

A. Projects Identification and guide allocation process

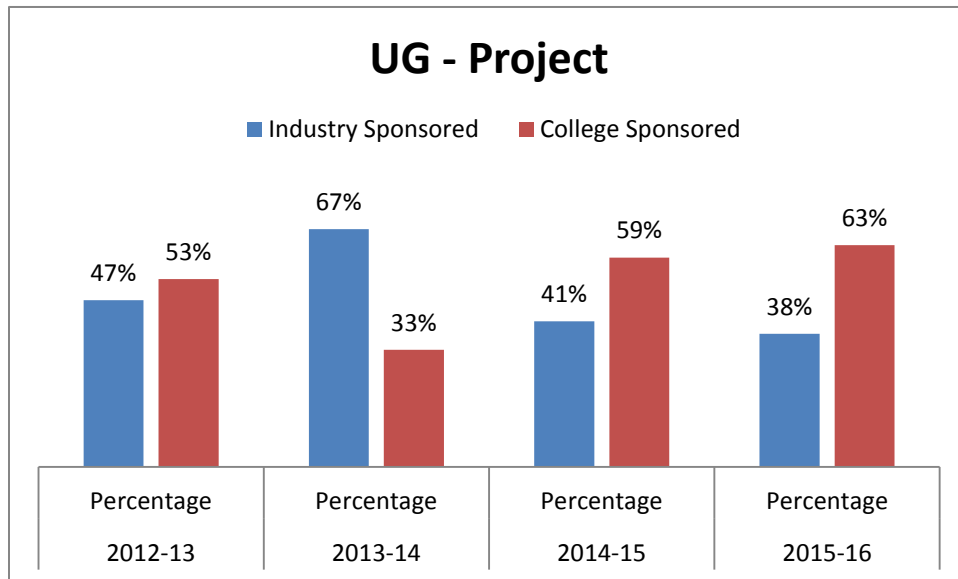
- Students approach various industries for the final year projects and work on the same once it has been approved by the department level project coordinator.
- Faculty members declare In-House project statements and interested students approach the.
- Once mutually decided between faculty and students it has been approved by the department level project coordinator and students starts working on the same.
- These project statements are separated domain wise and distributed among the faculty members.

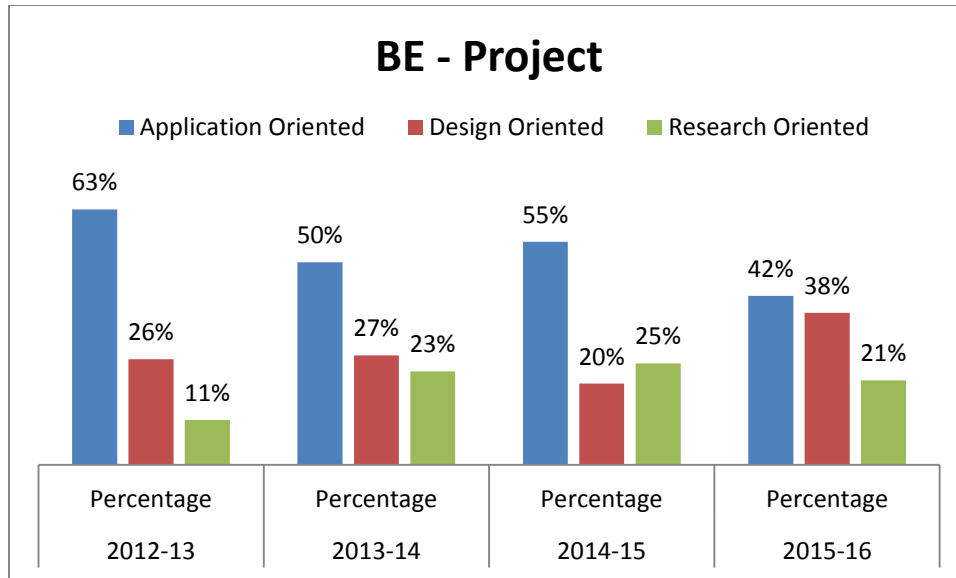
B. Projects classification and mapping with program outcomes and program specific outcomes

- In the department of mechanical engineering, students chose their projects, which are broadly categorized as,
 - **Industry sponsored projects:** under this category the project is performed in an industry to fulfil their need and industry pays for the cost of the projects.
 - **Institute sponsored projects:** under this category project is performed by the group of students, which is assigned by the faculty member from the department. In this case, the institute bears the cost of the projects.
- Further classification of projects is done according to following categories:
 - **Application Oriented:** In this category, projects are performed where the target is to achieve any real life application. In this category of project, design and manufacturing component is less as most of the parts are available on the shelf, which are assembled together.
 - **Design Oriented:** In this category, design and manufacturing is performed from the scratch. In this category, at least one iteration of design, manufacturing, testing and then modified design is expected.
 - **Research Oriented:** In this category, extensive review of literature is done, which aims to learn new methods or procedures and validate results.
- Following factors are considered (but not limited) to classify projects in above categories Environment, Safety, Standards and Cost

Table 2.3 Details of types of undergraduate projects

Academic Year →	2012-13	2012-13	2013-14	2013-14	2014-15	2014-15	2015-15	2015-16
Details ↓	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Total BE Projects	19		22		20		24	
Industry Sponsored	8	42%	7	32%	5	25%	9	38%
College Sponsored	11	58%	15	68%	15	75%	15	63%
Application Oriented	12	63%	11	50%	11	55%	10	42%
Design Oriented	5	26%	6	27%	4	20%	9	38%
Research Oriented	2	11%	5	23%	5	25%	5	21%





C. Continuous monitoring mechanism and evaluation

- Weekly meetings of the students with respective guide is planned on the project day (every Monday/Friday in the BE time table). Students maintain the log book of weekly meetings.
- At the end of the month, the work done is presented by students and progress has been judged by the team of faculty members.

D. Methodology to assess individual as well as collective contribution/understanding of the project

- For BE projects university time table based evaluation is carried out in first and second semester. At the end of the first semester students present their work to the guide and expert from a same department.
- Evaluation sheet is distributed by the project coordinator to all the judging teams.
- Judging is carried out based on various criterion such as
 1. Understanding of Project,
 2. Percent Completion of project,
 3. Presentation skills,
 4. Demonstration and
 5. Documentation.
- Evaluation is carried out on individual basis as well as on team performance.

- Evaluation is done by judging team and is communicated to the students for further improvement.
- At the end of the academic year, students present and demonstrate their work to the expert from an industry and the project guide.

E. Project Demonstration

- At the end of final year, as per the university schedule, final viva is arranged.
- Students demonstrate their project in front of a panel consisting of:
 - Internal project guide
 - External academia/industry personnel
 - Department project coordinator
- Working prototype, testing results, validation done is presented and judged by the panel.

F. Papers published or awards won

- Every group is encouraged to write a paper or to participate in project competition organized by various engineering colleges in Pune region as well as Cummins Institute of Engineering.
- Students are provided with the 'research article formats' of various conferences or journals.
 - In academic 2014-15, students of 02 project groups have published papers.
 - In academic 2013-14, students of 01 project group have published paper.
 - In academic 2012-13, students of 03 project groups have published papers.