

# Course Project Guidelines (G001)

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**FACULTY OF ENGINEERING & COMPUTING SCIENCE**  
**TEERTHANKER MAHAVEER UNIVERSITY, MORADABAD**

## Revision History (Project Guidelines)

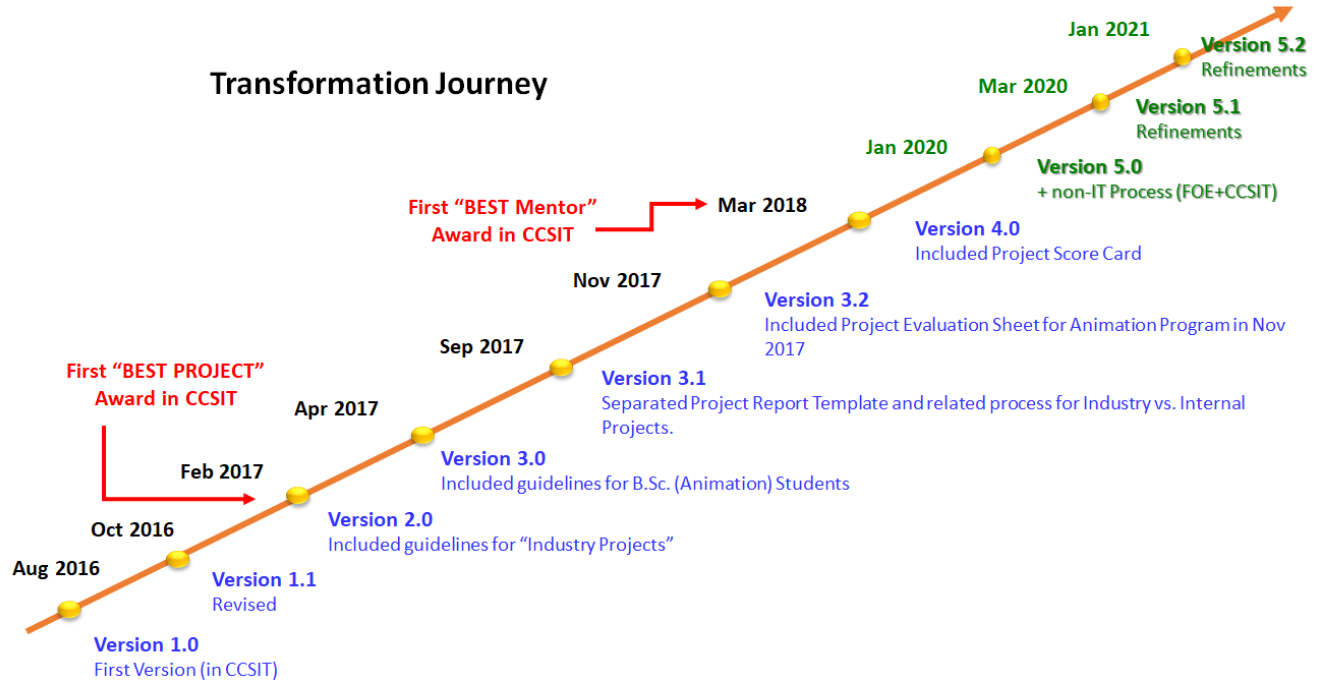
Author/ Changes made by	Date	Reason For Changes	Version
Rashmi Jain, Consultant	Aug, 2016	First Version	1.0
Rashmi Jain, Consultant	Oct, 2016	Revised to include details related to Project Report (T003)	1.1
Rashmi Jain, Consultant	Jan, 2017	Revised to include guidelines for Students who are doing projects with Industries	2.0
Pradeep Gupta, Course Coordinator (B.Sc. Animation)	Apr, 2017	Revised to include guidelines for B.Sc. (Animation) Students	3.0
Rashmi Jain, Consultant	Aug, 2017	Revised to separate Project Report Template and related process for Industry vs. Internal Projects. Also incorporated feedback from Even Session 16-17.	3.1
Rashmi Jain, Consultant	Nov, 2017	Revised to separate Project Evaluation Sheet for Animation Program	3.2
Rashmi Jain, Consultant	Mar, 2018	Revised to Introduce Project Score Card	4.0
Rashmi Jain, Consultant	Feb, 2020	Revised to include Guidelines for Core Engineering Students (i.e. Students from Electrical, Mechanical, Electronics & Civil Engineering)  <i>Due to major changes, the naming convention for the templates/ checklists is also modified. For easy maintenance &amp; readability, all the templates/ checklists are now having Version 5.0</i>	5.0
Rashmi Jain, Consultant	Mar, 2020	Revised Project Guidelines to include T025D for Core Engineering Project Phase 2	5.1
Rashmi Jain, Consultant	Jan, 2021	Revised T023D: Training Evaluation Form (Core Engg Industrial)  Plus, Minor corrections in this doc including changes in Table 1.	5.2

**Approved by:**

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# Transformation Journey



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**Table1: Templates to be used with Project Guidelines**

Milestones	Type	IT	ANIMATION	Core Engg Project Phase 1	Core Engg Project Phase 2
Project Synopsis	-	T001A	T001B	T001C	NA
Synopsis Presentation	-	T011A	T011B	T011C	NA
Project Requirements	-	T002A	NA	NA	NA
Project Report	Internal Project	T003A	NA	T003C	T003C
Project Report	Industrial Project	T004A	NA	NA	T004C
Project Progress	Internal Project	T012A	T012B	T012C	T012C
Project Progress	Industrial Project	NA	NA	NA	T012D
Project Evaluation Form	Best Project (Internal)	T021A*	T021B	T021C**	T021D
Project Evaluation Form	Students	T022A	T022B	T022C	T022D
Project Evaluation Form	Industrial Project	T023A	NA	NA	T023D
Project Score Card	Internal Project	T024A	T024A	NA	T024D
Project Evaluation Calculator*** (based on T021x & T022x)	Calculate Internal Marks & Select Best Project (For Department use only)	T025A	T025B	T025C	T025D
Project Evaluation Calculator*** (based on T023x)	Calculate Internal Marks for Industrial Projects (For Department use only)	T026A	NA	NA	T026D

\* **BEST PROJECT** (IT) declaration will be done in ODD Semester. Exception: Only for B.Tech (CS), BEST PROJECT declaration will be done in EVEN semester.

\*\* **BEST PROJECT** (Core Engg.) declaration will be done after completion of Phase2.

\*\*\* **Project Evaluation Calculator** takes inputs (manually) from Project Evaluation Form & Project Score Card. Basis on data input, the calculator calculates **INTERNAL MARKS** for each Student. Also highlights the “Best Project” in various categories.

## 1 About Course Project Guidelines

There have been rising expectations about course projects from both Students and Project Guides. Students want to do the best they can; Project Guides want to provide opportunities for students to complete the projects with learning thru complete software development life-cycle and succeed at research. Both Project Guides and students need to be realistic about what can be accomplished in the available time.

The rationale behind this guideline is to define and follow a uniform process across courses. The department will run awareness session time-to-time/ as and when required on this to ensure students and Project Guides are aware of the process and are following the same in their respective projects. Any improvement suggestions can be given to the project coordinator for improvement in process.

## 2 Scope of this Document

This document covers the Guidelines related to project execution, to be followed by FOE&CS Faculty and Students.

The document has 3 Sections/ stakeholders as described in Table below:

	ID	Description	Remarks
1.	G001a	The Department/ College	Entity of TMU
2.	G001b	Project Guides (Internal or Industrial Projects)	Within departments/ colleges of TMU
3.	G001c	Eligible Students of respective Department/ College	a) to do the Projects within campus as decided by respective departments/ colleges b) for Industrial Projects outside campus/ in Industry as decided by respective departments/ colleges

## 3 Definitions & Abbreviations

<b>Internal Project</b>	When a project is done internally under guidance of a Project Guide assigned by TMU College/ Departments.  <i>It is recommended to have not more than 3 students in a project group. Exceptions are ok, if any.</i>
<b>Industrial Project</b>	When a project is done in Industry (outside TMU campus) under guidance of a Project Guide (i.e External Guide) assigned by that organization  In such case, respective TMU College/ Departments assigns Internal Project Guide/ Mentor to guide & ensure progress monitoring as per Project

	<p>Guidelines detailed in this document.</p> <p><b>Industrial Project</b>, a project group may have one or more than one students as applicable / allowed in their respective organization.</p>
<b>Project Guide</b>	<p>A mentor/guide is assigned to each project - internal or industry-based. Project Guide is accountable to technical guidance, monitor progress at regular intervals to ensure project completion and submit the evaluation details at the end of each milestone.</p>
<b>Project Coordinator</b>	<p>A nominated person within department/ college, who is responsible to ensure</p> <ul style="list-style-type: none"> <li>• Project selection is meaningful. <i>Pro-actively prepare and maintain list of potential projects in database.</i></li> <li>• Project Guide is assigned to each Project</li> <li>• Students are allocated/assigned to each Project</li> <li>• Awareness sessions are conducted for project guides and students</li> <li>• Latest version of the Project Guideline and it's related artefacts are uploaded at TMU website</li> <li>• Appropriate Project Evaluation Sheet (Refer details in Table 1) is filled and submitted by respective Project Guides in timely manner</li> <li>• Project Score Card is filled by Panels for nominated Internal Projects</li> </ul>
<b>Committee Member</b> (Applicable in FOE)	<p>Committee Members are like panels of experts to evaluate Project Work with respective Project Guide (internal)</p>

## 4 G001a: Guidelines for Department/ College

Department/ College is overall responsible to plan and facilitate the Projects for the students and allocate project guides for various courses. Below listed are some of the activities should be initiated and monitored at Department/ College level.

### 4.1 Organization Structure

In the beginning of the Session, the College Principal/ Director should nominate

- A Project Coordinator (Overall across departments)
- A Project Coordinator for each department, in case the college has multiple departments
- Committee Members (if applicable)
- Project Guides (both for Internal & Industrial Projects)

### 4.2 Internal Projects - Project List Preparation

Project Coordinator with help of Project Guides

- Should prepare a list of feasible projects for the current academic session applicable to their respective courses.
- Each Project should be given a unique Project ID

Branch Initial	Course Name	Academic Year	Even/Odd Semester	Serial No.
2-Character	3- Character	4- Character	1- Character	3- Character
CS	BTH (for B.Tech)	19-2020	E	001
CS	BAN (for B.Sc. Animation)	19-2020	O	001
CS	BCA (for BCA)	19-2020	O	001
CS	BGN (for BSc CS)			
CS	MTH (for M.Tech)			
CS	MCA (for MCA)			
EE	BTH	20-2021	E	
EC	BTH			
CV	BTH			
ME	BTH			

Example: CSBTH1920E001  
MEBTH2021E002

- Identify best suited project guide for each project
- Prepare details (as shown in the table below) and take approval on Project List from College Principal/ Director

Project ID	Project Title	Brief on Project (not more than 250 words)	Course Name	Project Guide Name



### 4.3 Internal Projects - Project Allocation

- a) Project Coordinator with help of Project Guides allocates Projects to Students
- b) The Project Guides ensure that students having some level of technical knowledge to complete their project. Team formation should be done accordingly.
- c) Project Guide should also ensure that each individual in the respective Project knows his/her "Role" (Refer: Project Synopsis Template)
- d) Same projects can be done by more than one project team, subject to different Technology/ Methodology/ Platforms (optional)/ slight difference in the functions etc.
- e) It is responsibility of Project Guide to submit Project Synopsis Report (T001) to Project Coordinator

*Note: Each faculty in Department/ College should take up responsibilities for projects as "Project Guide" for at least one project apart from their Lab responsibilities*

### 4.4 Internal Projects - Project Governance

- a) Project Coordinator is responsible to manage Project related artefacts (softcopy & hardcopy) at central location.
- b) Project Coordinator will get the Project Evaluation Form ready & file for each Student/ Project. The same forms will be used for all milestones in a semester.

### 4.5 Industrial Projects- Project Governance

- a) Internal Project Guide will be allocated for each project/student
- b) Students with help from college (placement cell) or at their own will identify the Project location.
- c) Students are expected to follow the norms as per their organization, where they have been selected for the project/ training
- d) It is the responsibility of the student to be in touch with the Project Guide during tenure of the Industry Project:
  - i. Share thru email OR present Project Synopsis (T001) – within 4-6 weeks of the date project started in Industry
  - ii. Share or present Project Progress (T004) – at least once
  - iii. Present Final report (T003)
- e) Project Guides should maintain the communication records in terms of date etc. with their respective students and share the same with Project Coordinator as and when required
- f) Project Evaluation Guidelines are applicable for Industrial Projects

*Note: Any waiver in Process should be approved by Principal.*

### 4.6 Synopsis Preparation and Presentation

- a) For Internal Projects - Synopsis presentation should be done within 2 weeks of project allocation to the project teams.

*It is important that the project guides have explained the project in details to respective Project Team and the Project Team has done some research work before presentation.*

- b) Project Synopsis should be prepared and submitted in the format (T001) attached with this Guideline.
- c) For Synopsis presentation, template T011 should be used
- d) The students, who are engaged in Industrial Project, may send Project Synopsis (T001) either thru mail OR come to campus for presentation by taking prior appointment with their Project Guide
- e) Any feedback given to the Project Team during the sessions, should be incorporated appropriately in the Project Synopsis, which should be verified by the respective Project Guide. Post that only Project Guide should approve the Report.
- f) It is mandatory that Project Guides are present during the presentation of their respective project (ideally each project guide should be present in all presentations)
- g) Project Coordinator will appoint some other faculty to evaluate Project, where he/she is the Project Guide
- h) Evaluation details at both Project Team level & Student Level must be filled and signed using appropriate Template T005x
- i) Project Coordinator must validate each such form from compliance perspective and sign for each milestone.
- j) Project Evaluation Sheet should be maintained throughout the academic session.
- k) This sheet will contribute to 60% of the criteria to select the “Best Project”
- l) Project Score Card will contribute to 40% of the criteria to select the “Best Project”
- m) In case of Industrial Project Training (MCA, BCA, B.Tech.) students have to send their training/internship details and synopsis to their internal supervisor

#### 4.7 Project Report Submission

- a) At Semester beginning, the Project Coordinator of each Department/ College must publish a Calendar with details (sample given below):

Milestones->	Project Synopsis	Project Requirements	Project Progress	Project Report	Mid-way Demo/ Presentation	Final Demo/ Presentation
Internal Projects (IT)	Date	Date	Date	Date	Date	Date
..	Date	Date	Date	Date	Date	Date
..	Date	Date	Date	Date	Date	Date

- b) The calendar date plan must be approved by Principal/ HOD FOE&CS.
- c) Plagiarism in all project reports should be done by respective Project Guide
- d) Project Report (T003) submission will be done at Project Team level (One Project Team -- One Report Submission) i.e. each Project Team will submit 1 HARDCOPY of the Project Report to Department/ College

**Exception:** For BCA, BSc (CS) and BSc (Animation) Project Reports plagiarism will not be done. But the assigned guides for these course projects should keep proper monitoring and check that copy and paste should be avoided by students in their project reports

- e) Any Project is considered complete when there are evidences of SDLC phases (Requirement, Design, Development and Testing).

*This point is applicable to IT projects including Animation projects.*

- f) The project team will be allowed in External viva after approval of the Project Report by Project Guide.

#### 4.8 Project Progress Presentation and Final Presentation

- a) Each project team will present the project progress (using Template T004) at the end of each milestone.
- b) Each such session is a formal session. Marks will be given as per details given under section "Distribution of Marks".

*Template T005x will be used for marks and evaluation*

- c) Attendance of each student is Compulsory as the marks will be given to each student
- d) Project Guide of the project should be present in each such session
- e) Project Guide must ensure that students have all related artifacts ready for the presentation in expected templates

*Department/ College will follow the calendar as described in Section 4.7*

Table2: Details if Project Progress Presentation is Mandatory or Optional

Milestones->	Project Synopsis	Project Requirements	Project Progress	Project Report	Mid-way Demo/ Presentation	Final Demo/ Presentation
Internal Projects (IT)	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
Industrial Projects (IT)	Optional	Optional	Mandatory	Mandatory	Optional	Mandatory
Internal Projects (Animation)	Mandatory	Optional	Mandatory	Mandatory	Mandatory	Mandatory
Internal Projects – Project Phase1 (Core Engg)	Mandatory	Optional	Mandatory	Mandatory	Optional	Mandatory
Internal Projects – Project Phase2 (Core Engg)	Mandatory	Optional	Mandatory	Mandatory	Optional	Mandatory
Industrial Projects (Core Engg)	Mandatory	Optional	Mandatory	Mandatory	Optional	Mandatory

#### 4.9 Upload/ Download Templates, Process Guidelines

- a) All required process, guidelines and templates are maintained at TMU portal under version control
- b) Project Coordinator (Overall) is responsible to ensure that all latest versions are uploaded at TMU portal
- c) Project Coordinator (respective college) is responsible to ensure awareness sessions are conducted as and when required
- d) It is required that students, project guides, committee members, panels, project coordinators follow these defined and controlled process
- e) Any feedback or improvement suggestions on process, guidelines and templates can be given to the Project Coordinator (overall)

#### 4.10 Distribution of Marks

- a) Project Evaluation Form with ratings should be submitted to Project Coordinator after each milestone in an academic session.  
*Project Evaluation Form (T021x, T022x, T023x) is used to Rate performance of Students and Project Overall (on a scale of 1 to 5).*
- b) The respective % weightage multiply with Rate will be the Marks for the student/ project (Best Project).  
*The conversion of Rate to Marks is done with help of automated sheet following the %weightage as described on the Project Evaluation Form.*
- c) Project Evaluation Form is filled by the Project Guide, Project Coordinator/ Committee Members at completion of each project milestone. Throughout the semester the same Project Evaluation Form is used for each student/ project by filling the details in respective Milestone column.
- d) Evaluation of “Best Project” is done based on Project Evaluation Form and Project Score Card with weightage 60% and 40% respectively.
- e) Combining the score will result into the “Best Project”.
- f) Project Guide of the “Best Project” will be awarded as “Best Mentor” for the semester for that course/program.

*It is important that each student and their project guides are present during the project milestone dates, as published by Department/ College.*

## **5 G001b: Guidelines for Project Guides/ Committee Members / Project Coordinator**

Project Guides are Owner, Mentor and Technical Consultant to the students. Project Guides are responsible to monitor the progress and assign marks for the project/training work. It is customary for the student and Project Guide to meet regularly to keep their communication continuous and effective. Ratings on a Scale of 1 to 5 using Project/ Training Evaluation Form (T005x) will be submitted at the end of each milestone of the project by the Project Guide and Committee Members / Project Coordinator.

The responsibilities include:

- a) Ensure understanding of the Project Guidelines
- b) Ensure that students download and use all the format that help to make a Project/Training Report (Synopsis Format, Project Requirements, Project Report Format) from TMU website
- c) Ensure that each allocated project is feasible and can be completed within the given time. It would be nice if the Project can be used by prospective users outside Department/ College.
- d) Encourage reusability of projects across batches to come to a robust product/ application
- e) Ensure that students do a feasibility study and some research of their project before further going to implement it. Project ambiguities and doubts should be cleared
- f) Provide technical help to the students as and when required
- g) Help students on how to make presentations and face the questions during presentation. Conduct a “Mock” before final presentation and take corrective actions
- h) Ensure students participation in session for student on “Project Guidelines and Templates”
- i) Review each and every report/ presentation of your respective students/ groups and ensure incorporation of all review comments
- j) Monitor regular progress of respective project including documentation. Ensure all members of the project team are working in the project
- k) Encourage students to come up with innovative ideas while developing the project
- l) Spend sufficient time with team for discussions on project related issues
- m) Fill the Project Evaluation Form T005x for each milestone for at both Project and Students level.
- n) Be in regular touch with students who are out of TMU Campus for Industrial Projects/ Trainings.
- o) Have regular interaction with the external guide of students to know how the student is performing in the industry or training center (if the student is doing the project in Industry)

- p) Any improvement suggestions on Project Guidelines, templates etc. should be given to the respective Project Coordinator

## 6 G001c: Guidelines for Students

### DO's

- a) Always Download and use the latest versions of Project Guidelines and Templates from TMU Website
- b) Must attend "Briefing Session on Project Guidelines"
- c) Understand the "Project" allocated to you
- d) Brainstorm with team who will work with you in the allocated Project. Clarify the doubts if any related to the project with your assigned Project Guide
- e) Discuss with the Project Guide as team, if any modifications are required in the assigned project. Project should be feasible to deliver complete in the given time frame.
- f) Prepare the Project Synopsis (applicable for Internal Projects only) and submit the SOFTCOPY to the assigned "Project Guide" for review
- g) Ensure all review comments are incorporated in the document and then submit the HARDCOPY
- h) It is important to have regular interactions with the Internal Project Guide (once every two weeks).
- i) It is important to plan for overall project and ensure
  - i. Project Synopsis is approved and HARDCOPY is submitted
  - ii. All Project Requirements are captured and elaborated
  - iii. Hardware and Software platforms are identified (applicable only for IT Projects)
  - iv. Tools to be used are finalized after proper analysis to justify the use (if applicable)
- j) Focus on the Project development. The project should be in working condition, even if limited functionalities are developed/build they should work correctly
- k) Student should be able to demonstrate the working project to their respective Project Guide (applicable for Internal Projects) before final submission
- l) All submission should happen as per planned dates (as per calendar published by Department/ College)
- m) For Industrial Projects, Students will follow the process as described in their respective organizations. Still students will follow and submit the required details in the formats described in this guideline

**DONT's**

- a) DO NOT purchase or borrow any ready-made project or project report from market.  
*Internal Review will be based on Live-Project presentation and viva will be based on your submitted Project / Training Report*
- b) DO NOT copy-paste. Write the Report in your own language to keep you safe from PLAGIARISM check
- c) DO NOT prepare documentation at last minute. This may lead to mistakes in your report
- d) DO NOT prepare your own format for project documentation rather download the latest version of the template from TMU/ College website.
- e) DO NOT delete any section from any of the templates. If some section is "NOT APPLICABLE" then simply write "NA" under that section without deleting the section.
- f) DO NOT take your project presentation lightly