Goals and action plans on the SWOC analysis
Mechanical Engineering

1. Weakness

S.No	Weaknesses	Short Term Goals	Long Term Goals	Action Plans
1	Research output needs a substantial improvement	• Organize training programs on latest developments in their domain annually. • Encourage for quality research paper publications from the faculty of **SIG (Special Interest Group)**	• Research grant of minimum 10 Lakhs from each SIG. • Each faculty to have one quality research paper in SIG group annually.	• Training programs are planned in the emerging areas to create awareness and expertise. • Apply research proposals for getting research grants by encouraging staff to work in their area of expertise. • Staff are encouraged to publish quality publications in national/international journals as well as conferences by getting sponsorship from the institute. • Incentives will be given as per the institute norms for the good quality publications and successful project proposals
2	Strong Alumni base need for the institute growth.	• Interactive session to be arranged with batch of 2 - 3 alumni with the graduating students. • Invite and involve alumni as resource persons for delivering guest lectures, conduct seminars and workshops.	• Alumni to deliver lectures or seminars on current industry needs and latest trends of industry. • Generate Alumni sponsored fund to establish advanced/research facility.	• To make alumni network stronger by planning interaction programs for current student groups with alumni • To make the student community aware of latest industry requirements and opportunities. • Department requisites for advanced/ state of art facility to be sponsored by alumni.

2. Opportunities

S.No	Opportunities	Short Term Goals	Long Term Goals	Action Plans
1	Motivate the faculty without PhD to pursue the PhD as a priority.	• 60% of the faculty should have of Ph D	• 100% of the faculty should have of Ph D	• Faculty are encouraged to accelerate the research as a part of their doctoral program.
2	MOUs with higher level institutions with an objective of deputing faculty for carrying out PhD/collaborative projects/Research shall be encouraged.	• Collaborate with industries and higher-level institutions to make MOUs to conduct research and publications.	• Collaborate with industries and higher-level institutions to carryout joint research/ funded projects	• Faculty are encouraged to visit the industries/higher level institution to collaborate for research and consultancy projects • Faculty are encouraged to prepare collaborative proposals for funding agencies. • WS/FDP/STTP to be organized by inviting the industry experts and faculty from higher-level institutions as resource persons on latest technologies and emerging trends.
3	Efforts shall be made to invite core industries for campus placements.	• Number of core companies for campus placements to be increased.	More core companies are invited with attractive packages.	• Improve the technical background of students in emerging areas by encouraging them to register online courses like NPTEL, Coursera, MOOCS etc. • Staff will be given instructions to intensify mentoring sessions to make aware of students on current industry needs and guide them to improve their technical skills. • M.Tech programs strengthened by getting quality in admission and providing good prospects after awarding the degree.
4	A High-End Research Centre such as Material Characterization may	• Establish Research centre on materials characterization.	Research facilities for Materials Characterization to be created through sponsored projects	Advanced tools or software and State of art equipment is made available in the laboratories.

	be established to strengthen the opportunities of getting sponsored projects.			
5	Staff welfare measures such as Housing Loan, Vehicle Loan, etc. may be given a thought promoting loyalty of the employee to the institution.	• Staff shall be provided vehicle loan based on repayment without interest	Staff shall be provided Housing loan, vehicle loan apart from urgent financial support on medical grounds based on repayment with standard bank interest.	Staff requests are recommended for favourable action.
6	Funding: students to promote innovation - Student participation in Innovation, Incubation and Entrepreneurship activities	• Generate entrepreneurs • Encourage students to innovations and apply for patents.	• Encourage startups & Technology incubation. • Encourage students to apply for Intellectual Property Rights and patents.	Student innovations are encouraged to create academic/research projects from developing ideas to products.

3. Challenges

S.No	Challenges	Short Term Goals	Long Term Goals	Action Plans
1	Industry-Institute interaction may be improved	• Industrial visits are organized for students. • All doctorates should be associated with at least one industry.	• For each course 2-3 guest lectures will be delivered by Industry personnel.	• Invite industry personnel to deliver the guest lectures. • Invite industry personnel to deliver few topics of the course for B.Tech and M,Tech programs. • The coordinator of industrial visits will be identify the list of industries related to the Mechanical Engineering in and around the Hyderabad to carry out internships and projects.
2	Attracting quality students for admissions in the recent advancements and opportunities in the field of Computer Science and IT	• To provide training in emerging technologies in the area of computer science and IT.	• To conduct academic projects (interdisciplinary) with applications of emerging technologies in the area of computer science and IT.	• Encourage students to carryout interdisciplinary projects. • Train the students in the emerging technologies in the field of computer science and IT.
3	Improving sponsored research projects, consultancy, quality publications and patents in order to improve NIRF ranking opportunity.	• Faculty are encouraged to carryout sponsored/ consultancy projects.	• Acquire research grant from funding agencies.	• Faculty are encouraged to publish papers, patens/IPR writing proposals to funding agencies, Industry interactions etc. • Faculty as supervisors of B.Tech and M.Tech academic student projects with a motto of quality projects and converting them into a publications.
4	Improving Core and quality placements	• Number of core companies for campus placements to be increased. • More core companies are invited with attractive packages	• Establish corporate training center for MNC companies in the core sector	• Industry need based curriculum is considered during revision. • Department offers minor and honors degrees for UG students by choosing allied area of emerging technologies. • Department need to be discussed with MNC companies to establish corporate training center in the institute.