

**CENTRE FOR DISTANCE EDUCATION
ANNA UNIVERSITY
CHENNAI 600 025**

GUIDELINES FOR THE PREPARATION OF PROJECT REPORT

1. GENERAL

The manual is intended to provide broad guidelines to the MSC (CS-FOSS) candidates in the preparation of the project report. In general, the project report shall report, in an organized and scholarly fashion, an account of original research work of the candidate leading to the discovery of new facts or techniques or correlation of facts already known (analytical, experimental, hardware oriented, etc.). Project report shall demonstrate a quality as to make a definite contribution to the advancement of knowledge and the candidate's ability to undertake sustained research and present the findings in an appropriate manner with actual accomplishments of the work.

Instruction

The candidates are expected to read carefully the instructions given in the sequel and meticulously follow them in the preparation of the project report. Non-compliance with any of these instructions may lead to the rejection of the project report submitted.

2. SIZE OF PROJECT REPORT

The size of the Project report should be minimum 50 pages and maximum 60 pages of typed matter reckoned from the first page of Chapter 1 to the last page of the project report excluding reference section. Under extraordinary circumstances, the size of the project report shall be permitted up to pages with the concurrence of the supervisor.

3. ARRANGEMENT OF THE CONTENTS OF THE PROJECT REPORT

The sequence in which the Project report material should be arranged and bound as follows:

1. Cover Page & Title page (as shown in Annexure II)
2. Bonafide Certificate (as shown in Annexure III)
3. Certificate of Viva-Voce Examination
4. Company Letter if any

5. Acknowledgement
6. Abstract in English and Tamil
7. Table of Contents (as shown in Annexure IV)
8. List of Tables
9. List of Figures
10. List of Symbols, Abbreviations and Nomenclature (Optional) (as shown in Annexure V)
11. Chapters
12. Appendices
13. References

The Tables and Figures should be included at appropriate places in the text of the Project report.

4. PAGE DIMENSIONS AND MARGIN

Standard A4 Size (297 mm x 210 mm) paper may be used for preparing the copies. The dimensions of the final bound project report (3 copies) report should be 290 mm x 205 mm. Project report should be bound with black calico cloth and using flexible cover of thick white art paper.

The final Project report (at the time of submission) should have the following page margins:

Top edge	:	30 to 35 mm
Bottom edge	:	25 to 30 mm
Left side	:	35 to 40 mm
Right side	:	20 to 25 mm

The Project report should be prepared on good quality white paper preferably not lower than 80gsm. Tables and Figures should conform to the margin specifications. Large size Figures should be photographically or otherwise reduced to the appropriate size before insertion.

5. MANUSCRIPT PREPARATION

In the preparation of the manuscript, care should be taken to ensure that all textual matter is typewritten to the extent possible in the same format as may be required for the final Project report. Hence some of the information required for the final typing of

the Project report is also included in this section.

The headings of all items from 2 to 12 listed in section 3 should be typed in capital letters without punctuation and centered 50 mm below the top of the page. The text should commence 4 spaces below this heading. The page numbering for all items from 1 to 8 should be done using lower case Roman numerals and the pages thereafter should be numbered using Arabic numerals.

5.1 Cover Page & Title Page - A specimen copy of the Cover page and Title page for the Project report is given in Annexure II.

5.2 Bonafide Certificate - The Bona fide Certificate shall be typed in double line spacing using Font Style Times New Roman and Font Size 13 as per the format shown in Annexure III.

The certificate shall carry the signatures of student, Guide, Project In-charge at the Coordinating Centre The Bonafide certificate shall also carry the External Examiner's signature obtained at the time of Viva-voce.

5.3 Abstract - Abstract should be an essay type of narration not exceeding 600 words, outlining the research problem, methodology used for tackling it and a summary of the findings. This shall be typed in double line spacing using Font Style Times New Roman and Font Size 13 and signed by the candidate.

5.4 Acknowledgement – It should be brief and should not exceed one page when typed in double spacing. The candidate's signature shall be made at the bottom right end above his/her name typed in capitals.

5.5 Table of Contents - The Table of contents should list all captions following it as well as any caption which precedes it. The title page, Bonafide Certificate and Acknowledgment will not find a place among the items listed in the Table of Contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head. A specimen copy of the Table Contents for the Project report is given in Annexure IV.

5.6 List of Table - The list should use exactly the same captions as they appear above the Tables in the text. One and a half spacing should be adopted for typing the matter under this head.

5.7 List of Figures - The list should use exactly the same captions as they appear below the Figures in the text. One and a half spacing should be adopted for typing the matter under this head.

5.8 List of Symbols and Abbreviations - One and a half spacing should be adopted for typing the matter under this head. Standard symbols, abbreviations, etc. should be used. The list should be arranged alphabetically with respect to the contents on the right side as shown in Annexure V.

5.9 Chapters - The chapters may be broadly divided into 3 parts (i) Introductory chapter, (ii) Chapters developing the main theme of the Project report and (iii) Results, Discussion and Conclusion. The main text shall be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions.

- Each chapter should be given an appropriate title.
- Tables and Figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
- Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page which refers to the material they annotate.

5.10 Appendices - Appendices are provided to give supplementary information, which if included in the main text may serve as a distraction and cloud the central theme under discussion.

- Appendices should be numbered using Arabic numerals, e.g. Appendix 1, Appendix 2, etc.
- Appendices, Tables and references appearing in appendices should be numbered and referred to at appropriate places just as in the case of chapters.
- Appendices shall carry the title of the work reported and the same title shall be included in the Table of Contents page.

5.11 List of References - Any works of other researchers, if used either directly or indirectly, the origin of the material thus referred to at appropriate places in the Project report should be indicated. The author's publications during the period of research should not be included in the references and can be separately mentioned as in 5.10. A paper, a monograph or a book may be designated by the name of the first author followed by the year of publication, placed inside brackets at the appropriate places in the Project report. The citation may assume any one of the following forms.

Examples of Citation

- (i) An improved algorithm has been adopted in the literature (Rupf 2009)
- (ii) Massey and Mittelholzer (2008) have dealt at length this principle
- (iii) The problem of mechanical manipulators has been studied by Anigstein et al (2010) and certain limitations of the method used, has been pointed out by Anigstein et al (2010 a).

The listing should be typed 4 spaces below the heading "REFERENCES" in single spacing. The reference material should be listed in the alphabetical order of the first author. The name of the author/authors should be immediately followed by the other details and year. A typical illustrative list given below relates to the citation example quoted above.

REFERENCES

1. Alishahi, K., Marvasti, F., Aref, V. and Pad, P. "Bounds on the sum capacity of synchronous binary CDMA channels", J. Am. Chem. Soc., Vol.55, No.8, pp.3577-3593, 2009.
2. Djonin, D. and Bhagrava, V. "New results on low complexity detectors for over-staturated CDMA systems" in Proc. Globecom, 2010.
3. Karystinos, G.N. and Pados, D.A. "The maximum squared correlation, total asymptotic efficiency, and sum capacity of minimum total squared correlation binary signature sets", Designs, Codes and Cryptography, Vol.51, pp.348-355, 2007.
4. Massey, J.L. and Mittelholzer, T. "Welch's bound and sequence sets for code-division multiple access systems", in Sequences II, Methods in Communication,

Security and Computer Sciences”, Capocelli, R., De Santis, A. and Vaccano, U.
Eds. Springer-Verlag, New York, 2007.

5. Verdu, S. Multiuser Detection, Cambridge University Press, New York, 2008.
6. Waldron, S. “Generalized Welch bound equality sequences are tight frames” IEEE Trans. Inf. Theory, Vol.49, No.9, pp.2307-2309, 2008.

5.12 Tables and Figures – “Table” means tabulated numerical data in the body of the Project report as well as in the appendices. All other non-verbal material used in the body of the Project report and appendices such as charts, graphs, maps, photographs and diagrams may be designated as Figures.

- A Table or Figure including caption should be accommodated within the prescribed margin limits and appear on the page following the page where their first reference is made.
- Tables and Figures on half page or less in length may appear on the same page along with the text. However, they should be separated from the text both above and below by triple spacing.
- All Tables and Figures should be prepared on the same paper or material used for the preparation of the rest of the Project report.
- Two or more small Tables or Figures may be grouped if necessary in a single page.
- Wherever possible, the photograph(s) shall be reproduced on a full sheet of photographic paper or standard A4 size paper.
- More than one photograph can be included in a page.
- Samples of Fabric, Leather, etc., if absolutely necessary may be attached evenly in a page and fixed/pasted suitably and should be treated as Figures.

6. TYPING INSTRUCTIONS

6.1 General

This section includes additional information for final typing of the Project report. The impressions on the typed/printed copies should be black in colour.

A sub-heading at the bottom of a page must have atleast two full lines below it or else it should be carried over to the next page.

The last word of any page should not be split using a hyphen. One and a half spacing should be used for typing the general text. The general text shall be typed in Font Style Times New Roman and Font Size 13. Single spacing should be used for typing:

- (i) Long Tables
- (ii) Long quotations
- (iii) Foot notes
- (iv) Multiline captions
- (v) References

All quotations exceeding one line should be typed in an indented space - the indentation being 15 mm from either side of the margin.

6.2 Chapters

The format for typing Chapter headings, Division headings and Sub-division headings are explained by the following illustrative examples.

Chapter heading	:	CHAPTER 1
		INTRODUCTION
		OUTLINE OF
Division heading	:	1.1 PROJECT REPORT
Sub-division heading	:	1.1.1 Literature Review
		1.1.1.1 Synthetic aperture radars on satellites

The word CHAPTER without punctuation should be centered 50 mm down from the top of the page. Two spaces below, the title of the chapter should be typed centrally in capital letters. The text should commence 4 spaces below this title, the first letter of the text starting 20 mm inside from the left hand margin.

The division and sub-division captions along with their numberings should be left justified. The typed material directly below division or sub-division heading should commence 2 spaces below it and should be offset 20 mm from the left hand margin. Within a division or sub-division paragraphs are permitted. Even paragraph should commence 3 spaces below the last line of the preceding paragraph, the first letter in the paragraph being offset from the left hand margin by 20 mm.

7. NUMBERING INSTRUCTIONS

7.1 Page Numbering

All page numbers (whether it be in Roman or Arabic numbers) should be typed without punctuation on the upper right hand corner 20 mm from the top with the last digit in line with the right hand margin. The preliminary pages of the Project report (such as Title page, Acknowledgement, Table of Contents, etc.) should be numbered in lower case Roman numerals. The title page will be numbered as (i) but this should not be typed. The page immediately following the title page shall be numbered as (ii) and it should appear at the top right hand corner as already specified. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals.

7.2 Numbering of Chapters, Divisions and Sub-Divisions

The numbering of chapters, divisions and sub-divisions should be done using Arabic numerals only and further decimal notation should be used for numbering the divisions and sub-divisions within a chapter. For example sub-division 4 under division 3 belonging to chapter 2 should be numbered as 2.3.4. The caption for the sub-division should immediately follow the number assigned to it.

Every chapter beginning with the first chapter should be serially numbered using Arabic numerals. Appendices, included if any, should also be numbered in an identical manner starting with Appendix 1.

7.3 Numbering of Tables and Figures

Tables and Figures appearing anywhere in the Project report should bear appropriate numbers. The rule for assigning such numbers is illustrated by an example. Thus, if a Figure in Chapter 3, happens to be the fourth then assign 3.4 to that Figure.

Identical rules apply for Tables except that the word Figure is replaced by the word Table. If Figures (or Tables) appear in appendices then Figure 3 in Appendix 2 will be designated as Figure A 2.3. If a table to be continued into the next page this may be done, but no line should be drawn underneath an unfinished Table. The top line of the Table continued into the next page should, for example read Table 2.1 (continued) placed centrally and underlined.

7.4 Numbering of Equations

Equations appearing in each Chapter or Appendix should be numbered serially, the numbering should commence afresh for each Chapter or Appendix. Thus for example, an equation appearing in Chapter 4, if it happens to be the eighth equation in that Chapter should be numbered as (4.8) thus:

$$\left[\frac{\partial}{\partial x} \left[\frac{p^2}{h} \right] + \frac{\partial}{\partial y} \left[\frac{pq}{h} \right] = -gh \right] \quad \frac{\partial \eta}{\partial x} = -k \frac{\sqrt{p^2 + q^2}}{h^2} \quad \frac{1}{\rho} \left[\frac{\partial}{\partial x} (\tau_{xx}) + \frac{\partial}{\partial y} (\tau_{xy}) \right] \quad (4.8)$$

While referring to this equation in the body of the Project report it should be referred to as Equation (4.8).

8. BINDING SPECIFICATIONS

- Project report (3 copies) should be bound with black calico cloth and using flexible cover of thick white art paper. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.
- Soft copy of the Project report in CD form (2 Nos) should be submitted for University archives.

9. NUMBER OF COPIES TO BE SUBMITTED FOR EVALUATION

Students should submit 3 copies of Project Report to the Study centre Coordinators through the Project In-charge of the Study centre concerned on or before the specified date. The Study centre Coordinator may distribute the copies as follows:

- i. One copy to be signed and returned to the student
- ii. One copy to be retained for the Study Centre Library
- iii. One copy to be given to the Guide concerned
- iv. One copy to be forwarded to the External Examiner

After the Viva-voce Examination one copy of the project report signed by the External Examiner, Internal Examiner, Coordinator of Study centre to be forwarded to the Centre for Distance Education, Anna University, Chennai (Refer Annexure VI). CD containing the Complete project report is also to be forwarded to the Centre for Distance Education after the Viva-voce Examination

ANNEXURE II

A typical Specimen of Cover Page and Title Page

**DIGITAL IMAGE PROCESSING
TECHNIQUES FOR THE DETECTION OF
CRACKS**

 <1.5 line spacing>

Submitted by

 <Italic>

ABIRAMI A

Roll No.: **Reg. No.:**

A PROJECT REPORT

Submitted to the <Italic>

FACULTY OF SCIENCE AND HUMANITIES

in partial fulfilment for the requirement of award of the degree

of

 <Italic> <1.5 line spacing>

**MASTER OF SCIENCE
IN
FREE / OPEN SOURCE SOFTWARE (CS-FOSS)**



CENTRE FOR DISTANCE EDUCATION

ANNA UNIVERSITY

CHENNAI 600 025

<1.5 line spacing>

FEBRUARY 2013

**DIGITAL IMAGE PROCESSING
TECHNIQUES FOR THE DETECTION OF
CRACKS**

Submitted by

ABIRAMI A

Roll No.: 1101FOSS0001

Reg. No.: 68943212415

A PROJECT REPORT

Submitted to the

FACULTY OF SCIENCE AND HUMANITIES

in partial fulfilment for the requirement of award of the degree

of

MASTER OF SCIENCE

IN

FREE / OPEN SOURCE SOFTWARE (CS-FOSS)



**CENTRE FOR DISTANCE EDUCATION
ANNA UNIVERSITY
CHENNAI 600 025**

FEBRUARY 2013

ANNEXURE III

A typical Specimen of Bona fide Certificate

**CENTRE FOR DISTANCE EDUCATION
ANNA UNIVERSITY
CHENNAI 600 025**

BONA FIDE CERTIFICATE

Certified that this Project report titled “**DIGITAL IMAGE PROCESSING TECHNIQUES FOR THE DETECTION OF CRACKS**” is the bona fide work of Ms. ABIRAMI A. who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other Project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

<<Signature of the Student>>

<<Signature of the Guide>>

<<Name>>

<<Name>>

STUDENT

GUIDE

<<Designation & Address >>

<<Designation & Address >>

(If applicable)

<<Signature of the Project In-charge>>

<<Name>>

PROJECT IN-CHARGE

<<Designation & Address >>

ANNEXURE IV

A typical Specimen of Table of Contents

<Font Style Times New Roman Font Size
13>

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	iii
	LIST OF TABLES	xvi
	LIST OF FIGURES	xviii
	LIST OF SYMBOLS AND ABBREVIATIONS	xxvii
1	INTRODUCTION	1
	1.1 GENERAL	1
	1.2 OBJECTIVES OF THE RESEARCH	3
	1.3 LITERATURE REVIEW	4
	1.3.1 Aircraft Landing Operations	6
	1.3.2 Flight Control System	19
	1.3.3 Intelligent Control Design Techniques	29
2	DEVELOPMENT OFNON-LINEARSIX DEGREES-OF-FREEDOM AIRCRAFT MODEL	45
	2.1 GENERAL	45
	2.2 BUILDING AN AIRCRAFT	54
	2.2.1 Configuration Script	54
	2.2.1.1 Aerodynamic section	58
	2.2.1.2 Propeller section design	60
	2.2.1.3 Engine section comparison	63
	2.2.1.4 Inertia section	66

ANNEXURE V

LIST OF SYMBOLS AND ABBREVIATIONS

JDBC	-	Java Database Connectivity
CSMA/CD	-	Carrier Sense Multiple Access/Collision Avoidance
BIOS	-	Basic Input Output System
SMS	-	System Management Server
DLL	-	Data Link Layer
RAID	-	Redundancy Array Of Inexpensive Disks
LLC	-	Logical Link Control
SNMP	-	Simple Network Management Protocol
SAP	-	Service Access Points
NIC	-	Network Interface Card
SCSI	-	Small Computer System Interface
DHCP	-	Dynamic Host Configuration Protocol
TCP	-	Transmission Control Protocol
IP	-	Internet Protocol
EMI	-	Electro Magnetic Interference
DNC	-	Direct Numerical Control
Mac	-	Macintosh (Apple Macintosh Computer)
OOPS	-	Object Oriented Programming and Systems
SSH	-	Secure Shell
UML	-	Unified Modeling Language
VGA	-	Video Graphic Array
W3C	-	World Wide Web Consortium
WAP	-	Wireless Application Protocol
FIFO	-	First In First Out
ERP	-	Enterprise Resource Planning
DBMS	-	Database Management System
OS	-	Open Source/Operating System
RDS	-	Remote Data Services

ANNEXURE VI

CERTIFICATE OF VIVA-VOCE-EXAMINATION

This is to certify that Thiru/Ms./Tmt.
(Roll No.; Register No.) has been
subjected to Viva-voce-Examination on(Date) at
.....(Time) at the Study centre
.....(Name and Address of the Study centre).

Internal Examiner

Name :

(in capital letters)

Designation :

Address :

External Examiner

Name :

(in capital letters)

Designation :

Address :

Coordinator centre

Name :

(in capital letters)

Designation :

Address :

Date :

***Note:**

1. This Annexure shall be attached to the Project Report to be sent to the Director, Centre for Distance Education, Anna University, Chennai 600 025.
2. A Xerox copy of the signed certificate shall be attached to the project copy retained at the Study centre library.