



SHREE VENKATESHWARA HI-TECH ENGINEERING COLLEGE

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai)

Accredited by NAAC with 'A' Grade | NBA (CIVIL, CSE, EEE, MECH)

Gobichettipalayam – 638 455, Erode District, Tamilnadu

E-mail: svhecgobi@gmail.com Website: www.svhec.com Mob: 99429 45555



DEPARTMENT OF MECHANICAL ENGINEERING

Innovations by the Faculty in Teaching and Learning

To enhance the learning experience of students, faculty members of our institution are using innovative methods of teaching and learning process, like e-materials, models, charts, video lectures, role play, mini projects, quiz, student presentation, 3 minutes talk, self-learning, interactive learning, collaborative learning, content beyond the syllabus, workshop and industrial visits. This helps the faculty member to shift conventional method of teaching. The selective list of instructional methods available is given in the following Table.

Name of the Faculty	Name of the Subject	Topic	Instruction Methods used
Dr.K.M Arunraja	Design of Machine Elements	Couplings Design	NPTEL Video, Examples, Quiz Event.
Mr.K.Kannakumar	Non-Conventional Machining Process	Water Jet Machining	Real time application, Animation, NPTEL video lectures, Industry Visit
Mr.S.Meinathan	Computer Aided Design And Manufacturing	CNC Manual and Automated Programming	Instructed and trained using virtual Manufacturing simulation and Modeling software's.
Mr.P.Lingeswaran	Theory of Machines	Gear Tooth action Interference and Under Cutting	Working Models, Animation, Real Time Examples
Mr.S.Sathishkumar	Hydraulics and Pneumatics	Tool handling in CNC Machine tools	Real time application, Animation, NPTEL video lectures, Industry Visit

- Video lectures by the senior faculty members of our Institute and eminent resource persons from other premier institutions, innovations and research works carried out by the faculty and students are available in the institute website (<http://svhec.com/>)
- Faculty Lectures are conducted with ICT and the following strategies are also used to enhance the students learning Question and Answers.



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- Mapping with real world examples.
- Discussion on applications related to context and activities like Role Playing Interaction on topics.
- Conducting Games and quiz related to concepts.
- Learning materials are available in the institute Learning Management System (LMS) for knowledge sharing.
- E-Journals and E-Books are made available in the digital library for the benefit of Students and Faculty members.
- Faculty members are encouraged to publish research articles in referred Journals, presenting papers in Seminars, Conferences etc., All the faculty members are encouraged to participate in SWAYAM, NPTEL, Virtual Lab, MOOCs, Spoken Tutorials etc.,
- Screen cast subject videos are uploaded in YouTube public domain by the faculty members to improve the students learning and listening skills

State-of-the-Art facilities for training activities

Auditorium with LCD projectors, Seminar halls with ICT, Internet Connectivity which facilitate the faculty to deliver the training activities effectively.

Wi-Fi Campus

A 24x7 secured Wi-Fi facility plays a vital role for both Faculty and students in getting connected to global network.

Technology Workshops for hands on experience

Workshops and Training programmes are conducted by the industry experts.

Table shows the details of the Industrial Training Programs.

S. No.	Academic Year	Training on Topic	Industry	Date	No. of Faculty Attended
1	2024-2025	Advanced Manufacturing	DMW CNC Centre, Perundurai	28.08.2024	1
2	2023-2024	CAE Virtual Simulation	Macbro Technologies, Erode	28.10.2023	2
3	2022-2023	Non Destructive Testing	HAASEE Inspection Services, Coimbatore.	09.03.2023	2



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4	2021-2022	Automotive Design	C Cube Technologies	28.03.2022	2
5	2020-2021	HVAC System Design for Residential Building	SS Tecnovision, Coimbatore	01.03.2021	2
		3D Printing Workshop	IMIK 3D Print Trainer, Coimbatore	28.12.2020	2
6	2019-2020	CNC Manual Part Programming Techniques	SS Techno vision, Coimbatore	07.01.2020	2

Some of the learning innovations made by the faculty:

- Following parameters were chosen and a competition was conducted among the classes by Faculty members
- Online courses registration and completion
- English speaking campus
- Collection and distribution of e-materials

Smart Class room facilities:

All the classrooms in SVHEC are Information and Communication Technology (ICT) enabled and is equipped with LCD projectors, computers connected to Internet to utilize the e-resources as a support for the subjects being taught. This enhances the learning experience of the students.

Role playing based teaching:

Role play stimulates the imagination and enhances the social development, encourages friendship through cooperation, listening and turn taking. This activity makes the students to develop their knowledge on a specified topic. It solves a particular issue, which creates an opportunity for decision making in a given environment.



Role playing based teaching



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Employability Training:

In view of the employability of the students, Department of Mechanical Engineering of Shree Venkateshwara Hi-Tech Engineering College has been providing the technical and soft skills training. The training is conducted by internal faculty which comprises technical and soft skills. Before commencing the training, Internal Training Team will assess the students' technical skills and based on the feedback, the team will classify the students into various categories like domain- specific, technology-specific and also with an extent of student's interest. Once the classification has done, the training schedule will be incorporated in the regular timetable. Few open source and licensed software will be used as an additional aid of technical training. During the training regular assessments will be held to gauge the potential of the students.

Based on the feedback, special emphasis is made to train the students to meet the requirements of the information technology industry. Apart from this regular training, the company specific training will also be provided for the benefit of students. The Soft skills training will be held for all the students by eminent faculties from S&H Department. The training covers Communication Skills, Email Etiquettes, Resume Writing and personality development.



SEMINAR ON CAREER OPPORTUNITIES IN DEFENCE SECTORS FOR MECHANICAL ENGINEERS

Mr. K. ANBARASU, Placement / Defence Facilitator Scholar Training Academy

E-learning:

Online learning helps students to create and communicate new ideas. The students can get the chance to uplift their skills and gain knowledge apart from regular education. One of the prime importances of e-learning is that it helps students and teachers develop advanced skills.



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Working models/Charts/Monograms:

The details of working models and chart/monograms/charts available in the department laboratory are mentioned below:





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Industrial Visits

Industrial visits play a crucial role in enhancing teaching and learning by providing students with real-world exposure to industry practices, technologies, and work environments. Faculty members incorporate innovative strategies to maximize the learning outcomes from these visits. Students are encouraged to interact with industry professionals, ask questions, and observe practical applications. Live demonstrations and hands-on sessions help bridge theoretical knowledge with practical insights.



Industrial Visit to Anna Aluminium Company Pvt Ltd, Kerala



Industrial Visit to Traco Cable Company Limited



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Group discussion and 3 minute talk:

Faculty members are using Group discussion, debate and 3 minutes talk based teaching as another innovative Methods. The students are encouraged to deliver a innovative technology for the period of 3 minutes talk which enhances the speaking ability.



Conclusion:

Innovation in TLP leads to fruitful engagement of students. It can focus on student's development with the help of various pedagogical strategies. Increased interaction between the students and faculties is the major outcome of innovations in TLP. Faculties are also explored to latest tools and technologies in the market and are upgraded.