SHREE VENKATESHWARA HI-TECH ENGINEERING COLLEGE
Accredited by NAAC with 'A' Grade
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai
An ISO 9001:2015 Certified Institution
Gobichettipalayam – 638 455, Erode District, Tamilnadu
Web: http://www.svhec.com/

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 Table

Name of the Faculty	Name of the Subject	Topic	Instruction Method used
Mr.K.Balakrishnan	Microprocessor and Microcontroller	8086 Architecture	Demonstration with kit, Simulation
Mr.K.Balakrishnan	Embedded and Real Time Systems	Clock Synchronization in Distributed Real-Time Systems	NPTEL video lectures
Mr.C.Alakesan	Discrete-Time Signal Processing	Two Channel Filter Bank	Animation, NPTEL video lectures
Ms.S.Ayisha	Digital Communication	Properties of Line codes	Role-play, Animation, Quiz, Real Time Examples
Ms.G.S.Nandhini	Optical Communication	Optical Sources	Role-play, 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

  ➢ 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

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- ➢ 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, Amrita 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 LED projectors, seminar halls with ICT, Internet Connectivity which facilitate the faculty to deliver the training activities effectively.

Technology Workshops for hands on experience

Workshops and Training programmes are conducted. Table 1 shows the details of the Faculty Development Programs for Faculty.

Table 1 Faculty Development Programs

S.No.	Academic Year	Training on Topic	Type of Event	Date of Event	No. of Faculty Attended
1.	2021-22	Smart Grid And Electric Vehicle	ATAL - FDP	04.10.2021 - 08.10.2021	1
2.		Virtual Faculty Development Program on Sensor Technology	ATAL - FDP	04.10.2021- 08.10.2021	4
3.		Internet Of Things (IOT) Using Arduino & Raspberry PI	ATAL - FDP	25.10.2021 - 29.10.2021	3
4.	2020-21	Wearable Devices	ATAL - FDP	30-11-2020 - 04-12-2020	4
5.		Precision Health Technology	ATAL - FDP	14-12-2020 - 18-12-2020	3
6.		Inculcating Universal Human Values In Technical Education	AICTE	22-03-2021 - 26-03-2021	3
8.	2019-20	Digital Signal Processing	FDP	07.06.2018 - 08.06.2018	5
9.		Innovations In Green Technology And Its Applications In Green Synthesis And Sequestration Of Industrial Pollutants Towards Sustainable Development	FDP	27.11.2018 - 10.12.2018	1

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Wi-Fi Campus

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

Some of the learning innovations made by the faculty
Following parameters were chosen and a competition was conducted among the classes by Faculty members

- ➢ 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 enhance 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.

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. Learning innovations used by the faculty members for handling the classes (sample subjects) is given in Table 2

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Table 2 Learning innovations used by the faculty members

S.No.	Course Title	Activity	Topic	Team Members
1.	EC8392 DIGITAL ELECTRONICS	Debate	Basic memory structure	Bhuvaneshwari P(732520106002) Deepiga R (732520106006) Hemalatha P (732520106011)
		Group discussion	Programmable Logic Devices	Mohan raj S(732520106021) Naga raj S (7325206022) Santhiya S (732520106035) Vaishnavi M (732520106038)
		Seminars	Codes	Sarath Krishnan R(732520106034) Vanipriya N (732520106039) Vishalini S (732520106042)
2.	EC8553-DISCRETE TIME SIGNAL PROCESSING	Role play	Linear Filtering Operation	Gomathi S(732517106008) Keerthana K (732517106017)
		Debate	Digital filters	Devi M (732517106003) Kavina K (732517106014) Pramila J (732517106026) Saranya T (732517106031)
		Group discussion	Convolution	Harish D K (732517106010) Maheshwari K (732517106016) Monisha M (732517106022) Nivetha S (732517106025)

Multimedia Presentation:

Multimedia presentation through video projector enables to project the interactive lesson onto the board which encourages student's critical thinking, problem solving ability, discussion and collaboration

Use of ICT:

It is defined for the purpose of learning process, as a diverse set of technological tools and resource used to communicate, disseminate, store and manage information

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Other e-tool utilizations: Table 3 consists of various e tools used for teaching learning process

Table 3 various e tools used for teachinglearning process

Tools	Methods	descriptions
MS Power point	It can be prepared with many of the popular multimedia elements like graphs, models, sound & videos, etc.,	Slide based
NPTEL, Online spoken tutorial, Swayam courses	Presentation is created and explained by Experts in its specific domain	Video based
Windows movie maker	Presentation is created using movie making concepts of casts, sounds, pictures and scores	Movie based
E-Campus	Course material is available at college website	e content
Virtual labs	Presentation of lab practical and clear demonstration are given	Application based

In addition to the classroom interactions, following the other methods of learning experiences provided by the faculty members to the students:

- ➢ Project work and Working with real time projects in Incubation (ECE Incubation centre)
- ➢ Short/long term Industrial visits
- ➢ Internships/Inplant training
- ➢ Oral presentation
- ➢ Technical Seminars/ symposiums/ workshops
- ➢ Technical paper presentations/ Group discussion
- ➢ Laboratory Teaching
- ➢ Three minutes talking method