

Bridging the gap...

To make fresh graduates competent with international industry standards, organisations, today, are doing away with the traditional approaches of building products. Rather, they have now embraced latest technologies and harnessed their advantages to develop robust, appealing and competitive products—not only for students, but even for working professionals.



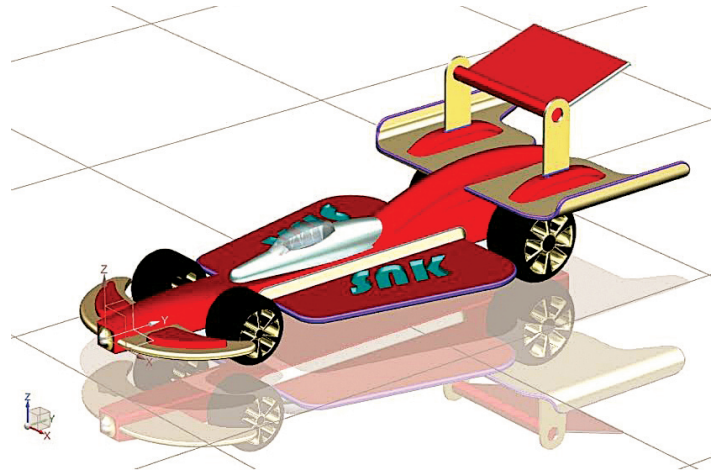
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Several renowned studies have indicated that less than 25% of engineering graduates in India are actually employable. India sees one of the highest numbers of engineers graduating every year and the fact that around 75% of them will not find a good job is very concerning. With rapid evolvement in technology, and new knowledge creation, the education imparted to students at their engineering colleges becomes obsolete and barely finds relevance in the industry outside. In today's highly competitive environment, the industry looks for trained manpower that would start contributing to their company's growth objectives at the earliest. Bridging this gap is imperative, if we are to increase the absorption rate of the freshly passed out engineering graduates in the industry.

Industry – institute collaboration

In a strictly academic environment, it is difficult for the

students to comprehend the nature and magnitude of work that takes place in the industry. Also, the knowledge that students are imparted in their academic institutes is limited and does not cover the entire scope of work that companies execute regularly, which furthermore keeps students oblivious about the industry working knowledge. Industry-institute collaboration makes for a perfect approach to help students get a glimpse of industry work scenario and gives them an exposure of the detailed operational understanding within a company or an industry. Siemens PLM Software, in association with DesignTech Systems, has established 11 centres of excellence in various cities in Gujarat. These centres, each dedicated to a specific domain such as automotive, aerospace and defence, industrial machinery, etc, contain a set-up of the latest and most advanced technologies in product design, engineering, automation and manufacturing. This gives students the exposure to the



DesignTech CAD Academy student
Nilesch Kurade designed F1 Car in NX CAD

contemporary technologies being used in the industry, which not only helps students update and upgrade their knowledge, but also increases their chances of initiating a bright career with a good company.

Capitalising new opportunities

With the advent of new technologies, processes and workflows in manufacturing, students can now capitalise on new opportunities created in this area of work. Cutting-edge technologies, processes and certifications that are used in the manufacturing set-ups that include computer-aided designing, computer-aided manufacturing, plant simulation and digital manufacturing, Additive Manufacturing, PLM, inventory management, quality control, six sigma now help students have multiple new career avenues to choose from.

With new collaborative and self-managing manufacturing systems being researched upon through IoT, the operational functions in the manufacturing set-ups is expected to change radically. Industry 4.0 is going to be the Next Big Thing that is going to revolutionise the way manufacturing machines and systems have been operating. After the Assembly Lines invention at Ford manufacturing that brought about the new age industrial revolution, Industry 4.0 will bring in amounts of investments being made into this research area.

With the Government's focus on 'Make in India' initiatives, the manufacturing sector in India has got an exponential boost, thus, creating many job opportunities. Students need to make the most of this, and work on gaining relevant knowledge to be a part of this growth engine. Greater foreign investments, emphasis on skill development,

working out policies for ease of doing business—these initiatives are providing a major thrust to the manufacturing sector which is expected to boom manifold. This will further expand and create new career opportunities.

Addressing the skill gap

Traditionally engineering projects and internships were bridging this skill gap. Through internships, students would gain an understanding on industry's working environment and processes. They would also develop deep understanding about the company's operations, while working closely within or with the companies, or professionals for their engineering projects. But this understanding is limited as internships, at the most, last not more than 3 months. Also, the knowledge that students acquire is limited to the extent of the scope of the project. Engineering colleges and institutes, and other private training institutes have to make consistent efforts in upgrading their courseware, teaching techniques to include the knowledge of the latest advances in their field. Also, live scenario projects and arranging industry seminars from industry experts is another way of introducing students to the outside world of industry. Establishing centres of excellence is the new approach to make students familiar with the latest technologies that the industry is using. The knowledge that students possess should be congruent to the industry applications. Redundant knowledge will never help students get a realistic picture of an industry's working dynamics. Therefore, industry-academia collaborations is the best and the most straightforward way to bridge the gap.

At par with latest trends

The highly competitive “one world one market” scenario has necessitated the research agencies and companies’ R&D departments to invest heavily into bringing new technologies to augment product innovation, optimise development costs & time, while bettering product quality and gaining manufacturing efficiency. Consistent efforts in the development of modern technology have resulted in incremental evolution of tech solutions. Technologies now become obsolete and/or redundant in a matter of months. Hypothetically, if an engineering student was introduced to a certain technology in his first year, it would not be an exaggeration to say that this technology would be nearing its descent or would have already begun its descent in terms of its applications and use by the time that student passes out of the engineering college in the fourth year. If professionals want to continue their growth trajectory, they have to constantly

invest in gaining new knowledge and keeping themselves abreast with the latest technologies and processes.

In mechanical engineering, for example, there are a plethora of new technologies besides CAD and CAM solutions that have made their way in the industry, becoming an integral part of their processes in the last couple of years. Also, companies are now done away with the traditional approaches of building products. They have now embraced these latest technologies and harnessed their advantages to develop robust, appealing and competitive products—not only for students, but even for working professionals. If they want to retain their position and place within the company and experience consistent growth in their career may have to be abreast. Reading about new innovations, upgrading their knowledge, acquiring training to get deeper understanding about their applications, strengths, and usage is a must for their professional growth. Only then will they be able to contribute to ensure sustainable growth for their company and themselves. □

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