FORMAT FOR GRADUATION PROJECT REPORTS

Department of Chemical Engineering
For graduation projects in partial fulfillment of
the requirements for the degree of
Bachelor of Science in Chemical Engineering

Faculty of Engineering and Architecture
Yeditepe University
2008

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1. FORMAT

1.1. CHARACTER FONTS

As a character font, use Times or Times New Roman. The font size must be 12 point in the text including formulas, equations, table headings and figure captions. At least 8 point should be used in figures, tables and super or subscripts. Footnotes, long biographical quotes and extensive quotations should be 10 points.

1.2. SPACING

Spacing of the text material shall be 1.5 or when necessary integer multiples thereof. For example, when a paragraph ends, the next one starts after pressing RETURN twice (2xCR) to get two 1.5 spacings.

The followings are exceptions:

- Footnotes - single spacing
- Long biographical quotes - single spacing
- Extensive quotations - single spacing and indented one (1) centimeter relative to the text material.

1.3. MARGINS

Margins of pages shall conform to the following specifications:

- Left / Top margins - 3.5 cm from edge of paper
- Right / Bottom margins - 2 cm from edge of paper

These margins shall be observed on charts, tables, and drawings. Folded papers will not be accepted unless there is absolutely no other way for the material to be presented.

1.4. PAGINATION

The preliminary section, including the title page; approval page, if any acknowledgment; table of contents, etc., should be numbered, using lower case Roman Numerals, e.g., i, ii, iii, etc. The title page counts as starting from Page i, and other pages consecutively, but the number does not appear until Table of Contents section. The sequence of the preliminary section is as follows:

Title Page	Page i number does not appear
Approval Page	Page ii number does not appear
Acknowledgment	Page iii number does not appear
Abstract	Page iv number does not appear
Özet	Page v number does not appear
Table of Contents	Page v, vi as necessary
List of Figures	Page vi, vii as necessary
List of Tables	Page vii, viii as necessary
List of Symbols / Abbreviations	Page ix, x as necessary

For the remainder of the report, Arabic numbers are used. Each page must be numbered. Page numbers are to be placed two centimeters from the top and right hand margins on the pages and must be 12 point. Include all pages for illustrations, tables, appendices, bibliography, etc. Use of suffixes, such as 25a, 25b, etc., will not be approved. The numbering in the main body of the report should begin with Page 1 and run consecutively to the last page. No punctuation, such as dash or a period, should accompany the page number.

Paragraphs must be uniformly indented one centimeter. Series of paragraph items which are to be listed without headings under any of the regular headings may, for clarity, be designated by special bullets such as ●, or enumerated by (i), (ii), (iii), etc. A new paragraph must not begin at the bottom of a page if there is not sufficient space for at least (2xCR). A paragraph must be separated from the preceding and succeeding paragraphs by (2xCR).

1.5. HEADINGS

1.5.1. Main Headings

Main headings numbered such as 1., 2., etc. must obey the following rules:

- They must begin a new page. Omit period at the end of the heading. Main headings must be typed in bold face, must be in capital letters and in 14 points and centered.
- Main headings should reflect content of the text that follows. Main headings are not to be called as chapters.
- The number of the headings will be followed by a period and two spaces.
- They must precede the following text material or second heading by (3xCR). After one CR change to 12 fonts, then 2xCR more.

1.5.2. Second Headings

Second headings numbered such or 2.1., 2.2., etc. must obey the following rules:

- They must begin and be typed in 12 points, bold face, left justified and capital letters. Omit period at the end of heading.
- The number designation of the second heading will be followed with a period and two spaces.
- Second headings must be (2xCR) below preceding text and (2xCR) above of succeeding text, but need not begin a new page.

1.5.3. First Subheadings

First subheadings numbered such as 2.1.1., 2.1.2., etc. must obey the following rules:

- They must be typed on separate lines beginning at the left margin line of the text, but need not begin a new page.
- They must be typed in 12 points, bold face, left justified and with capital and lower case letters except conjunctions, prepositions and articles.

- The number designation of the heading will be followed by a period and two spaces. Omit period at the end of the heading.
- First subheadings must be separated from the preceding and succeeding text by (2xCR).

1.5.4. Second Subheadings

Second subheadings numbered such as 2.1.1.1., 2.1.1.2.., etc. must obey the following rules:

- They must be typed on separate lines beginning at the left margin line of the text.
- They must be typed in 12 points, bold face, italic, left justified and with capital and lower case letters except conjunctions, prepositions and articles.
- The number designation shall be followed by a period and two spaces.
- Second subheadings must be (2xCR) below preceding text and (1xCR) above of succeeding text, but need not begin a new page.

1.6. BIBLIOGRAPHICAL MATERIAL

Reports should follow the form used in scholarly publications of the student's field of research. Rules of form vary from one field to another, and it is important that the student learn the editorial usages of his/her own field. It is generally important that he/she follow such usages consistently throughout his/her report

- The number in square brackets such as "[8]", should indicate the order of first appearance of the reference in the text. The listing of references in the bibliography shall be in the order in which they are used in the text and shall bear the same number as was used in the reference in the text. (See Page 19 - 20).

1.7. SPECIALLY DESIGNATED EXPRESSIONS

Specially designated expressions usually mean equations, formulae, etc. and they obey the following rules:

- They will be centered on the page and separated from the preceding text and the succeeding text by (2xCR).
- The expressions shall be identified by an Arabic number in parentheses like "(2.1)", "(2.2)", "(2.3)", etc., which should be placed opposite the expression and in line with the right margin of the text. They should be numbered within each chapter in the order of their appearance.
- Mathematical formulae and expressions must be typeset according to a consistent math-style throughout the whole report. The standard style for mathematical expressions in scientific publications makes use of italic typeface for variables in Latin characters and non-italic typeface for mathematical signs (+, -, parentheses, etc.). Bold characters are usually reserved for vectors and matrices. In any case, the style used for in-text formulae should be the same as that of displayed formulae.

1.8. TABLES AND FIGURES

Tables and figures should be enumerated within each chapter, i.e., as 2.1, 2.2, 2.3, 3.1, 3.2, etc. The designation of each table or figure within the text should have only the first letter in capital (i.e, such as "Table 4.5" or "Figure 3.8") throughout the report. Tables, figures and their captions should be centered as shown in the examples on Page 21. Figures and tables must be (2xCR) below preceding text and (2xCR) above caption. The captions should be as normal text, i.e, only the first letter should be capitalized. Also note that all floating items such as graphs, charts, photographs and illustrations should be considered and designated as a figure or table, whichever is appropriate.

2. ARRANGEMENT

2.1. TITLE PAGE

This page does not bear a page number. Examples of Title Page for a graduation project report is presented on Page 12. Follow the examples carefully as to form and spacing.

2.2. APPROVAL PAGE

All copies of the graduation project report submitted must include original signatures of the Examining Committee on the approval page. It should be prepared in accordance with the sample in Page 11 and should follow the title page. The names of the members of the Examining Committee will be listed one below the other in alphabetical order except the Supervisor's, whose name will be at the top of the list.

2.3. ACKNOWLEDGMENT

The author may desire to include a page with a brief note of an acknowledgment of help received from particular people. All organizations proving financial support or data must also be acknowledged.

2.4. ABSTRACT

The abstract should give the information that will enable a scholar to tell whether he/she wishes to read the complete work. Therefore, the abstract should cover the following points: Statement of the problem, procedure or method, results, conclusions. The abstract should contain no headings, tabular material, chemical formulas, or footnotes. Abstracts should not contain references, but author citing is allowed.

2.5. TABLE OF CONTENTS, LIST OF FIGURES, TABLES AND SYMBOLS / ABBREVIATIONS

Reports are expected to have a "Table of Contents" for the convenience of the reader. If figures and tables are scattered throughout the text, a separate "List of Figures" (and/or "List of Tables") must be included after the Table of Contents. These lists should include page numbers. Similarly, a "List of Symbols" (or "List of Symbols/Abbreviations", as appropriate) should be included. Examples of such materials are shown on Page 13 - 17. "List of Symbols/Abbreviations" can contain abbreviations listed alphabetically as a separate group following the symbols.

2.6. TEXT

The text of the report will follow at this point. The first section (in most cases, Introduction) will start on the first page of the text, i.e. the first page enumerated in Arabic numerals. Please pay attention to some of the precautions listed below:

- The whole text should be left and right justified.
- Periods, commas, semicolons and colons go outside the quotation marks.
- The word "data" is plural and requires a plural verb.
- Integers from one to nine, inclusive, should be spelled out except when they represent a chapter or a section; for number 10 and above, use numerals. Numbers should be spelled out when they begin a sentence.
- Spell out per cent; do not use %, and write per cent as two words without a period within the text.

2.7. APPENDICES

A last section may contain supporting data for the text in the form of one or more appendices. Examples of appendix material include data sheets, questionnaires, flowcharts, illustrations, maps, software listings, charts, etc. If the appended data should include oversize illustrations or maps, several alternative methods of inclusions are available.

If a section, table, figure, equation etc., is to be included in an appendix, the numbering should follow the same rules used within the report. In this case, however, they should begin with the letter of the respective appendix such as "Table A.l", "Equation (B.4)" etc. Each appendix should have a descriptive title just like chapter headings (See Page 14).

The developed computer program should be given in a separate CD. The format and contents of this diskette or CD is explained in Appendix B of this booklet.

APPENDIX A: SAMPLE PAGES

The following pages (10-21) present examples of some report pages typeset in the format described in the proceeding chapters. They include the pages to be found in the preamble of a report (such as title and table of contents, etc.). Further, this booklet (except its title page) is typeset in the format required for the reports.

The sample pages for reference lists (Pages 21-22) include examples of referencing journal articles, books, articles in a book, theses, conference papers, reports, and articles in the Internet.

Follow the examples in the following pages care fully as far as the form, font type and size, and spacing is concerned. You can consult the assistants for questions you might have.

PRODUCTION OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR) PROTEIN IN RECOMBINANT CELLS

by
Banu Ünsal

Submitted to the Department of Chemical Engineering
in partial fulfillment of
the requirements for the degree of
Bachelor of Science

Faculty of Engineering and Architecture
Yeditepe University
2005

PRODUCTION OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR) PROTEIN IN RECOMBINANT CELLS

First Line

APPROVED BY:

3xCR

Assist. Prof. Nihat Baysal ……

(Supervisor)

3xCR

Assist. Prof. Burak Alakent ……

3xCR

Prof. Fahir Borak ……

11xCR

DATE OF APPROVAL: …./…./….

Last Line

ABSTRACT

Frame relay is a connection oriented packet switching technique and is intended for the interconnection of geographically separated local area networks. Frame relay communication has been proposed to improve the performance of ISDN packet transmission, but later it has been found out that it alone could be used as a cost effective communication technique. The work done in this M.S. report is part of a joint effort to develop a high speed network test bed that involves a frame relay switch, frame relay terminals and frame relay routers in the Computer Networks Research Laboratory. The frame relay line speed of the test bed has been selected as 2048 Kbps. IBM compatible personal computer's (PC's) with ISA bus have been selected as frame relay terminals and routers, since they have law east and it is relatively easier to solve their interfacing problems. A Motorola VME bus based multiprocessor computer system has been selected as the main component of the frame relay switch. The development of the frame relay ISA bus interface and the development of frame switch interface are the subjects of this M.S. report. Both interfaces have many common functions, subsystems and components. The frame relay PC ISA bus interface has been fully designed, realized as a board and tested for operation. The frame relay switch interface has been designed based on the experiences accumulated while developing the frame relay PC ISA bus interface.

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LIST OF FIGURES

LIST OF TABLES

LIST OF SYMBOLS / ABBREVIATIONS

A	System matrix
B	Input matrix
E	Three-dimensional Euclidean space
G	Plant transfer matrix
G_1	Plant disturbance matrix
R	A closed and bounded region in E
∂R	Boundary of the region R
∂R^s s=l,...,p	Complementary regular subsurface of the boundary ∂R, s being a positive scalar
T	Sampling time
U	Control Input
x_c	Controller state vector
α_c, α_e	Controller and estimator characteristics polynomials
Γ	Discrete plant control input matrix
Γ_1	Discrete plant noise input matrix
λ	Plant delay time or transportation lag
Φ	Discrete plant system matrix
τ	Optical distance
τ_o	Optical thickness or optical half thickness
ADD	Average detection delay
ASN	Average sample number
i.i.d.	independently and identically distributed
JACS	Journal of American Chemical Society
MSE	Mean Square Error

1. MAIN HEADING

The aim of this page is to show how the format of the headings should be adjusted. Main headings must be typed in bold face, must be in capital letters and in 14 points and centered. They must precede the following text material or second heading by (3xCR). After one CR, change to 12 fonts, then 2xCR more.

1.1. SECOND HEADING

They must begin and be typed in 12 points, bold face, left justified and capital letters. The number designation of the second heading will be followed with a period and two spaces. Second headings must be (2xCR) below preceding text and (2xCR) above of succeeding text, but need not begin a new page.

1.1.1. First Subheading

They must be typed in 12 points, bold face, left justified and with capital and lower case letters except conjunctions, prepositions and articles. The number designation of the heading will be followed by a period and two spaces. First subheadings must be separated from the preceding and succeeding text by (2xCR).

1.1.1.1. Second Subheading

They must be typed in 12 points, bold face, italic, left justified and with capital and lower case letters except conjunctions, prepositions and articles. The number designation shall be followed by a period and two spaces. Second subheadings must be (2xCR) below preceding text and (1xCR) above of succeeding text, but need not begin a new page.

1.1.1.2. Second Subheading 2

This is an example for second subheading.

REFERENCES

1. Maiers, J. and Y. S. Sherif, "Application of Fuzzy Set Theory", *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. SMC-15, No. 1, pp. 41-48, 1985.

2. Doebelin, E., *Control System Principles and Design*, John Wiley, New York, 1985.

3. Banerjee, P. K. and R Butterfield (editors), *Development of Boundary Element Methods - I*, Applied Science Publishers, London, 1980.

4. Efstathiou, J., "Rule-based Process Control Using Fuzzy Logic", in E. Sanchez and L. A. Zadeh (eds.), *Approximate Reasoning in Intelligent Systems, Decision and Control,* pp. 145-158, Pergamon Press, Oxford, 1987.

5. Taşoğlu, T., *Application of Neural Networks to Digital Computer Control of Nuclear Reactors*, M.S. Report, Boğaziçi University, 1991.

6. Akın, H. L. and T. Taşoğlu, "Nuclear Reactor Control Using Back Propagation Neural Networks", *Proceedings of the Sixth International Symposium on Computer and Information Sciences,* Antalya, 30 October-2 November 1991, Vol. 2, pp. 889-905, Elsevier, Amsterdam, 1991.

7. Webb, A. R., D. Lowe and M. D. Bedworth, A Comparison of Nonlinear Optimization Strategies for Feedforward Adaptive Layered Networks, *RSRE Memorandum No. 4157*, RSRE Malvern, 1988.

8. Miller, D., *λ Prolog: An Introduction to the Language and Its Logic*, http://www.cis.upenn.edu/dale/1Prolog/index.html, 1996.

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A Manual of Form for Theses and Term Reports, Indiana University Press, 1950.

A Manual of Style, 11th ed., University of Chicago Press, Chicago, 1949.

Appel, L., *Bibliographical Citation in the Social Sciences: A Handbook of Style*, 2nd Rev. ed., University of Wisconsin Press, Madison, 1946.

Campbell, W. 8., Form and Style in Report Writing, Houghton Mifflin Co., Boston, 1954.

Hurt, P., *Bibliography and Footnotes : A Style Manual for.. Students,* (Revised and enlarged by M.L. Hurt Richmond), University of California Press, Berkeley, 1949.

Lamport, L., LATEX *: A Document Preparation System*, Addison-Wesley, Reading, 1986.

McGraw-Hill Book Co., *A Few Suggestions to McGraw-Hill Authors*, New York, 1922.

Perrin, P. G., *Writer's Guide and Index to English*, Rev. ed., Scott, Foresman and Co., Chicago, 1950.

Sears, D., *Harbrace Guide to the Library and Research Paper*, Harcourt, Brace and Co., New York, 1956.

The Manuscript: *A Guide for Its Preparation*, 3rd ed., John Wiley, New York, 1941.

Trelease, S. F., *Scientific Paper: How to Prepare It, How to Write It*, Williams and Wilkins, Baltimore, 1947.

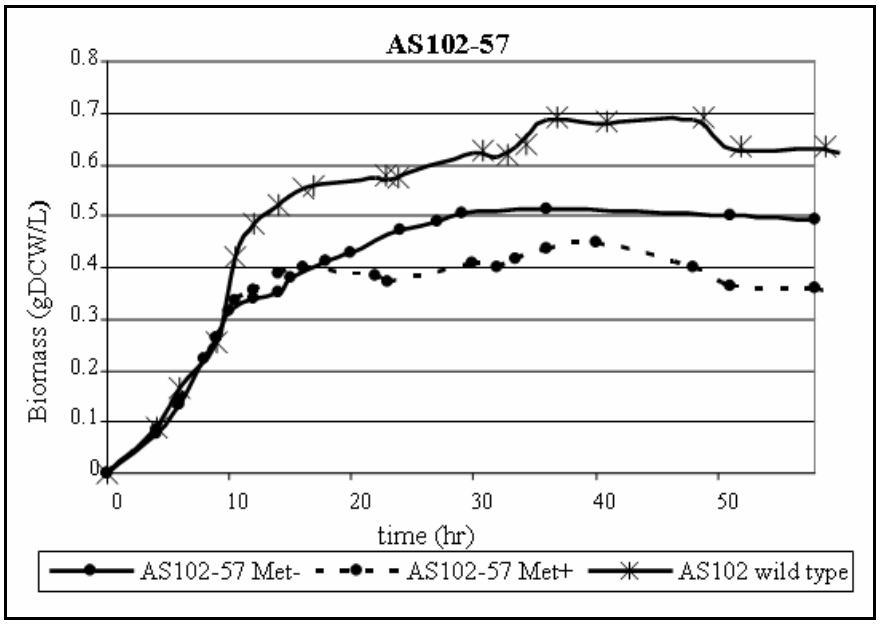

Figure 5.7. Growth curves of the wild type (AS102) and recombinant AS102-57 *S. cerevisiae* in the presence or absence of methionine

Table 2.2. Delayed neutron constants

Mean life (s)	Decay Constant (λ_i, s^{-1})	Fraction
80.40	0.0124	0.00021
32.80	0.0305	0.00140
8.98	0.1110	0.00125
3.32	0.3010	0.00253
0.88	1.1400	0.00074
0.33	3.0100	0.00027

APPENDIX B: FORMAT OF CD CONTAINING COMPUTER SOFTWARE

Listings of software should be given in a CD. The CD should contain files containing the source code, one or more sample input and corresponding output separately. Other than these, there must be another file named "READ.ME".

In this ASCII text file, the following sections must appear:

- Files in the Disk: In this section, the names of the files together with their contents must be listed.
- Hardware Requirements: In this section, the equipment, graphics card, mouse, disk capacity, RAM capacity etc. necessary to run the software must be noted.
- Software Requirements: In this section, the operating system, the compiler, linker, and the libraries etc. necessary to compile and link the software must be listed. Please note that no copyrighted material file (compiler, library etc.) should be put on the CD without obtaining the necessary license from the copyright owner.