CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
NOTES TO AUTHORS OF SENIOR PROJECT REPORTS

The purpose of the report is to convey to the reader as much information as possible in the fewest number of words. This "Notice to Authors of Senior Project Reports" has been prepared to guide the student in writing the final report. This notice is very similar in content and format to the "Notice to Authors" printed in the Journal of the American Chemical Society and other ACS journals. Some instructions given there are not applicable to senior project final reports either because the purpose is somewhat different from that of the usual published paper or because it will not be set into type. Attention should be paid to the margins to be left on each page. One-inch margin is left on the top, the right-hand side and the bottom of the page. A one and a half inch margin is left on the left-hand side of the page.

General Considerations. The report should be written in correct, effective English in the past tense except in discussing commonly accepted theory and equations. The use of first person must be avoided and the report written in a passive voice. The other prime requirements of a written report are precision, clarity, ease of reading, conciseness, and correctness of rhetoric, grammar, and spelling. Neatness is important, particularly as it affects legibility. The report should be free of typographical errors. In writing the report, it should be assumed that the reader would have the level of scientific competence of an average senior chemistry major. Data or material, other than numerical constants, equations, and procedures known by the average senior, taken from an outside source, must be accompanied by a complete reference to that source. A report usually contains the following sections: Title page, acknowledgments (optional), abstract, table of contents, index to tables, index to figures, index to abbreviations, introduction, experimental results, discussion, appendices and literature cited. The pages listing the first eight items are numbered consecutively in lower case Roman numerals, e.g., i, ii, iii, iv, etc. These numbers appear at the bottom center of the paper with "i" not shown on the title page. All other pages are numbered consecutively in Arabic numerals on the top right-hand corner of the page, one half inch from the edges. The first page of the introduction section is numbered "1" and the number shown at the bottom center of the paper.

Title Page. This should show the title of the report, the name of the writer, the purpose of the report, the name of the supervisor and the date when the report is submitted. An example of the title page is attached. See page 4.

Acknowledgments. The common practice is to acknowledge any financial, material or technical assistance received from outside.

Abstract. The abstract should briefly state the reason for the work, the significant results and conclusions.

Table of Contents. This should provide a ready reference for the reader to access the various sections of the report.

Index to Tables, Figures and Abbreviations. These are self-explanatory.

Introduction. The introduction indicates the object of the experiment and provides background material for the work described in the body of the report. All information needed for a clear understanding of the later discussion, such as basic principles and definitions of terms should be

included; all unimportant material and all material not truly relevant to the discussion should be omitted. All symbols used should be clearly identified when introduced. Mathematical derivations should be given only if they are not known to the average reader and only if they will be used later to interpret the experimental results or to illustrate a point in the discussion. Equations should be worked into the sentence structure but should appear on separate lines. Equations that will be referred to later should be numbered consecutively.

Experimental Section. This section should be divided into the following parts:

(a) **Apparatus**. The apparatus other than the usual glassware (test tubes, beakers, burners, etc.), should be described briefly by model number or type. The conditions of its usage should be described here or under Procedure.

(b) **Chemicals**. The source of chemicals, without catalog number, should be given along with their purity, e.g., spectral grade, HPLC grade, etc.

(c) **Procedure**. This should be written in such a way so that another person can repeat the procedure without any difficulty. A standard common procedure may be cited, omitting the details, but any deviations from the cited procedure must be given in detail. Refer to appropriate subject journals for examples on how to write the respective procedure. For example, see the "Journal of Organic Chemistry" for organic chemistry preparations.

Results. The length of this section depends on the nature of the project. If the work involves measurements, calculations, etc., the results should be presented in full detail, making use of tables and graphs. This section may be combined with the Discussion section if it adds to the smooth flow of the report.

Raw data is not generally included. No result should be excluded merely because it is unexpected or is inconsistent with others or with theoretical considerations. The causes for discrepancies can be pointed out or speculated about later in the discussion section.

Discussion. This section provides the connecting link between the factual data and results, and the writer's conclusions. The discussion should include such topics as: comparison with other experimentation and with theory, speculations about unexpected results, comments on suitability of method and other applications of method, comments on the theoretical significance of the results, comments on any approximations made in calculations, an error analysis if applicable, and suggestions for further investigations.

Appendices. Supplementary material, relevant to the subject of the report, which is so voluminous or detailed that inclusion in the text interrupts the continuity, should be assembled in one or more appendices. An example is a detailed mathematical derivation.

Literature Cited. References to the literature should be numbered in one consecutive series, starting with number 1 for the first reference cited and so on. Reference numbers in the text should be typed as unparenthesized superscripts. In the text, initials may be omitted if the author is referred to, thus, Lewis and Randall or, if there are more than two authors, Daniels et al[2]. The list of references in numerical order should be placed after the appendices. (ACS journals print references as footnotes at the bottom of each page; this is more convenient for the reader but more difficult for the typist). The list should be arranged and punctuated as follows:

(1) A. B. Smith, "Textbook of Organic Chemistry", Vol. 1, D. C. Jones, New York, N.Y., 1961, pp. 123-126.

(2) J. S. Doe, J. Smith, and P. Roe, J. Am. Chem. Soc., 1968, 90, 8234.

Note that initials of authors are included, journal names are abbreviated correctly as listed in the "Chemical Abstracts Service Source Index". Abbreviations such as ibid. may be used if appropriate, but must be used correctly. Ibid. can refer only to the immediately preceding reference. Thus,

(3) J. E. Simpson, ibid., 1961, 91, 116.

Nomenclature, Formulas and Equations, Abbreviations. Nomenclature should be consistent, clear, and unambiguous, and conform to the usages of Chemical Abstracts and the conventions recommended by the IUPAC. The use of number or letter designations for compounds should be minimized. Registered trademark names should be capitalized; trade and trivial names should not be capitalized. When such abbreviations are used, the approved name should be given in parenthesis at the first occurrence, e.g., DPN (diphosphopyridine nucleotide) or aspirin (acetylsalicylic acid). Structural formulas should be numbered. Repetition of the same structure should be avoided; the number of an earlier structure may be used alone if a compound occurs several times in formula schemes. Abbreviations such as Me for CH_3, Et for C_2H_5, and Ph (but not u) for C_6H_5 are acceptable. Physical constants and spectral data for new compounds should be given in the format shown in the Notice to Authors in J. Org. Chem.

Letters used to represent quantities in mathematical expressions should be underscored. Dimensions for all quantities must be given. Abbreviations for units should be followed by a period only if there is possibility of confusion. These frequently occurring abbreviations are preferred: %, °K, mL, L, g, mp, bp, cm, cal, kcal, ac, dc, V, mV, eV, emf, mnr, no., Å, hr, min, sec, Hz, ppm, equiv, eq. In agreement with international convention, all rate constants should use seconds as the unit of time. The energies of infrared peaks should be expressed in wave numbers (cm^{-1}). Chemical shift data should be expressed on a ppm basis and the standards used should be specified.

Tables. Tables should be self-explanatory and should be identified by a title and a number. The quantities in each row or column should be clearly labeled and the units specified. Lines of data should not be numbered nor run numbers given unless these numbers are needed for reference in the text. Columns should not be used to contain only one or two entries; nor should the same entry be repeated numerous times consecutively. Data, which are deducible easily by simple arithmetic from data in another column, should not be included in one column. Tables should be interspersed in the manuscript as near as possible to the places where they are referred to in the text. If footnotes and references are required for data in a table, they should be marked with a superscript letter and listed alphabetically at the bottom of the table.

Figures and Graphs. These should be carefully planned and prepared. They should be numbered consecutively and interspersed in the manuscript. Circles or other simple symbols, not dots, should indicate experimental points on graphs. Axes must be labeled with the name and units of the variable, and the scales of the axes need careful planning. Figures and graphs should have a concise title. The number and title should be placed at the bottom along with necessary information. Different colors should not be used to make distinctions between lines, etc., because they all come out black in Xerox copies. Allow enough room on the left-hand edge of graphs so the title of the ordinate is visible when the manuscript is bound.

Author: J. E. Simpson : Revised: 01/04/02 Anz

TITLE OF YOUR PROJECT (ALL LETTERS SHOULD BE IN CAPITALS)

A REPORT PRESENTED TO THE
FACULTY OF THE
CHEMISTRY AND BIOCHEMISTRY DEPARTMENT
CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE
BACHELOR OF SCIENCE
IN
CHEMISTRY

BY
EAGER BEAVER

PROJECT ADVISOR
MR. OR DR. OR PROFESSOR KNOWALL KETONE

MONTH, YEAR

SIGNATURE PAGE

TITLE: CAPITALIZED PROJECT TITLE

AUTHOR: FIRST LAST

DATE SUBMITTED: SEMESTER YEAR

APPROVED BY _____

(NAME OF PROJECT ADVISOR)
(CHEMISTRY AND BIOCHEMISTRY DEPARTMENT)

ACKNOWLEDGEMENTS

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