

## **Project Policy- B.Tech 2019 Scheme**

Sahrdaya promotes a project based learning approach by encouraging each student to do a project for every semester. At the end of the semester an assessment of the projects will be documented with a project report and performance of the students will be credited. In addition an exhibition of student projects will be showcased and the best project from each class will be awarded.

### **First Semester- Micro Project**

Micro project aims to do an experimental implementation of a concept related to the course offered by the guide allocated to the student group. Each faculty can give a micro project which is connected to the subject (eg. Calculus/ Physics etc. ) they are offering to the students. Project may be a mathematical modeling/ structural model/ working model/ software/ hardware etc. Micro projects should be very small, such that every member in the group can be directly involved in the work with an enthusiasm towards experiential learning. For micro projects the process is more important than the final output of the project.

Project Group: Maximum of six students.

Project Coordinator: One of the student advisors.

Project Guides: Faculty members who offer a course in the first semester.

### **Objectives**

- Introduce Project Based Learning.
- Inculcate interest towards Engineering.
- Establish the practical applications of courses.
- Encourage professional and scholarly discussions among the students and faculty members.

## Second Semester- Programming Project

Programming and coding is becoming the new standard of literacy for every engineering graduate, and the importance of learning how to code is also increasing. Under this project, each student is advised to develop a practical application in any of the programming languages.

Project Group: Maximum of six students.

Project Coordinator: One of the student advisors for the batch.

Project Guide: Course instructors for C-programing course

### Objectives

- Learn to write a program.
- Inculcate an interest towards coding.
- Understand how to develop a practical application using a programming language.
- Understand the importance of coding and programming skills considering the fast evolution of different industries through technology.

## Third Semester- Sustainable Engineering Project

Each group can develop a mini project which is having an impact on any of the 17 sustainable development goals defined by the United Nations, preferably an innovative solution to overcome the future challenges to sustain life on mother earth. Project groups are encouraged to select a project topic which can apply knowledge and skills related to the branch of study. Project may be an experiment/ model/ working prototype, which should establish the proof of concept. Training on out of the box innovation development may be given to the students (with the help of IEDC) as part of this project.

Project Group: Maximum of four students.

Project Coordinators: Instructors for the sustainable engineering course (project quality and content) and one of the student advisors for the batch (overall coordination and assessment).

Project Guide: Faculty members allocated by the HoD.

### Objectives

- Apply project based learning to develop solutions for future sustainability challenges.
- Encourage out of the box thinking and innovative mindset
- Understand sustainable development goals and challenge.
- Acquire practical engineering skills

#### **Fourth Semester- Product Design Project;**

In the Product Design Project students are expected to develop minimally viable innovative products as a solution to a problem connected with the branch of study using the concepts they learned in the Design and Engineering Course. Students are expected to apply their engineering knowledge and develop a minimally viable prototype, which should establish the proof of concept. Student groups are advised to do field visits for the empathetic understanding of the problem and the end user expectations. The project coordinators should ensure the application of design thinking methodology.

Project Group: Maximum of four students.

Project Coordinators: Instructors for the design and engineering course (project quality and content) and one of the student advisors for the batch (overall coordination and assessment).

Project Guide: Faculty members allocated by the HoD.

#### **Objective**

- Innovative product development.
- Inculcate engineering passion.
- Promote entrepreneurship.
- Project based learning.
- Improve technical confidence and employability skills.

#### **Fifth Semester - Engineering Skill Development Project**

Each group can develop a project which should help them to learn various technical skills and modern tool usage. Departments may recommend various technological platforms relevant to the branch of engineering.

Project Group: Maximum of four students

Project Coordinators: One of the student advisors for the batch

Project Guide: Faculty members allocated by the HoD

#### **Objective**

- Learn various skills and modern tools in Engineering
- Increase the interest in Engineering
- Project Based Learning
- Increase Technical Confidence

## Sixth Semester - University Mini Project

Mini Project should enable the students to apply the engineering knowledge they have imbibed to address the real-world situations/ problems and find solutions. An innovative full stack/ hybrid type of projects related to the branch of engineering which helps students in transforming theoretical knowledge into a practical implementation/ working model with a scope of design and development can be encouraged. Training should be arranged for the students on technical writing and paper publishing as part of this project. The Department's having University Mini Project should make sure that, project selected should map with the outcomes and guidelines issued in the university syllabus.

Project Group: Maximum of four students.

Project Coordinators: Course Instructors for university mini projects.

Project Guide: Faculty members allocated by the HoD.

### Objective

- Identify, discuss and justify the technical aspects and design aspects of the project with systematic approach.
- Learn to apply knowledge acquired for project development.
- Learn technical writing skills.
- Project based learning.

## Sixth Semester - Preliminary Project Work

For branches not having a university mini project in the sixth semester(BT,CE,EEE) is encouraged to start with the final year thesis project as a preliminary project work. This will help the departments to adapt quality projects which may require more duration. The progress of the project should be evaluated for IA incentive credits for the sixth semester and the progress should be presented as a technical poster presentation together with the end semester project exhibition of the institute. Training should be arranged for the students on technical writing and paper publishing, as part of this project (with the help of RDC) and conference paper presentations should be encouraged with intermediate research outcomes. The project coordinators should make sure that the project selected should map with the outcomes and guidelines issued in the university syllabus for the final year project.

Project Group: Maximum of four students.

Project Coordinators: One of the student advisors for the batch and the potential course Instructors for the final year university project.

Project Guide: Faculty members allocated by the HoD.

#### Objective

- Inculcate a comprehensive expertise in engineering.
- Develop research aptitude.
- Improve publications in conferences and book chapters.

### Seventh and Eighth Semester- Final Year Thesis Project

Students are expected to do a research thesis on a topic selected in consultation with guides allocated. Project selected should map with the outcomes and guidelines issued in the university syllabus. The project should give an opportunity to apply the engineering expertise of the students and improve the research aptitude. Results of the projects should be validated using appropriate methods or testing. Students are expected to start the work immediately after the sixth semester examination and complete the same before the starting of eighth semester. Eight semesters should be dedicated to result validation, thesis preparation, publications and patenting (if patentable).


Project Group: Maximum of four students

Project Coordinators: Course Instructors for the final year university project.

Project Guide: Faculty members allocated by the HoD

#### Objective

- Inculcate a Comprehensive expertise in engineering
- Develop Research Aptitude
- Improve publications in Conferences, Journals and Book Chapters
- Improve Patents/IPR
- Project Based Learning

  
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