

# **National Institute of Technical Teachers' Training and Research**

Shanti Marg Shamla Hills, Bhopal-462002



## **Post Graduate Dissertation Guidelines**

**M.E. / M.TECH.**

## Preamble

These Guidelines are intended to give both students and supervisor at the National Institutes of Technical Teachers' Training and Research a set of procedures and expectations that will make the Dissertation evaluation process easier, more predictable, and more successful. These Guidelines should be interpreted as the minimum requirements of the degree awarded by RGPV, Bhopal. The Dissertation Committee assigned for various programmes offered by RGPV, Bhopal may add requirements or guidelines as deemed fit.

### 1.1 Dissertation Work

The Dissertation Work for M.E. / M.Tech consists of Dissertation Work – I and Dissertation Work–II. *Dissertation Work–I* is to be undertaken during *III semester* and *Dissertation Work–II*, which is generally a continuation of Dissertation Work–I and is to be undertaken during *IV semester*.

### 1.2 General Suggestions and Expectations

The Dissertation Work is by far the most important single piece of work in the post-graduate programme. It provides the opportunity for student to demonstrate independence and originality, to plan and organize a large Dissertation over a long period and to put into practice some of the techniques student have been taught throughout the course. The students are advised to *choose a Dissertation that involves a combination of sound background research, a solid implementation, or piece of theoretical work, and a thorough evaluation of the Dissertation's output in both absolute and relative terms*. Interdisciplinary Dissertation proposals and innovative Dissertations are encouraged and more appreciable.

It is good to try to think of the Dissertation as a deliverable at reviews rather than an effort to deliver a fully-functioning 'product'. The *very best Dissertations invariable covers some new ground, e.g. by developing a complex application which does not already exist, or by enhancing some existing application or method to improve its functionality, performance etc.*

A straightforward implementation Dissertation is acceptable, but student must appreciate that

it is unlikely to gain high marks, regardless of how well it is done and its usage. Likewise, Dissertations which are predominantly survey reports, unless they are backed up with experimentation, implementation, on theoretical analysis, e.g. for performing an objective comparison of surveyed methods, techniques etc. pure survey reports with no supporting implementation or theory, are not acceptable.

- Postgraduate students are to decide on the Dissertation Work-I and Dissertation Work-II Dissertation with their proposal and Dissertation Supervisor during the month of **July/August** with a Synopsis consisting of about **three chapters** - **Introduction**, **Literature Review** and **Methodology** which should highlight the deliverables
- In Case of re-reviews, any number of re-reviews can happen depending on the discretion of the committee and it should happen within the prescribed time.
- If the student fails to attend, the Supervisor refuses to endorse the student's work. The committee can invite Head of the Department who is empowered to resolve among further matters.
- If the work of the candidate is found to *be insufficient and plagiarism*, the committee and Head of the Department will decide the further process.
- Head of the Department can initiate further steps to ensure the smooth implementation as deems appropriate of guidelines.
- Marks split-up

Committee	-	60 Marks (Each 10 marks)
Supervisor	-	40 Marks
<b>Total</b>	-	<b>100 marks</b>

### 1.3 Choosing the Right Dissertation

The idea for student's Dissertation may be a proposal from a faculty member or student's own, or perhaps a combination of the two.

The Dissertations offered by faculty member may vary substantially in breadth, depth and degree of difficulty. The most important thing is to shortlist a set of Dissertations that are right for *student*. Some students are better suited to well-defined and relatively safe Dissertations that provide scope for demonstrating proficiency with a low risk of failure. Other students are better advised to tackle harder, riskier Dissertations that require a high degree of original input and/or technical problem solving.

The potential Supervisors will be happy to offer advice on the suitability of a Dissertation, given student's individual background, strengths and ambitions. Remember that it is important to balance ambition and realism when making a choice. For better help of Dissertations student can search from websites like (IEEE, ACM, Elsevier, Springer, etc...)

## **1.4 Internal Assessment of the Dissertation Work**

- The assessment of Dissertation Work for I and II shall be done independently in the respective semesters and marks shall be allotted as per the weightages.
- There shall be *two* assessments (*Phase-I and phase-II*), by a departmental review committee formed by the HOD concerned during each of the dissertation work semesters for M.E. / M.Tech. programmes (each 100 marks). The student shall make presentation on the progress made before the committee - one during middle of the semester explaining the title and its implications and second presentation towards the end of the semester with spiral bound hard copy before the examination with enough time to incorporate the feedback after the presentation so that it can be finalized and submitted.
- The Dissertation Work shall be assessed for a maximum of 100 marks of which 20 marks will be through internal assessment. The Dissertation Work prepared according to approved Guidelines and duly signed by the Supervisor(s) and the Head of the Department shall be submitted to the competent authorities.
- If the candidate fails to obtain 50% of the internal assessment marks in the Phase-I and Phase-II, he/she will not be permitted to submit the report for that particular semester. This applies to both Dissertation Work-I and Dissertation Work -II.
- Every candidate doing M.E. / M.Tech. shall be encouraged to send a paper / patent for publication in a journal or a conference - preferably a concept paper related to their topic and a second paper highlighting their contribution and the results of their work. An acknowledgement from the Supervisor for having communicated to the journal or conference shall be attached to the report of the Dissertation Work.
- A copy of the approved Dissertation report after the successful completion of viva examinations shall be kept in the library of the department.

## **1.5 Student-Proposals**

If student has his/her own idea for an individual Dissertation, it is the student's responsibility to find a faculty member who both approves of the proposed programme of work and is willing to be the supervisor. Student should first get the permission of Dissertation Committee, and may proceed with the consistent consent of the Supervisor.

## **1.6 Supervisor**

The supervisor can suggest Dissertation titles focusing more on the current field of research and ensure the level of innovation. Also Supervisors are advised to check for the formatting of the presentation and Dissertation report.

## **1.7 Supervisor to Check**

For Dissertations proposed by faculty member, student should discuss the Dissertation with the proposer as soon as possible so that student have plenty of time to think about the best choices for student. Note that every Dissertation is not suitable for every student; some may be specifically tailored to a particular degree and some may only suit students with a very specific set of interests. Each proposal will indicate these constraints in order to help student to make an informed choice.

- Advised to check for the formatting of the presentation and the documentation.
- Check for the attendance of the students (Regular meeting for the discussions)
- Advise the students to contribute some new techniques and publish a paper at the end of the Dissertation

## **1.8 Student's Meeting with Supervisor**

Student must make sure that s/he arranges regular meetings with student's Supervisor. The meetings may be brief once student's Dissertation is under way but student's Supervisor need to know that student's work is progressing. If student need to talk to the Supervisor and cannot locate him/her in office, contact him/her asking for a time when s/he will be available. When a student goes to see the Supervisor s/he should have prepared a written list of points s/he wish to discuss. Take notes during the meeting so that student does not forget the advice s/he was given or the conclusions that were reached.

## **1.9 Dissertation Committee**

The Dissertation committee is advised to conduct the Dissertation reviews for the students of various programmes within the stipulated period and review the marks to be sent the HOD at the month end. The Dissertation committee is also advised to make necessary arrangements required (Seminar hall availability and Dissertation or, etc...) for the smooth conduct of reviews.

- The committee is advised to find the enough complexity in the Dissertation.
- All the three panel members must be present during the review.
- The reviews to be conducted in the seminar hall and the available class rooms (in the department).

## **1.10 Dissertation Presentation / Demonstration**

The presentation is also a compulsory component of the Dissertation. The Dissertation committee will not allocate marks for a Dissertation unless there has been a formal presentation. One of the most important skills which the Dissertation aims to assess is student's ability to communicate his/her ideas and work. The objective of the presentation is to find out exactly what s/he seem to have done and to ensure that s/he get relevant marks that is consistent with other Dissertations. As part of the assessment, the student will be required to give a presentation and demonstration of his/her Dissertation to the Dissertation Committee. Each presentation will be for 30 minutes. Supervisors will help him/her to structure the talk and be willing to go through it with student beforehand. Other PG students could be encouraged to attend the presentations as observers only, as the feedback by the committee will benefit everybody.

## 1.11 Dissertation Work-I Requirements: M.E/M.Tech.

First Review Within 8 Weeks	Second Review Within 16 Weeks
<ul style="list-style-type: none"> <li>Title</li> <li>Abstract</li> <li>Introduction</li> <li>Literature Survey</li> <li>References</li> </ul>	<ul style="list-style-type: none"> <li>Title</li> <li>Abstract</li> <li>Introduction</li> <li>Literature Survey</li> <li>Methodology</li> <li>Modules Split-up and Gantt Chart</li> <li>Proposed System (Phase 1)</li> <li>Equations /Design and software to be used</li> <li>Algorithms / Techniques used</li> <li>Expected outcomes</li> <li>References</li> </ul>

**Note:**

- The presentation should have maximum of 30 slides
- Presentation will be for 30 minutes
- System to be tested using testing software.



**NITTTR, Bhopal**

**Dissertation Evaluation Form  
M.E/M.Tech – DW-I**

### III Semester

**Dissertation Title :**

**FIRST REVIEW**

Candidate Details			
Sl.No	Register No	Candidate Name	Supervisor
1			
Candidate Contribution and Performance			
Subject Matter		Marks	
Understanding background and topic			
Specifies Dissertation goals			
Literature Survey			
Dissertation Planning			
Question and Answer			
Presentation skills			
<b>Total</b>			
<b>Comments</b>			

Member 1

Member 2

Member 3

Supervisor



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**Dissertation Evaluation Form  
M.E/M.Tech – DW-I**

**III Semester**

**Dissertation Title :**

**SECOND REVIEW**

<b>Candidate Details</b>			
<b>Sl.No</b>	<b>Register No</b>	<b>Candidate Name</b>	<b>Supervisor</b>
1			

<b>Candidate Contribution and Performance</b>	
<b>Subject Matter</b>	<b>Marks</b>
Abstract	
Specifies Dissertation goals	
Literature Survey	
Summaries algorithms and highlights the Dissertation features	
Specifies the testing platforms and benchmark systems	
Dissertation Planning	
Technical Design	
Summarises the ultimate findings of the Dissertation	
Implementation (60 Percentage)	
Question and Answer	
Presentation skills	
<b>Total</b>	
<b>C o m m e n t s</b>	

Member 1

Member 2

Member 3

Supervisor

**1.12 Dissertation Work-II Requirements:M.E/M.Tech.**



First Review Within 4 Weeks	Second Review Within 16 Weeks
<ul style="list-style-type: none"> <li>• Title</li> <li>• Abstract</li> <li>• Work completed for Phase I</li> <li>• 70% of code Implementation</li> <li>• Expected outcomes</li> <li>• Draft copy of conceptual paper</li> <li>• References</li> </ul>	<ul style="list-style-type: none"> <li>• Title</li> <li>• Abstract</li> <li>• Work completed for Phase II</li> <li>• 70% of code Implementation</li> <li>• Detailed Design (if any deviation)</li> <li>• Contribution of the candidate</li> <li>• 100% of code Implementation - Demo</li> <li>• Experimental Results</li> <li>• Performance Evaluation</li> <li>• Comparison with Existing system</li> <li>• Result Analysis and Conclusion</li> <li>• References</li> <li>• Draft copy of a dissertation for publishing</li> </ul>

**Note:**

- The presentation should have maximum of 30 slides
- Presentation will be for 30 minutes
- A draft copy of the conference paper to be prepared at the end based on the Dissertation Work.
- System to be tested using testing software's.



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**Dissertation Evaluation Form  
M.E/M.Tech – DW-II**

**IV Semester**

**Dissertation Title :**

**FIRST REVIEW**

<b>Candidate Details</b>			
<b>Sl.No</b>	<b>Register No</b>	<b>Candidate Name</b>	<b>Supervisor</b>
1			

<b>Candidate Contribution and Performance</b>	
<b>Subject Matter</b>	<b>Marks</b>
Abstract	
Work to be completed in Phase 1	
Architecture /System Design – Phase 1 and 2	
Work to be completed in Phase 2	
Summaries the techniques implemented / to be implemented	
Contribution of the Candidate	
Results obtained and Summaries the ultimate findings of the Dissertation	
Implementation (60 Percentage)	
Question and Answer	
Presentation skills	
<b>Total</b>	
<b>C o m m e n t s</b>	

Member 1

Member 2

Member 3

Supervisor



**NITTTR, Bhopal**

**Dissertation Evaluation Form**  
M.E/M.Tech –DW-II

**IV Semester**

**Dissertation Title :**

**SECOND REVIEW**

<b>Candidate Details</b>			
<b>Sl.No</b>	<b>Register No</b>	<b>Candidate Name</b>	<b>Supervisor</b>
1			

<b>Candidate Contribution and Performance</b>	
<b>Subject Matter</b>	<b>Marks</b>
Abstract	
Architecture /System Design – Phase 2	
Overall Architecture /System Design – Phase 2	
Summarises the techniques implemented	
Contribution of the Candidate	
Results obtained and Performance Evaluation	
Summarises the ultimate findings of the Dissertation	
Implementation (100 Percentage)	
Prefinal draft of entire dissertation	
Draft of the paper to be published	
Question and Answer	
Presentation skills	
<b>Total</b>	
<b>Comments</b>	

Member 1

Member 2

Member 3

Supervisor