Manual from the American Institute of Physics</u>, as defined under the Guidelines, Requirements, and Instructions. Submission of the research report paper must be made prior to the end of your appointment, as directed by the host laboratory.

Development of the materials required to fulfill the deliverables may be performed using word processing and/or graphics design/presentation software of your choice, but all final copies must be made available in an Adobe Acrobat (.pdf) file format, and submitted using your account on the WDTS Application and Review System (WARS) online system, via the Deliverables tab. Non-DOE interns submit this deliverable via the email address used for weekly reports.

Guidelines, requirements, and instructions for preparing the program report deliverable is contained in this DOE pdf document: <u>Science Undergraduate Laboratory Internships (SULI)</u> <u>Program Deliverables Requirements and Guidelines</u>, pp. 5-31.

Document naming convention

- All document names must begin using the following template:
 - ALL CAPS followed by type of deliverable in lower case, underscores separate words not spaces
 - LASTNAME_FIRSTINITIAL_deliverabletype
 - e. g., STEGMAN_M_report
 - Note: Use_underscores_not_spaces.

Report guidelines, summary form

• I. General instructions

Submit manuscripts in English only (American spelling). Use subheadings for each section Double space (1 inch margins), minimum 12 point font Indent paragraphs so that the start of a new paragraph is clearly distinguished, especially where there is a continuation of an existing paragraph after a displayed equation.

Number all pages in sequence, beginning with the title and abstract pages.

- II. Title
- Place the title about a third of the way down from the top of the first page.
- Begin the first word with a capital letter; thereafter capitalize only proper names and acronyms.
- Author(s): You as the first author, your mentor as concluding author. Identify affiliated institutions.

Authors' names and affiliations

- Lead with the authors' names
- Omit titles such as Professor, Doctor, etc.
- In the affiliation, use no abbreviations except for state. Give an adequate postal address including the ZIP.
- See page 6 and 7 of AIP Style Manual for examples of how to format authors' names. Author title sample: Drag on an axially symmetric body in the Stokes flow of micropolar fluids Jane J. Doe and James G. Smith, Physics, Massachusetts Institute of Technology, Cambridge, MA 02139
 A. Marten Dharias Davidsheeren Netional Laboratory United Networks

A. Mentor, Physics, Brookhaven National Laboratory, Upton, NY 11973

Template for authors:

You, Your School's Department, Your College, City, State ZIP Your mentor, BNL Department, Brookhaven National Laboratory, Upton, NY 11973

• III. Abstract

Begin the abstract on a new line.

Use wider side margins for the abstract than for the rest of the manuscript, so that it will be clear where the abstract ends and the main text begins.

Type or print the abstract double spaced, preferably as one paragraph of continuous text. Avoid displayed mathematical expressions, figures, and tables.

If a reference to the literature is needed, write it out within square brackets in the text of the abstract rather than referring to the list at the end of the paper. For example: The measurement of hydrogen permeation into iron reported by W. R. Wampler [J. Appl. Phys. 65, 4040 (1989)], who used a new method based on ion beam analysis,...

Define all nonstandard symbols, abbreviations, and acronyms.

More on the abstract

• State the subject of the paper immediately, indicating its **scope and objectives**. Do this in terms understandable to a nonspecialist. Describe the treatment given the subject by one or more such terms such as "brief," "comprehensive," "preliminary," "experimental," or "theoretical."

- Indicate the **methods** used to obtain experimental results. If they are novel, state the basic principles involved, the operational ranges covered, and the degree of accuracy attained.
- Summarize or discuss the experimental or theoretical **results**, the conclusions, and other significant items in the paper. Do not hesitate to give numerical results or state your conclusions in the abstract.
- Do not cite the literature references by the numbers in the list at the end of the paper, and do not refer by number to a selection, equation, table, or figure within the paper. Nonstandard symbols and abbreviations used in the abstract must be defined there as well as in the main text.
- Use running text only. Never use displayed mathematical expressions or numbered equations. Omit tables, figures, and footnotes.
- Keep the length of the abstract to a small percentage of that of the paper. Write concise, straightforward English; make every word count. Try to substitute words for phrases and phrases for clauses. Be terse, but not telegraphic; do not omit a's, an's, or the's. Regardless of the length of the final draft of your abstract, study it again with a view to shortening it further to a minimum length.

• IV. Introduction

Make the precise subject of the paper clear early in the introduction. As soon as possible, inform the reader what the paper is about. Depending on what you expect your typical reader already knows on the subject, you may or may not find it necessary to include **historical background**, for example. Include such information only to the extent necessary for the reader to understand your statement of the subject of the paper. As part of the background, you may also wish to include a **review of the relevant literature**. Indicate the **scope of coverage of the subject**. Somewhere in the introduction state the limits within which you treat the subject. This definition of scope may include such things as the ranges of parameters dealt with, any restrictions made upon the general subject covered by the paper, and whether the work is theoretical or experimental. State **the purpose of the paper**. Every legitimate scientific paper has a purpose that distinguishes it from other papers on the same general subject. Make clear in the introduction just what this purpose is. The reader should know what the point of view and emphasis of the paper will be, and what you intend to accomplish with it.

• Main body of the paper

The discussion of your project and its outcomes. Include **scope and objectives, methods, results**, and other significant items in this section.

• VI. Conclusion

Typical functions of the conclusion of a scientific paper include (1) summing up, (2) a statement of conclusions, (3) a statement of recommendations, and (4) a graceful

termination. Any one of these, or any combination, may be appropriate for a particular paper.

• VII. Acknowledgments, footnotes, references, and appendixes

- You must include an acknowledgements section that contains the acknowledgements text for your program (See intern info page for a list of these texts). You can, of course, include other acknowledgements.
- Place all footnotes (including references) in order of citation as a separate, double-spaced list at the end of the manuscript, before the tables and figures.
- Type or print each footnote as a separate indented paragraph beginning with the appropriate superscript indicator.
- For references cited in the text use superscript numerals running consecutively through the text: 1, 2, 3, etc. Place citation indicators *after* commas, periods, quotation marks, colons, and semicolons.
- Appendixes, as needed. All graphics, tables, etc. should EACH have a caption identifying the information displayed.

Special requirement for CCI interns

This required report should communicate the outcomes and success of your project activities to the Office of Workforce Development for Teachers and Scientists (WDTS). It is not intended to be a scientific publication, and should be a narrative on meaningful outcomes and accomplishments made during your internship. The content of your report should be written at a level for readers who are not necessarily subject matter experts, but do have general scientific or technical knowledge and research experience.

Guidelines, requirements, and instructions for preparing the program report deliverable is contained in this DOE pdf document: <u>Community College Internships (CCI) Program</u> <u>Deliverables Requirements and Guidelines</u>, pp. 3-6.

• Required elements for CCI report: abstract, body, appendix

Abstract.

Body.

Introduction. Background and Project Objectives. Provide the context of past and competing technical work that motivated the project; how the present activity goes beyond that work; the proposed technical objectives of this work, and how well they were met, including any additional objectives that developed in the course of your activity.

Progress. Technical Approach, Impacts, and Accomplishments. Describe the technical approach taken by the project; results, stressing the most significant accomplishments and impacts. **Future Work**. Briefly state future activities anticipated or planned, with estimates of required scope to achieve or extend the project deliverables.

Impact on Laboratory or National Missions. Briefly describe project connection and relevance to DOE and Laboratory missions; actual impact on projects including both (a) changes to direction of existing projects and/or (b) new work or new capabilities resulting from the project. Please include a statement regarding the source of funding for the primary research project. **Conclusions**

Acknowledgements

References

Appendix. Please provide the additional information requested below. The Appendix is in addition to the report Body above, and this content is not counted towards the six-page report limitation.

- **Participants**. In a table, list the names, institutions, and roles of each person who participated in the project, including host lab personnel, CCI or SULI students, or other students, as appropriate. Include a brief statement of each participant's project team role.
- Scientific Facilities. Briefly state if any scientific user facilities were part of your project activities, including identification of the facility. The relevant facilities are: CFN, RHIC, and NSLS-II.
- Notable Outcomes. Publications, Reports, Manuals, Drawings/Schematics, Patents, or Presentations. List any articles, patent disclosures, laboratory technical reports, invited/contributed conference/workshop presentations, technical documents, and/or internal presentations resulting from activities performed under this appointment. Please include full bibliographical citations, coauthors, affiliations, titles, and/or venues, as appropriate.

"I," "we," vs. impersonal constructions

The old taboo against using the first person in formal prose has long been deplored by the best authorities and ignored by some of the best writers. "We" may be used naturally by two or more authors in referring to themselves; "we" may also be used to refer to a single author and the author's associates. A single author should also use "we" in the common construction that politely includes the reader: "We have already seen" But never use "we" as a mere substitute for "I," as in, for example, "In our opinion..." which attempts modesty and achieves the reverse; either write "my" or resort to a genuinely impersonal construction.

The passive is often the most natural way to give prominence to the essential facts: *Air was admitted to the chamber.*

(Who cares who turned the valve?) But avoid the passive if it makes the syntax inelegant or obscure. For example, a long sentence with the structure

The values of ... have been calculated.

is clumsy and anticlimactic; begin instead with I [We] have calculated

"The author(s)" may be used as a substitute for "I[we]," but use another construction if you have mentioned any other authors very recently, or write "the present author(s)."

Special standards for usage apply in two sections of a paper: (i) Since the abstract may appear in abstract journals in the company of abstracts by many different authors, avoid the use of "I" or "we" in the abstract; use "the author(s)" or passives instead, if that can be done without sacrificing clarity and brevity. (ii) Even those who prefer impersonal language in the main text may well switch to "I" or "we" in the acknowledgments, which are, by nature, personal. --from *The AP Style Manual*, pp. 14-15