

## **RULES & REGULATIONS**

For

M.E. / M. Tech. Programmes (Full-time & Part-time)



University College of Engineering
(Autonomous)
Osmania University
Hyderabad – 500 007, Telangana State
(With effect from the Academic Year 2015 - 2016)

# M.E. / M. Tech. PROGRAMMES (Full-time & Part-time)

## **RULES & REGULATIONS**

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# Rules and Regulations M.E./M.Tech. Programmes in Engineering (Full-Time & Part-Time)

(Applicable to the students admitted from the Academic Year 2015-2016 onwards)

#### Notes:

- 1) All the rules and regulations, hereinafter specified shall be read as a whole for the purpose of interpretation.
- Unless and otherwise stated, all the rules and regulations documented here are also applicable to Part-Time Programmes.

## 1. ELIGIBILITY FOR ADMISSION\*

An applicant for admission into the M.E./M.Tech Programme shall have one of the following qualifications:

- 1.1. A Bachelor's degree in Engineering/Technology of Osmania University.
- 1.2. AMIE Degree or similar qualification recognized by the UPSC as equivalent to B.E./B.Tech.
- 1.3. Any other qualification which is recognized as equivalent to the Bachelor's Degree in Engineering/Technology of Osmania University.
- 1.4. For M.Tech (CSE), Master's Degree holders in Physics, Statistics, Mathematics, or Applied Mathematics, Applied Statistics, Applied Physics, Geophysics and Computer Applications are also eligible. However, all candidates should have valid GATE score in CSE / IT only or any other entrance test conducted by the competent authority.

- 1.5. For M.E. (Civil) programme with specialization in Construction Engineering and Management, candidates with B.Arch. Degree are also eligible.
- 1.6. For M.E.(BME) programme with specialization in Bio-Medical Electronics, candidates with B.E. Degree in Bio medical Engg. / Electrical and Electronics Engg. / Electronics Engg. / Electronics & Communication Engg. / Instrumentation Engg. or its equivalent are eligible.
- 1.7. For M.E (EE) programme with specialization in Power Electronic Systems, candidates with B.E./B.Tech in Instrumentation / Electrical Engineering / Electronics and Instrumentation Figg are eligible.

<sup>\*</sup> Subject to review from time to time as per the directives of competent authority

#### 2. HOW TO APPLY

A candidate seeking admission into the M.E./ M.Tech. Programme shall apply in the prescribed form as per the Notification issued by Convener, PGECET (on behalf of TSCHE) every academic year. For PTPG programmes the candidate will have to apply in the prescribed form as per the Notification issued by Convener, PTPG admissions (Director, CEEP) every academic year.

#### 3. ADMISSION

- 3.1 The Convener, PGECET appointed by TSCHE will conduct the counseling for admission to PG programmes based on GATE score.
- 3.2 After exhausting the eligible GATE qualified candidates, remaining seats will be filled with Non-GATE candidates, based on the merit at the Entrance Test conducted by the Convener, PGECET (on behalf of TSCHE).
- 3.3 No full time employee shall be admitted to the M.E./M.Tech. Course unless he/she shows proof of having taken leave for the period of the course.
- 3.4 Admission to PTPG programmes will be based on Rank obtained at the entrance test conducted by Osmania University.
- 3.5 All admissions both for Full time and Part time programmes are subject to Reservation rules in force from time to time.
- 3.6 A candidate for admission to the Part time Programme shall have at least one year of experience in the relevant profession after obtaining the qualifying degree.

- 3.7 A candidate for admission to the part time Programme shall submit a letter from the present employer permitting him to attend the Programme.
- 3.8 Admission of sponsored candidates shall be subject to the following conditions.
  - a) Apart from eligibility conditions specified in clause 1, the candidate must have qualified in the GATE examination or PGECET examination.
  - b) The application for admission has to be duly recommended by the sponsoring agency and forwarded to Osmania University. The sponsoring agency should be a Government Establishment or a Public Sector Undertaking or a reputed Private Undertaking.
  - c) Admissions will be based on GATE score and after exhausting GATE qualified candidates, PGECET qualified candidates are considered for admission.
  - d) Candidate should be a permanent employee of the sponsoring agency with a minimum of two years of post qualification experience.
  - e) The sponsoring agency shall grant him/her leave for pursuing the course.
  - f) Candidates working on research projects under various schemes are also eligible to be considered for sponsored seats subject to fulfillment of conditions (3.8 a to e).

## 4. PROGRAMMES AND DURATION

- 4.1 The following P.G. Programmes are offered:
  - (i) Bio Medical Engineering (Full-Time)
  - (ii) Civil Engineering (Full-Time and Part-Time)
  - (iii) Computer Science and Engineering (Full- Time and Part-Time)

- (iv) Electrical Engineering (Full-Time and Part-Time)
- (v) Electronics and Communication Engineering (Full-Time and Part-Time)
- (vi) Mechanical Engineering (Full-Time and Part-Time)
- **Note:** (a) More than one specialization may be offered in each of the above programmes with some of them being 3-tier fee structure programmes.
- (b) Part-Time Post graduate programmes offered in various specializations are 3-tier fee structure programmes.
- 4.2 The duration of M.E. / M.Tech. (Full Time) Programme is 4 semesters, consisting of two semesters of course work (6 Core courses + 6 Elective courses + 2 Lab courses + 2 Seminars) and two semesters of Dissertation Seminar and Dissertation work. The total period of study for the purpose of drawing the scholarship amount (if eligible) shall not exceed 24 months. Each semester shall have 16 weeks of instruction.
- 4.3 The duration M.E./M.Tech Part-Time programme shall be 6 semesters having similar course work, Dissertation Seminar and Dissertation work.
- 4.4 The standard of the part time M.E./ M. Tech Programme shall be the same as that of the full time M.E./M.Tech Programme.
- 4.5 All rules as applicable to the Full time students shall also be applicable to the M.E./M.Tech Part-time students.

## 5. COURSE REQUIREMENTS

5.1 The degree of M.E / M.Tech will be conferred on a candidate who has (a) pursued a regular course of study of not less than two semesters of course work as prescribed hereunder and

- has passed all examinations in the subjects as prescribed in the Scheme of Examination, and (b) submitted and successfully defended his/her Dissertation at the end of the fourth semester (Regular programme) / Sixth semester (PTPG programme) as prescribed in the Scheme of Examination.
- 5.2 A regular course of study for eligibility to appear for any course (subject) for which an examination is conducted at the end of the semester shall mean putting in an attendance of not less than 75% in each of the course (subject) registered during that semester.
- 5.3 Provided that in special cases and for sufficient causes shown, the Vice-Chancellor on the recommendation of the Principal of the College may condone the deficiency of not exceeding 10% attendance for ill-health when an application made for such a condonation is supported by a medical certificate issued by an authorized medical officer and approved by the Principal of the College. Absence not exceeding two weeks, for activities like N.S.S., Inter University Competitions and debates will be condoned if the candidate is sponsored by the University for such activities.
- 5.4 If a candidate fails to secure the minimum of 75% attendance required in a course (subject), then he/she shall not be eligible to appear for the University examination at the end of the semester in the subject. He/she shall be required to prosecute a regular course of study in the subject again before appearing for the University Examination in that subject.
- 5.5 If a candidate fails to maintain a minimum of 40% attendance in at least three of the theory courses (subjects) registered (in case of part-time, at least two courses) independently (excluding Seminar and Lab. courses) and in the first semester following admission, he/she shall forfeit his/her seat

- in the program and the admission automatically stands cancelled.
- 5.6 The course requirements comprise successful completion of a minimum of twelve theory subjects (6 Core Courses + 6 Elective Courses), two Laboratory courses, two Seminars, one Dissertation Seminar (3<sup>rd</sup> semester) and Dissertation (3<sup>rd</sup> and 4<sup>th</sup> semester). For PTPG programmes, the course work is spread over first 4 semester followed by Dissertation Seminar (5<sup>th</sup> semester) and Dissertation (5 & 6<sup>th</sup> Semester) [Refer Table-I & Table-II].
- 5.7 Instruction in each theory course, Lab. course and Seminar shall be as per the Scheme of Instruction described in Table-I and Table-II.
- 5.8 A student, on being admitted to the M.E / M.Tech. Programme shall be assigned to a faculty Adviser. With the approval of the a Faculty Adviser / Course Coordinator, the students shall draw up a study plan to satisfy all the requirements, keeping in view the area of specialisation and then register for the courses.
- 5.9 A student is permitted to register for a maximum of six theory courses, a Laboratory course and a Seminar in a semester. It is necessary to pursue a regular course of study with minimum of three subjects in the semester, for getting eligibility to draw the scholarship amount. Dissertation shall be considered as equivalent to three theory courses (subjects) for this purpose. However, he/she shall not register for more than three courses (subjects) along with the Dissertation Seminar / Dissertation.
- 5.10 A Part-time student can register for a maximum of four theory subjects, one laboratory course and a Seminar in a semester.

- 5.11 The registration of the candidates should be made within one week from the date of admission for the I-semester and within one week from the date of commencement of classes for subsequent semesters. For the benefit of those who are unsuccessful in the main examination or for those who wish to reappear in a course(s) (subject(s)) a make up examination will be conducted. A candidate must register for the main examination makes the candidate ineligible to register for the make-up examination.
- 5.12 In the event, the make-up examination results are not declared before commencement of new semester, the candidates may be permitted to register for the course(s) (subject(s))/ Dissertation Seminar / Dissertation conditionally.
- 5.13 A student is permitted to register for Dissertation only if there are not more than three subjects as backlog from the previous semesters. Backlog for this purpose shall mean Theory courses / Lab courses / Seminars. A student who has successfully completed all the course requirements except Dissertation may be permitted to work on his Dissertation at any recognized Institution/ R&D Organization with the approval of the Head of the Department and Head of the Organization.
- 5.14 In the first fortnight of the third semester of Full-Time Programme and fifth semester of Part-Time Programme, a student shall seek a faculty member of the college who will be willing to be his/her supervisor for project/dissertation and register for it, failing which, the Head of the Department shall assign Supervisor. The student may, in addition, have an External Supervisor from the organization

- to which he / she is attached as a Co-supervisor with the approval of Head of the Department concerned.
- 5.15 A student shall submit five copies of the Dissertation prepared in the standard prescribed format and approved by his/her supervisor on or before the date indicated in the almanac. The format and detailed guidelines are given in an Appendix to this rules & regulations.
- 5.16 The maximum duration for completing all the requirements for obtaining the M.E./M.Tech Programme shall be double the period of study from the date of admission.
- 5.17 For such of those candidates who have not completed the course to an extent of maximum of 3 subjects and/or the Dissertation within the stipulated period, an additional period of one year in continuation may be given to complete the same by the Principal, UCE, OU. on application duly recommended by the Head of Department / Director, CEEP.

## 6. SCHEME OF INSTRUCTION AND EXAMINATION

The Scheme of Instruction and Examination is described in Table I (Regular Programme) and Table II (Part-Time Programme)

- 6.1 All examinations of the Osmania University shall be held at Hyderabad and /or at such place and on such dates as may be notified.
- 6.2 Applications for permission to appear at Semester End examination (SEE) shall be made on the prescribed form along with the necessary certificates and the prescribed fee. The form and the enclosures shall be sent to the Director of Evaluation on or before the date prescribed for this purpose.
- 6.3 When a candidate's application is found in order and he/she is found eligible to appear at the Semester End examination,

the Director of Evaluation shall furnish him/her with a Hall Ticket for the Examination and this Hall ticket shall be produced by the candidate before he/she can be admitted into the examination hall.

- 6.4 A candidate is not entitled to claim refund of the whole or part of the examination fee nor for the reservation of the same for a subsequent examination (s) if he fails to present himself / herself for the Examination for any reason.
- 6.5 The main examinations shall be held at the end of each semester only in the subjects offered during that semester.
- 6.6 A student shall appear for the Semester End Examination at the end of each semester only in the subjects registered during that semester.
- 6.7 A candidate who has been allowed to appear for the main examination may be permitted to re-appear in the subject at the subsequent make-up examination which shall be conducted within one month from the declaration of the results of the main examination.
- 6.8 A candidate who is unsuccessful at both the main and make-up examination or has not appeared at these Examinations in course (s) [subject(s)] shall register for the course (s) [subject (s)] again and pass these core / elective course (s) as the case may be, irrespective of whether the syllabus remained same or revised. Further, the candidate must undergo a regular course of study and secure a minimum 75% attendance for eligibility to appear at the examination. The Continuous Internal Evaluation (CIE) done or Sessional marks earned earlier stands cancelled. If the subject in which the candidate has failed is an elective, a new elective may be chosen if required. If a core course (subject) has been dropped in the curriculum, then the core course (subject) to be taken in place

- of the core course in which the candidate has failed will be specified by the Faculty Adviser / Course Coordinator in consultation with the Chairperson, BoS (Autonomous).
- 6.9 The distribution of Marks/Grades for the Continuous Internal Evaluation (CIE) and the Semester End Examination (SEE) shall be as detailed in the Scheme of Examination.
- 6.10 If a candidate appears at both the main and make-up examinations in the same subject, then the better of the two scores will be taken on record.
- 6.11 Theory question paper of Semester End Examination (SEE) will have 7 questions out of which the candidate has to answer 5 questions including the first compulsory question of 14 marks. The first question would consist of 5 to 7 short questions covering the entire syllabus. Remaining four questions would carry 14 marks each.
- 6.12 Out of 30 marks for Continuous Internal Evaluation (CIE), 20 are to be awarded on the basis of two class tests (each of 10 marks weightage). Performance of both the tests will be taken into account. Remaining 10 marks are to be awarded based on assignments/seminars/quizzes etc.
- 6.13 Laboratory Courses and Seminars listed in the Scheme of Instructions and Examination (Table 1 & Table 11) are Departmental requirements having only Continuous Internal Evaluation (CIE). However, the candidate has to complete the same by securing Minimum qualifying marks as stated in Clause 8.
- 6.14 Registration for Dissertation Seminar + Dissertation is subject to clause 5.13.
- 6.15 During Semester III of Regular Programme and Semester V of Part-Time Programme, student is expected to present Seminar on Dissertation topic covering statement of

- problem of Dissertation topic, Literature Review Appraisal, Objectives and Research Methodology etc.
- 6.16 The evaluation of Dissertation Seminar consists of 50 marks to be awarded by supervisor and 50 marks to be awarded by internal viva-voice committee comprising Chairperson, Head, two Internal Senior Faculty Members (subject experts) and guide.
- 6.17 During Semester IV of regular programme and Semester VI of Part-Time programme, the candidate will continue his/her dissertation work and complete it by the end of semester.
- 6.18 A student shall successfully complete all the programme requirements to be eligible to submit the M.E / M.Tech. Dissertation for its evaluation as per the procedure/norms given in clause 7.
- 6.19 Students who fail to submit their Dissertation and complete the examination formalities at the end of fourth/sixth semester (as per the almanac notified) need to re-register for their dissertation work in the following semester (in no case later than the double the period of course duration i.e, 4 years for Regular and 6 years for PTPG Programme). They will have to pay the prescribed fee for re-registration of Dissertation work every semester till the completion of their Dissertation work.

### 7. DISSERTATION EVALUATION PROCESS:

7.1 The candidates who have passed all the courses and Departmental requirements have to present the Dissertation to the internal Viva-Voce Committee. The Dissertation shall be scrutinized and evaluated by the viva-voice committee consisting of the Chairperson, BoS (Autonomous), HoD

/Nominee, Internal Subject Expert, and Supervisor of the candidate. The Chairperson, Board of Studies is the Chairperson of the Viva-Voce Committee and Supervisor is the Convener. The Viva Voce will be conducted as per the Almanac given by the Principal and will normally be twice in an academic year.

- 7.2 The Viva-Voce committee will give a comprehensive report indicating the adequacy or otherwise of the Dissertation. If candidate's Dissertation work is found inadequate by the viva committee, he/she has to appear once again for the Viva Voce examination. The candidate will have to revise the Dissertation as per recommendations of the vice-voce committee and submit the final copy within two weeks to the Director of Evaluation, Exam Cell, UCE, OU. The Director of Evaluation will send the Dissertation to the external examiner as per the panel of examiners submitted by the Chairperson, BoS (Autonomous).
- 7.3 Within four weeks from the date of submission to the Exam Cell, the external viva-voce will be scheduled in consultation with the external examiner. The external Viva-Voce Committee consists of the Chairperson, BoS (Autonomous), HoD, External Examiner and Supervisor of the candidate. The Chairperson, Board of Studies is the Chairperson of the Viva-Voice Committee and supervisor is the Convener. The external examiner will evaluate the Dissertation for maximum of 200 marks and will be done as per the guidelines given below in consultation with the guide.
  - 70 Marks are allocated for quality of Dissertation work covering (a) Literature review, (b) Innovation / Originality, (c) Research Methodology adopted and (d) Relevance / Practical applications.

- ii.) 30 Marks are provided for Report writing /
- iii.) 50 Marks are allocated for quality and clarity of presentation of Dissertation work.
- iv.) 50 Marks are provided for candidate's performance in terms of his/her ability to defend the work, his/her ability to answer the queries raised during Viva-Voce examination and overall subject knowledge.

Table-I M.E / M. Tech Four Semester Programme (Full Time) Scheme of Instruction & Examination

	S.	Course	Contact Hours per week		SEE		CIE	Credits
	No.	Course	Lectures	Practicals	Duration (hrs)	Maximum Marks	Maximum Marks	
	1,	Core	3	*	3	70	30	3
	2.	Core	3	7.5	3	70	30	3
	3.	Core/Elective	3		3	70	30	3
-	4.	Core/Elective	3		3	70	30	3
H	5.	Core/Elective	3	**	3	70	30	3
EST	6.	Elective	3		3	70	30	3
SEMESTER -	7	Lab-I	**	3	Departmental Requirement		50	2
	8.	Seminar-I		3	Departmental Requirement		50	2
		Total	18	6		420	280	22
	1.	Core	3	2,64	3	70	30	3
	2.	Core	3	- 22	3	70	30	3
	3,	Core/Elective	3	155	3	70	30	3
=	4.	Core/Elective	3	544	3	70	30	3
出	5.	Core/Elective	3		3	70	30	3
EST	6.	Elective	3		3	70	30	3
SEMESTER - II	7.	Lab-l	<b>⇒</b> ):	3	Departmental Requirement		50	2
	8.	Seminar-I	S##	3	Departmental Requirement		50	2
		Total	18	6		420	280	22
SEMESTER - III	1		rtation Seminar + Dissertation 4 clock week (Ir with Su		eraction 100 M		arks	8 Credits
SEMESTER-IV	1	Dissertation		6 clock hours per week (Interaction with Supervisor)		200 Marks		16 Credits

SEE: Semester End Examination

CHE: Continuous Internal Evaluation

Table-II
M.E / M. Tech Six Semester Course (Part Time)
Scheme of Instruction & Examination

	S	COURCO	Contact Hours pe week		SEE		CIE	Credits
	No	0.1		Practicals	Duratio n (hrs)	Maximum Marks	Maximum Marks	
	1.		3		3	70	30	3
监	2.		3		3	70	30	3
SI	3.		3		3	70	30	3
SEMESTER	4.	Seminar-I	-	3	Departmental Requirement		50	2
	1	Total	9	3	4	210	140	11
_	1,	Core	3	77	3	70	30	3
<u>د</u>	2.	Core/Elective	3	**	3	70	30	3
빓	3.	Elective	3	4	3	70	30	3
SEMESTER	4.	Lab-I / Seminar-I		3	Departmental Requirement		50	2
		Total	9	3	i <del>a</del>	210	140	11
	1	Core	3	141	3	70	30	3
e ≅	2.	Core/Elective	3	7-	3	70	30	3
Ĭ	3.	Core	3		3	70	30	3
SEMESTER III	4.	Lab-I I/ Seminar-II	0	3	Departmental Requirement		50	2
		Total	9	3	- 1	210	140	11
	1.	Core	3		3	70	30	3
2	2.	Core/Elective	3		3	70	30	3
Ë	3.	Core	3		3	70	30	3
SEMESTER IV	100	Lab-I I/ Seminar-II	-	3	Departmental Requirement		50	2
		Total	9	3		210	140	11
SEMESTER V	1,,	Dissertation Seminar + Dissertation		4 clock hours per week (Interaction with Supervisor)		100 Marks		8 Credits
SEMESTER VI	1	Dissertation		6 clock hour week (Intera with Superv	nteraction 200 N		ırks	16 Credits

Total

68

SEE: Semester End Examination

CIE: Continuous Internal Evaluation

#### 8. AWARD OF DEGREE

8.1 A candidate shall be deemed to have fully passed; in the subjects he/she has registered during the semester, if he/she secures not less than the minimum marks prescribed below:

### Minimum Qualifying Marks

ourse (	articulars	Minimum Marks / Grade			
(1) (ii)	Each Theory Course Each Laboratory Course	(CIE+SEE) (CIE)	7-		
(iii)	Lach Seminar	(CH:)	-	50% - 'C' Grade	
(iv)	Dissertation Seminar	(SEE)			
(11)	Dissertation	(SEE)			

## 8.2 Grading System

Grades are awarded based on the combined marks secured in the Semester End Examination (SEE) (University Exam) (Maximum 70%) and Continuous Internal Evaluation (CIE) (Maximum 30%) as per the criteria stated in the following Table:

Academic Performance in-terms of marks	Letter grade	Grade points
90 % and above	A+	10
80 % and above	A	09
70 % and above	B+	08
60 % and above	В	07
50 % and above	C	06
Below 50 %	F	0

- a.) The Memorandum of marks of a candidate will reflect the grade secured by him/her as per the grading criteria described in the Table above (clause 8.2)
- b.) There is no minimum marks criteria for the Continuous Internal Evaluation (CIE) for theory course (s) [subject(s)]

c.) A minimum Cumulative Grade Point Average (CGPA) of 6 is required for the award of Degree. The consolidated memorandum of marks will reflect the credits / grades scored in each course (subject).

## 8.3 Semester Grade Point Average (SGPA) & CGPA Calculation:

(a) A student is said to have earned credits if he/she secures letter grade 'C' and above

(b) SGPA = 
$$\frac{\Sigma \text{ Letter Grade Point} \times \text{Credits}}{\Sigma \text{ Credits}}$$

SGPA is calculated upto second decimal point

SGPA is calculated only when all subjects in that semester are Cleared / Passed

(c) CGPA = 
$$\frac{\Sigma(\text{SGPA}) \times (\text{Total Credits})}{\Sigma(\text{Total Credits})}$$

CGPA at a given point of Semester is calculated upto second decimal point

CGPA is calculated only when total credits earned are equal to total credits up to a Semester in which the candidate has last appeared for University Examination

- (d) in above calculations Pass / Fail courses are not included
- (e) Memorandum of Marks should indicate total number of credits and total number of credits earned up to a point of Semester

#### 8.4. Award of Division

CGPA 8 and above First Class with Distinction\*

CGPA 7 and above but less than 8 First Class

CGPA 6 and above but less than 7 Second Class

\* Candidates are eligible for the award of First Class with Distinction with a CGPA of 8 and above in single attempt.

#### 8.5 Award of Gold Medal

A student securing highest CGPA in **single attempt** is eligible for award of Gold Medal.

## 9. Transitory Regulations

Whenever the schemes of Instruction and /or syllabi are changed for a course, candidates shall satisfy the unfulfilled requirements of passing the number of core subjects and electives choosing subjects from the revised schemes, with the approval of the Head of the Department.

#### **APPENDIX**

### 10 Format of M.E./M.Tech.Dissertation

# Department of <Name of the Department> <Name of the College> Osmania University



## Certificate

This is to certify that the Dissertation work entitled < Title of the Project Work > submitted by < Mr. / Ms. Name of the student (Roll No.) >, a student of Department of < Name of the Department >, < Name of the College > in partial fulfillment of the requirements for the award of the degree of master of < Engineering / Technology > with < Name of the Specialization > as specialization is a record of the bonafide work carried out by < him / her > during the academic year < Academic year >.

Signature of the Supervisor

< Name >

< Designation >

< Address >

Signature of Head of the Dept.

< Name >

< Address >

Signature of Head of the Dept.

< Name >

< Address >

Seal

#### Declaration

I declare that the work reported in the Dissertation entitled < Title of M.E. / M. Tech. Thesis > is a record of the work done by me in the Department of < Name of the Department, Place / Organization >.

No part of the thesis is copied from books / journals / internet and wherever referred, the same has been duly acknowledged in the text. The reported data is based on the Dissertation work done entirely by me and not copied from any other source.

Signature of the Student

## 10.1 Guidelines for preparing M.E. / M.Tech. Dissertation

The Thesis must be presented on A-4 paper approximately 11 Inches / 9 Inches or 27.9 cm / 22cm and duly hard bound.

#### I. General:

- 1. The title of the thesis should be concise and clearly convey the work presented.
- 2. Lists of figures, tables, variables, symbols, acronyms etc. should be included, before the start of the first chapter.
- 3. The abstract should not be more than 500words.
- 4. A declaration stating the originality of work / results should be appended.
- 5. Any work which amounts to plagiarism should be totally avoided.
- 6. The entire thesis should be free from grammatical and spelling mistakes.
- 7. The total number of pages of the thesis should not normally exceed 250.
- 8. Any downloaded matter of tables or equations, if used, should be rewritten, and the source mentioned.
- 9. The first Chapter should clearly reflect the importance and objectives of the thesis.
- 10 A brief literature review may be included in the first or second chapter.
- 11. The organization of the thesis may be mentioned in the first chapter.

- 12. The pages should be numbered starting from the first page of the first chapter.
- 13. The pages before the first chapter should be numbered in small Roman numerals.
- 14. The headings and sub-headings should be properly numbered chapter wise.
- 15. Extension work may be indicated in the conclusion.
- 16. Uniform font and size should be followed for the titles of all chapters.
- 17. Uniform Indent should be followed throughout the text of the thesis.
- 18. Similarly uniformity should be maintained for all headings and sub headings.
- 19. Subscripts and superscripts should be adopted properly.

#### H. Formatting

- 1. The text should be presented at one and a half spacing.
- 2. The font size of the main text should be uniformly 12 points throughout the thesis:
- Left justification or left and right justification can be used for main text.
- 4. The left and right margin should be 30-40mm, top and bottom margins should be 25-30mm respectively.

#### III. References

1. The references should be numbered from the first chapter to the last chapter in ascending order and the corresponding number should be shown in square brackets wherever required.

- 2. The reference should be listed with details after the last chapter.
- 3. All the references listed should be referred in the main text.
- 4. The references could be technical papers of Journals, conferences, symposia, workshops and seminars, technical reports, manuals, text books and software.
- 5. The important contents of referred materials should be in the following order: Name (s) of the author (s), Title of the paper, publication title, year of publication, Vol, No.,pp.

## IV. Appendices

- Important programs, derivations, data and any other useful material may be shown in the appendices with proper numbering.
- The appendices should be numbered in capital Roman numbers or capital letters from the first chapter to the last chapter in ascending order. (eg. Appendix 1 or Appendix A)
- 3. The appendices should be shown with details after the last chapter.]
- 4. All the appendices should be referred in the main text.

## V. Equations

1. All the equations used in the thesis should be properly numbered chapter wise (eg. Eq. 3.1)

- 2. The equations shown should be clearly referred and identified as Eq. or eq. followed by equation number.
- Repetition of equations should be avoided. If needed, it may be referred by its number.
- 4. Equations should never be mixed up with main text. It should be shown as separate object and 'Equation Editor' can be used.

#### VI. Tables

- 1. The tables shown in the thesis should be clearly referred and explained and they should be numbered properly.
- 2. At the top of the table, it should be identified as table, followed by table number (ex. Table 3.1)
- 3. The caption of the table should be written clearly, precisely and briefly at the same position.
- 4. A spacing of at least 3 points should be taken for the first line of each cell.
- Table size should not cross the limits of the set page margins.
- 6. The font size should be less than or equal to the font size of main text.

#### VII. Figures

 The figures shown in the thesis should be clearly referred and explained. They should be numbered properly chapter wise.

- 2. At the bottom of the figure, it should be identified as fig. or figures, followed by figure number (ex. Fig 3.1 or figure 3.1).
- 3. The caption of the figure should be written clearly, precisely and briefly at the same position.
- 4. All the graphs and flowcharts should be identified and presented the same way as figures.
- 5. All the figures and graphs should be drawn clearly, so that variables, units, markings and details are dissembled.
- 6. All the drawings, text boxes, images and details related to a particular figure should be grouped together.
- 7. The font size used should be less than or equal to the font size of main text.
- 8. The figure size should not exceed the set page margins.