TAGORE ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROJECT RUBRICS AND GUIDELINES

The project is by far the most important single piece of work in the degree course. It provides the opportunity for the student:

- To demonstrate independence and originality
- To plan and organize a project over their academic period.
- To put into practice some of the techniques taught throughout the course.
- To improve team spirit and communication.

Initiatives

- Project work is part of eighth semester curriculum
- During the seventh semester of the course, Students in consultation with faculty members present their project ideas. Projects are identified to relevant context. The need for the project and end user of the project are verified.
- A project coordinator is appointed by the Head of the Department who is responsible for planning, scheduling the reviews and execution of all the activities related to student project work.
- The student's projects are selected in line with department mission, vision and program outcomes.
- Students are provided with a brief idea of various fields for selecting the project ideas.
- The project reports of previous year projects is made available in the department library which ensures no repetition of project work and also encourages students to enhance the previous works.
- A project coordinator is responsible for planning, scheduling and execution of all the activities related to the student project work. Students are allowed to do project either in house or in industry with the approval from the department level project coordinator and the head of the department.
- Faculties encourage students to participate in project exhibitions and 'Hackathons'.
- The project exhibition is aimed to provide a common platform to exhibit their innovations and their work towards excellence in the latest technology. The faculties encourage students to publish their project work in reputed journals/conferences and innovative projects will be applied for patent.
- Performance of student is evaluated by project monitoring team and is communicated to the student for further improvement.
- The project monitoring committee consisting of Head of the Department, supervisor and project coordinator are responsible to identify the merits and demerits to decide the quality of the project.

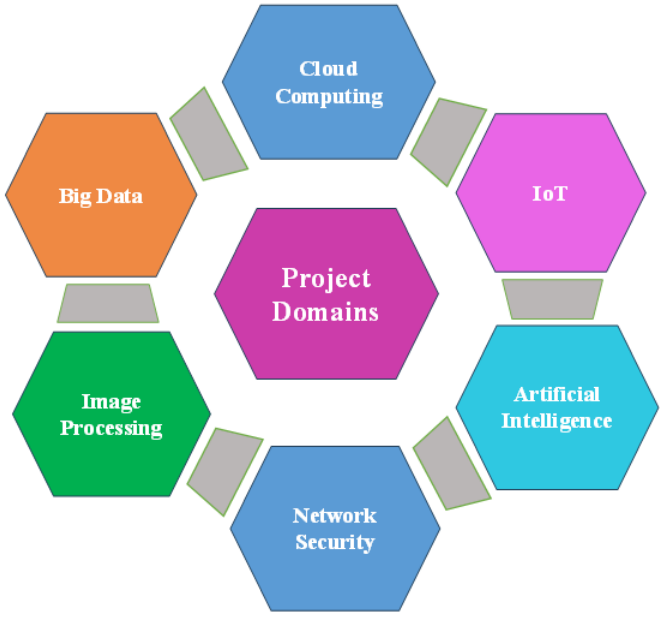
PROJECT MARK ALLOCATION

Review I Marks	Review II Marks	Review III Marks	End Semester Examination					Total Marks
			Thesis Submission (30)		Viva-Voce (50)			
			Internal Marks	External Marks	Internal Marks	External Marks	Supervisor Marks	
5	7.5	7.5	15	15	15	20	15	100

Identification of projects and allocation methodology to faculty members

- Students are briefed about various fields for selecting the project ideas by the Project coordinator and the HoD. Students are motivated to choose projects of social relevance and in line with department vision and mission.
- Faculty members encourage the students to do in-house projects and support is provided with required hardware and software in the project laboratory. Students are encouraged to participate in project exhibitions and publish their work in reputed journals / conference.
- **S**tudents are encouraged to avail external funding schemes for their project work.
- Students are advised and encouraged not only to do the project in the core domain but also in interdisciplinary domains
- Core domains of the projects are Machine Learning, Data Mining, Cloud Computing, Big data, IoT, Networking, Cyber Security and Interdisciplinary Projects related to the core domains as shown in Figure.

The project work flow is as shown in Figure.



The steps are

- List of faculty with their broad area of research is circulated to the students.
- Students of common interest form groups (maximum of 3) and approach the respective faculty to finalize their projects.
- The student project team after conceptualizing the project ideas is asked to present their broad area of work in the zeroth review.
- After getting inputs from review panels, students proceed for their research work.

Types and relevance of projects and their contribution towards attainment of POs and PSOs

Procedure for final year project work

Code and	Semest	Nature of Work	Assessment
CS8811 Project Work	VIII	Literature Survey, Problem	Initial Presentation
		Finalize project theme / title, Define Objectives, Completion Timelines	Progress Presentation
		Project Implementation	Progress Presentation,
		Project Completion, Testing, Report Writing	Project Demonstration, Project Report
		Individual work	Individual response, Presentation, technical
		University Viva Examination(External Evaluation)	Project Report and Oral Presentation

CONTINUOUS MONITORING AND PROJECT EVALUATION PROCESS

Step 1	Collection of literature Papers	0th review
	Analyze survey papers	
	Identify problems	
	Confirm Title of the Project, PPT	
Step 2	Outline of Project work	1st review
	PPT presentation, Suggestion from supervisor and coordinator	
Step 3	Description of Project work	2nd review
	PPT presentation, Suggestion from supervisor and coordinator	
Step 4	Submission of full report with oral presentation	3rd review

Assessment Component

Assessment Components	CO1	CO2	CO 3	CO 4	CO 5	TOTAL
Review I	2	25	-	25	25	100%
Review II	-	-	40	30	30	100%
Review III	-	-	50	25	25	100%
Viva Voce	2	20	20	20	20	100%

RUBRICS FOR STUDENTS PROJECT

Review 1 – Rubrics

	Level of					
		Excellent	**Good (8)**	**Average**	**Acceptable**	**Re-review**
A	Identification of Problem Domain and Detailed Analysis	extensive explanation of the purpose and need of the Project	Good explanation of the purpose and need of the project	Average explanation of the purpose and need of the project	Moderate explanation of the purpose and need of the project	Minimal explanation of the purpose and need of the project
B	Study of the Existing Systems and Feasibility of Project Proposal	Detailed and extensive explanation of the specifications and the limitations of the existing systems	Collects a great deal of information and good study of the existing systems	Moderate study of existing systems ; collects some basic information	Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information	Minimal explanation of the specifications and the limitations of the existing systems; incomplete information
C	Objectives and Methodology of the proposed work	All objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are clearly specified	Good justification to the objectives; Methodology to be followed is specified but detailing is not done	Incomplete justification to the objectives proposed; Steps are mentioned but unclear; without justification to objectives	Only some objectives of the proposed works are well defined; Steps to be followed to solve the defined problem are not specified properly	Objectives of the proposed work are either not identified or not well defined; Incomplete and improper specification

D	Evaluation by Guide	Team work: Collaborates and communicates effectively	Team work: Exchanges some views but require guidance to collaborate with others	Team work: Makes little or no attempt to collaborate in a group situation	Team work- Little attempt to collaborate in a group situation	Team work- No attempt to collaborate in a group situation
		Technical Knowledge: Extensive	Technical Knowledge: Fair	Technical Knowledge: Lacks sufficient knowledge	Technical Knowledge: Poor	Technical Knowledge: No sufficient knowledge

Review 2 – Rubrics

	Level of Achievement					
		Excellent	**Good (8)**	**Average (6)**	**Acceptable**	**Re-review**
A	Design Methodology and Work Progress	Division of problem into modules and good selection of computing framework; Appropriate design methodology and properly justified	Division of problem into modules and good selection of computing framework; Design methodology not properly justified.	Division of problem into modules but inappropriate selection of computing framework; Design methodology not defined properly.	Partial Division of problem into modules and inappropriate selection of computing framework; Design methodology not defined properly.	Modular approach not adopted; Design methodology not defined.
B	Planning of project work and team structure	Time frame Properly specified and Being followed;	Timeframe properly specified and Being followed;	Timeframe properly specified but not being followed;	Timeframe properly specified but not being followed;	Timeframe not properly specified
		Appropriate distribution of project work	Distribution of project work	Distribution of project work	Un-even distribution of project work	Inappropriate distribution of project work

C	Demonstration and Presentation	Objectives achieved as per time frame;	Objectives achieved as per time frame;	Objectives achieved as per time frame;	Objectives not achieved as per time frame;	No objectives achieved;
		Contents of Presentation are appropriate and well arranged;	Contents of presentation are appropriate but not well arranged;	Contents of presentations are appropriate but not well arranged;	Contents of presentations are not appropriate;	Contents of presentations are not appropriate and not well delivered;
		Proper eye contact with audience and clear voice with good spoken language	Satisfactory Demonstration clear voice with good spoken language but eye contact not proper	Presentation not satisfactory and average demonstration	Eye contact with few people and unclear voice	Poor delivery of presentation
D	Evaluation by Guide	Team work: Collaborates and communicates effectively	Team work: Exchanges some views but require guidance to collaborate with others	Team work: Makes effort to collaborate in a group situation	Team work- Little attempt to collaborate in a group situation	Team work- No attempt to collaborate in a group situation
		Technical Knowledge: Extensive	Technical Knowledge: Good	Technical Knowledge: Fair	Technical Knowledge: Poor	Technical Knowledge: No sufficient knowledge

Review 3 – Rubrics

	Level of Achievement					
		Excellent (10)	**Good (8)**	**Average (6)**	**Acceptable (4)**	**Re-review (0-2)**
A	Incorporation of suggestions	Changes are made as per modifications	Changes are made as per modifications	All major changes are made as per	Few changes Are made as per modifications	Suggestions
		suggested during previous reviews and new innovations are added	suggested during previous reviews and good justification	modifications suggested during previous reviews	suggested during previous reviews	During previous reviews are not incorporated
B	Project demonstrations	All defined objectives are achieved;	All defined objectives are achieved;	All defined objectives are achieved;	Some of the defined objectives are achieved;	Defined objectives are not achieved;
		Each module working well and properly demonstrated; All modules of project are well integrated and system working is accurate	Each module working well and properly demonstrated; Integration of all modules not done and system working is very satisfactory	Modules are working well in isolation and properly demonstrated; Modules of project are not properly integrated	Modules are not in proper working form that further leads to failure of integrated systems.	Modules are not in proper working form which leads to failure of integrated system

C	Presentation	Contents of presentation are appropriate and well delivered;	Contents of presentations are appropriate and well delivered;	Contents of presentation are appropriate but not well delivered;	Contents of presentation are not appropriate;	Contents of presentation are not appropriate and not well delivered.
		Proper Eye contact With audience and clear voice with good spoken language	Clear voice with good spoken language but less Eye contact with Audience	Eye contact with few people and unclear voice	Eye contact With few People and unclear voice	Poor delivery of presentatio n
D	Project Report	Project report is according to the specified format.	Project report is according to the specified format;	Project report is according to the specified format with some mistakes;	Project report is not fully according to the specified format;	Project report not prepared according to the specified format.
		Results are presented in very appropriate manner.	Results are presented in good manner;	Results presented are not much satisfactory;	Results presented are not much satisfactory;	Results are not presented properly;
		Project work is well summarized and concluded	Project work summary and conclusion not very appropriate	Project work summary and conclusion not very appropriate	Project work summary and conclusion not very appropriate	Project work is not summarized and concluded.

E	Evaluation by Guide	Team work: Collaborates and communicates effectively	Team work: Exchanges some views but require guidance to collaborate with others	Team work: Makes little or no attempt to collaborate in a group situation	Team work- Little attempt to collaborate in a group situation	Team work- No attempt to collaborate in a group situation
		Technical Knowledge: Extensive	Technical Knowledge: Fair	Technical Knowledge: Lacks sufficient knowledge	Technical Knowledge: Poor	Technical Knowledge: No sufficient knowledge
		Regularity: Reports to the guide regularly and consistent in work	Regularity: Not very regular but consistent in work	Regularity: Irregular in attendance and inconsistent in work	Regularity: Irregular in attendance and but keeps track of work	Regularity: Irregular in attendance and inconsistent in work