



Criteria 3.2.1: (10 marks)

Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident.

3.2.1 INNOVATION ECOSYSTEM

CONTENTS:

Innovative Culture Initiatives:

- Centre for Robotics
- FAB Lab and IOT Lab
- Dr. Pradeep P Thevannoor Innovation Awards (PPTIA)
- Seminars, workshops, hackathon, and idea pitching competitions
- SCMS Water Institute

Student-Focused Innovation:

- PPTIA since 2015
- Technical events like CREATIVO
- Dr. Pradeep P Thevannoor Learning Resource Centre
- Ideation & Prototyping Centre facilitates

Faculty Recognition and Incentives:

Entrepreneurial Culture:

- SSET's Innovation & Entrepreneurship Development Centre (IEDC)

Online Learning Culture:

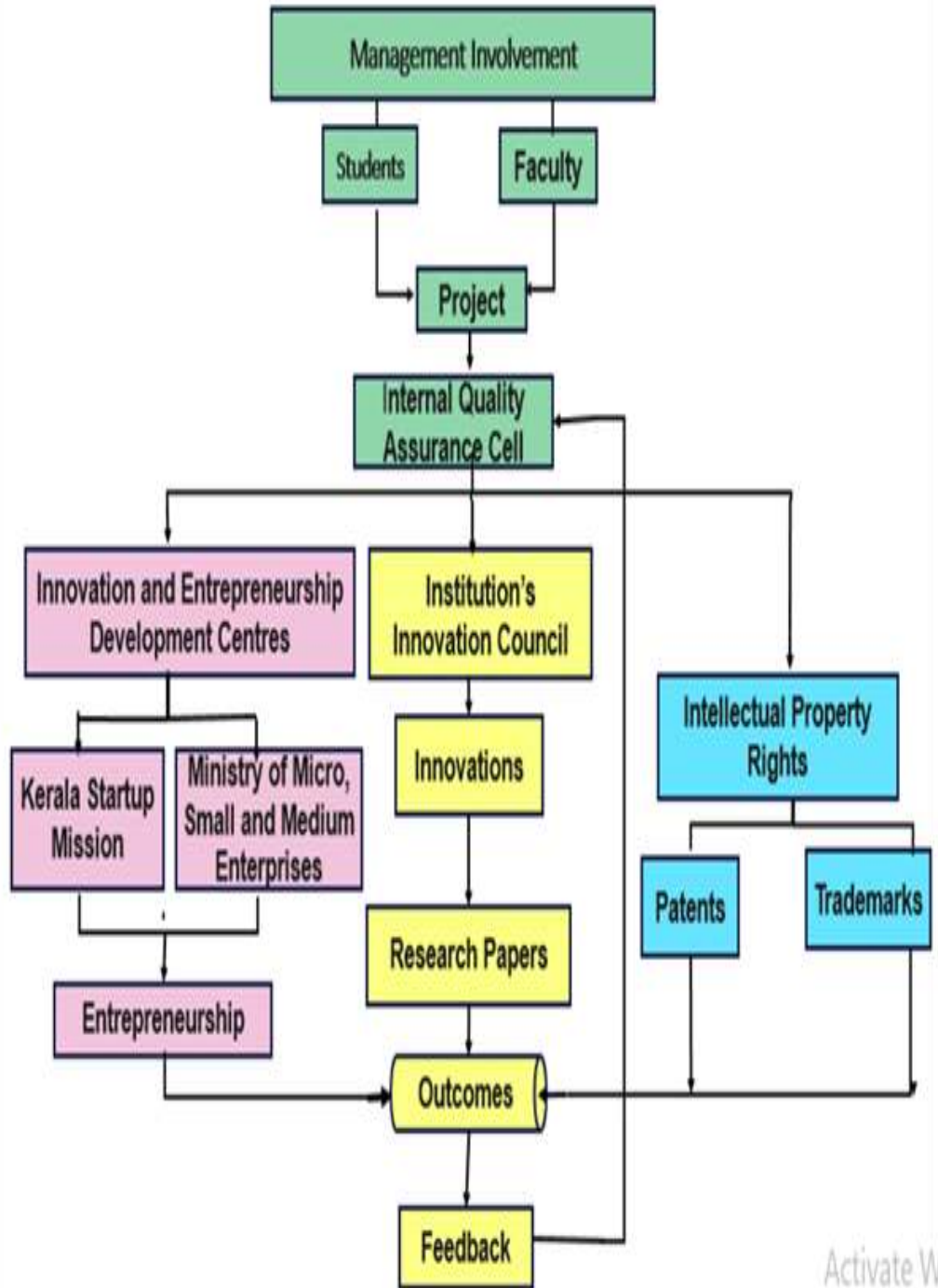
- NPTEL
- COURSERA

Evidence of Innovative Culture - Award-Winning Projects:

Sponsored and Funded Live Projects:



3.2.1 Innovation Ecosystem Flowchart



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CENTRE FOR ROBOTICS



Centre for Robotics aims at imparting knowledge in the field of robotics to the students from all streams of Engineering. This cell also helps the students to build prototypes and make their innovative ideas come to reality by implementing their ideas

Action specification

- Formulation of the goal: thinking in high level terms of what do we want to accomplish
- Formulation of the intention: thinking more specifically about what will satisfy this goal
- Specification of the action: determining what actions are necessary to carry out the intention. These actions will then be carried out one at a time
- Execution of the action: physically doing the action. In computer terms, this would be selecting the commands needed to carry out a specific action
- Perception of the system state: the user should then assess what has occurred based on the action specified and execution. In the perception part, the user must notice what happened
- Interpretation of the system state: having perceived the system state, the user must now use his knowledge of the system to interpret what happened
- Evaluation of the outcome: the user now compares the system state (as perceived and interpreted by him) to the intention and to decide if progress is being made and what action will be needed next



Robotic kits sponsored by IIT Bombay



- **FAB Lab and IOT Lab**



Fab lab –an overview



3D-printer



3D Printer Ultimaker



CNC Milling



Laser Cutter



Vinyl Plotter



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• Dr. Pradeep P Thevannoor Innovation Awards (PPTIA)

Dr. Pradeep P. Thevannoor Innovation Awards (PPTIA) instituted in the year 2015 by SCMS School of Engineering and Technology, Kerala, India is a global event held annually with an aim to identify, recognize and celebrate innovative ideas and applications to tackle issues and challenges faced by society. The PPTIA provides an excellent opportunity to student-innovators to showcase their ideas, products and services, empowering them to bring about game-changing advances in technology and industry applications for societal good. Mentorship opportunities with industry leaders help take the projects to the next level and gain national and international visibility as also funding opportunities.

Dr. Pradeep P. Thevannoor Hackathon Awards 2023 are to be held on November, 2023. SCMS School of Engineering and Technology, commemorating the great visionary Dr. Pradeep P. Thevannoor, who literally lived for SCMS, has successfully organised Dr. Pradeep P. Thevannoor Innovation Awards from 2015 to 2019, Innovation Talk series since 2020-2021. In 2022, we introduced the Dr. Pradeep P. Thevannoor Hackathon Awards 2022.

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KARUKUTTY, ERNAKULAM, KERALA, INDIA, 683576

**Dr. Pradeep P. Thevannoor
HACKATHON 2023**

REGISTER NOW
Open for 8th to 12th School Students

SCMS invites students to an amazing platform to solve some of the pressing problems we face in our daily lives, and build the culture of start-ups and innovation ecosystems.

1 FIRST PRIZE: Rs. 80000
2 SECOND PRIZE: Rs. 20000

Registration and Idea Submission
16th - 30th October 2023
Grand Finale : November 2023

Registration Link : <https://bit.ly/45MPjG9>

For More Information :
70347 80074
94477 47961
<http://www.scmsgroup.org/sset>

TECHNICAL SUPPORT FROM:

SSET SCMS School of Engineering & Technology

9th Edition
**Dr. Pradeep P. Thevannoor
Hackathon**

Inauguration by

Dr. Anil Joseph
President, Indian Geotechnical Society

16TH NOVEMBER 2023

TECHNICAL SUPPORT

SSET SCMS School of Engineering & Technology

9th Edition
**Dr. Pradeep P. Thevannoor
Hackathon**

Chief Guest

Mr. Loknath Behera
Managing Director, Kochi Metro Rail limited

AWARD CEREMONY
17TH NOVEMBER 2023

TECHNICAL SUPPORT



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Dr. PPTH 2022 Held

"I appreciate SCMS Group for choosing socially relevant issues for Dr. PPT Hackathon"
 - Dr. R. Bindu

8th Edition Dr. Pradeep P Thevaranoor Hackathon Awards (PPTH)

In a novel initiative to crack down on the country's problems, this year, SCMS School of Engineering and Technology, in association with SCMS School of Architecture, conducted Dr. Pradeep P Thevaranoor Hackathon Awards (PPTH), a 'Hackathon' involving creative school minds with riveting and innovative ideas, to address a set of socially relevant problem statements. This hackathon was the Eighth edition of the Dr. Pradeep P Thevaranoor Innovation Awards (PPTH), which is instituted to commemorate the spirit of innovation of our late Vice-Chairman of SCMS Group, Dr. Pradeep P Thevaranoor.

The Students in creative mood in the Dr.PPTH 2022.

Chief Guest
 Dr. R. Bindu
 Minister for Higher Education and Social Justice, Government of Kerala

8th Edition Dr. Pradeep P Thevaranoor Hackathon Awards (PPTH)

Minister for Higher Education and Social Justice Dr. R. Bindu inaugurating the valedictory function of Dr.PPTH 2022.



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The team FLIP (Fake Link Identification Program) from C.K.M.N.S.S Senior Secondary School, Chalakudy bagged the first prize for the problem statement Detecting Fraud links received in Whatsapp/SMS/Social Media. The team members were Nirmal U S, Vishakh V, Sai Krishna, Prem Jyothika R along with their mentor Ms. Renuka S Menon.



The winners of the Hackathon with the core group of Dr. PPTH 2022.

INNOVATING FOR **ILLITERATE**

DECCAN CHRONICLE



BJP MP Varun Gandhi presents the young lady innovator award to Priyanka Shiralkar of BV Bhoomaraddi College of Engineering, Hubballi for developing Graphical user interface for illiterate and semi-literate workers at construction sites, at the SCMS School of Engineering & Technology, Karukutty on Friday. College director Radha Thevannoor and CII startup council co-chairman Navas Meeran are also seen. — SUNOJ NINAN MATHEW



Seminars, workshops, hackathon, and idea pitching competitions

Seminar on "Hybrid Technologies"



Mr. Charan Gupta (1st from left) with members of Nippon Toyota management.

The Department of Automobile Engineering in association with SAE India Collegiate Club of SCMS hosted a seminar on "Hybrid Technologies" by Toyota – Kirloskar Motor Pvt Ltd (TKM) on September 13th 2022. Dr. Anitha G. Pillai, Principal, SSET, and Dr. Jenson Joseph E, HOD, Department of Automobile Engineering jointly inaugurated the seminar. The speakers of the seminar were Mr. Charan Gupta B. R, South Strategic Planning, TKM, and Mr. V. Karthikeyan, Technical Service, TKM. Nippon Toyota brought a Toyota Camry to the campus for a live demonstration of hybrid vehicle technology.



The Participants of Techkriti '22.



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SSET Team Associates with SIH 2022

A team of six faculty members of the Computer Science and Engineering Department, Assistant Professor Ms. Rosebell Paul, Ms. Neethu Krishna, Ms. Asha S, Mr. Mahesh K M, Mr. Scaria Alex, and Teaching Assistant Ms. Sreemol R were deputed for Smart India Hackathon 2022 which was a Nationwide initiative to provide students with a platform to solve some of the pressing problems we face in our daily lives, and thus to inculcate in them, a culture of product



innovation and a mindset of problem-solving. They were appreciated for their exceptional contribution as Technical Experts in the Smart India Hackathon, 2022 which was held at SCMS School of Technology and Management on August 25 and 26, 2022.

- **SCMS Water Institute**



'MIKE Computational Lab' powered by DHI at SSET in collaboration with SCMS Water Institute, 24 June 2022

Projects undertaken and its outcomes:



Flow measurements at Bodi Hills November 2019



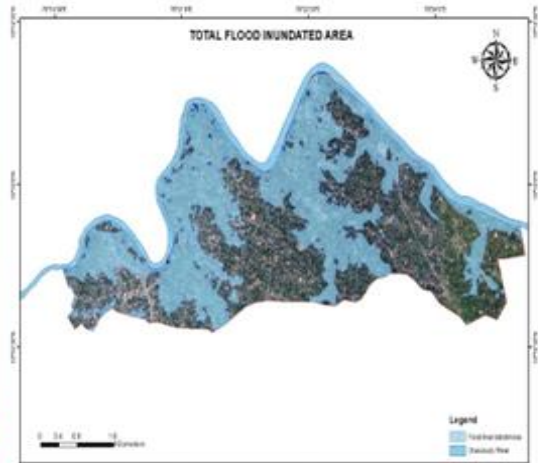
Abatement of Pollution of Rivers in Kerala December 2021 – Kadambrayar and Kecheri



SCMS WATER INSTITUTE



Pilot installation of a rainwater harvesting system July 3, 2020



Development of Flood Preparedness and Response Plan for Meloor Grama Panchayath, 2018



SCMS WATER INSTITUTE



Pipeline Investigation project under German company named SEWERIN on May 29, 2019



Water Auditing Project 2020



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Student-Focused Innovation:

Open with



SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY



Dr. Pradeep P. Thevannoor
Innovation Awards

Powered by




KSIDC MIC

Supported by



SL No. **014**

Participation Certificate

Awarded to
Jeslin Merin Sajeev
of
SCMS School of Engineering & Technology, Karukutty
for presenting the innovation
Faxima - The Trash Collector
in the In-house competition 'Creativo' as part of
Dr. Pradeep P Thevannoor Innovation Awards, 2019
at SCMS School of Engineering and Technology on 16th and 17th November, 2019

17th November, 2019

[Signature]
Dr. Radha Thevannoor
Group Director

[Signature]
Prof. Gopakumar S
Senior Group Director

[Signature]
Dr. Praveensal C J
Principal

[Signature]
Dr. Sheeja Janardhanan
Convener




SOCIAL INNOVATION CHALLENGE

CERTIFICATE OF ACHIEVEMENT



is, hereby, granted to:

Jeslin Merin Sajeev

for outstanding performance and securing **2nd Prize (Water Management)**
in the **Social Innovation Challenge**,
jointly hosted by the Centre for Society and Policy at Indian Institute of Science, India
and India-Japan Laboratory at Keio University, Japan

January 29, 2021



[Signature]
Professor Rajib Shaw
Director, India-Japan Laboratory,
Keio University, Japan



[Signature]
Professor Anjula Gurtoo
Chairperson, Centre for Society
and Policy, IISc, India



- **Dr. Pradeep P Thevannoor Learning Resource Centre**

The library has a collection of over 37840 volumes of engineering and technology related printed books. The library is also subscribing to 124+ technical journals and general magazines in printed form. Full text online databases like IEEE Explore(ASPP), ASCE, ASME, J-GATE of famous Learned Societies of the World comprising of more than 4000 journals are subscribed to and freely accessible, EBSCO E-books collection (Engineering Core) having more than 6000 books are also added to our collection and freely available to the users. NPTEL (National Programme on Technology Enhanced Learning), DELNET (Developing Library Network), NDL(National Digital Library) are the other Digital Library Resources accessible by our users. 15 high end systems are provided to access the e-Resources. Library also has a good collection of CDs and DVDs. All in-house operations in the library are fully computerized using state of the art RFID technology. OPAC a web-based e-Catalogue of all the information resources is accessible online. Thus PPTLRC provides uncompromising information and intellectual requirements to our users.

Dr. Pradeep P. Thevannoor Learning Resource Centre

E Resources and E Journals

Print Journals

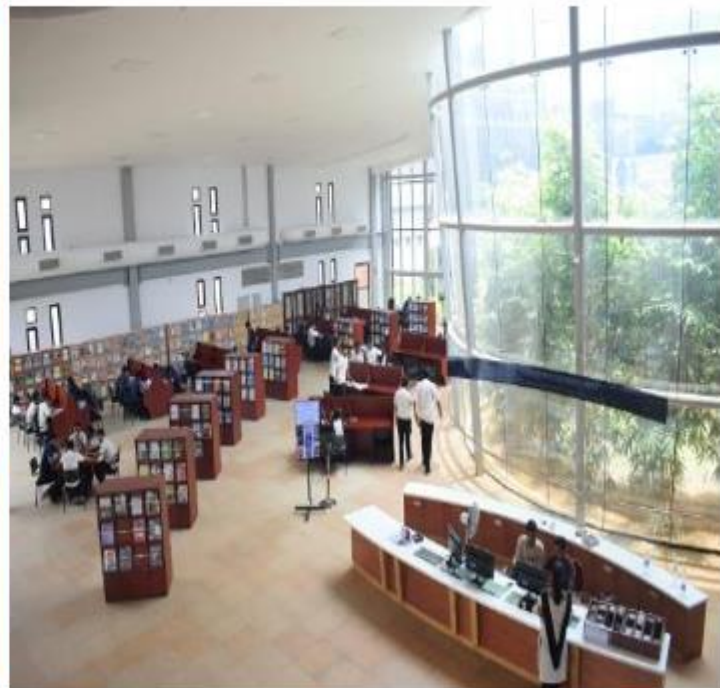
News Paper / General
Magazines

DELNET / Inter Library Loan

WEB-OPAC (Book search)

Library Collection

Open Access Journals / Useful
Links

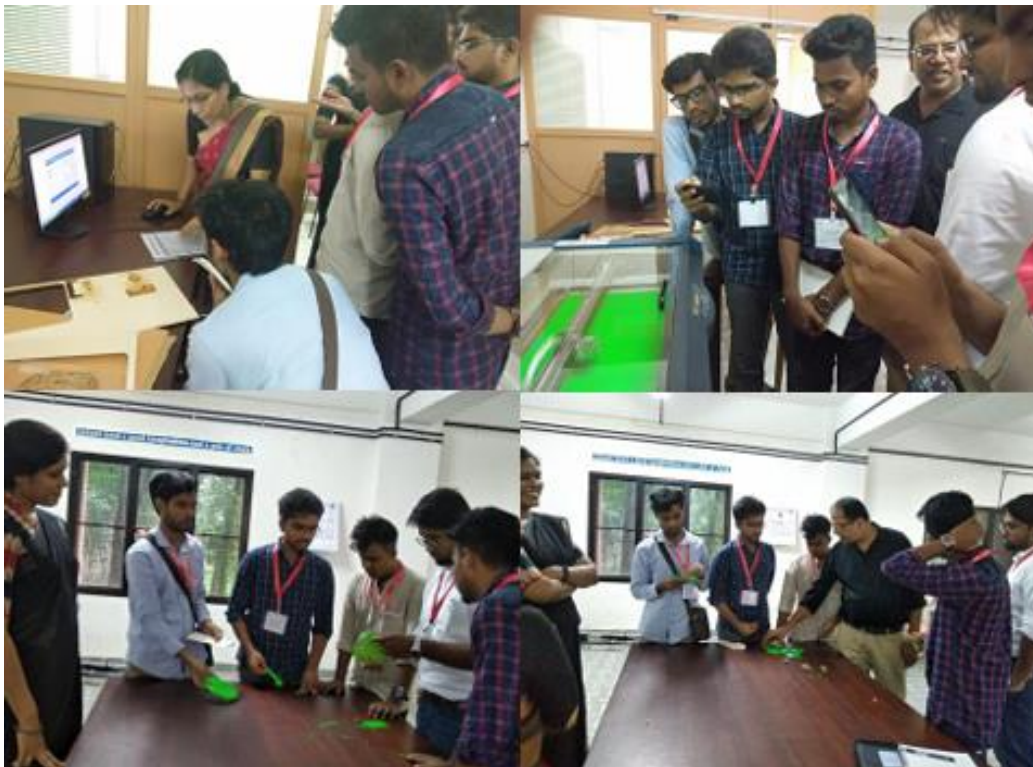




- **Ideation & Prototyping Centre facilitates**



Robotic kits sponsored by IIT Bombay



Swarm Robotics Designing and development in Ideation cell



● Faculty Recognition and Incentives:

SL.NO:	Authors	Title	Journal	Journal Rating	Month and Year	Incentive Paid
1	S. Anandhan, Gibin George, Arunjunairaj Mahendran, Selvakumar Murugesan	<u>Influence of multiwalled carbon nanotubes on the structure and properties of poly(ethylene-co-vinyl acetate-co-carbon monoxide) nanocomposites</u>	Polymer Composites	3.7	May 2021	Rs1,00,000
2	M Akhila, K Rangaswamy, N Sankar	Numerical Study on the Undrained Response of Silty Sands Under Static Triaxial Loading	Lecture Notes in Civil Engg.		Dec 2020	Rs. 5000
3	M Akhila, P C Jithesh, K Rangaswamy, N Sankar	Numerical Study on Cyclic Loading Effects on the Undrained Response of Silty Sand	Lecture Notes in Civil Engg.		Dec 2020	Rs. 5000

P PRINCIPAL SSET <principalsset@scmsgroup.org> to teamsset

Fri, Dec 1, 2023, 12:08 PM

Congratulations to faculty members who received incentives on 01.12.2023 for Publications for the period from 1st November 2022 to 30th September 2023

Venue : Seminal Hall , Main building - SCMS Cochin.
Programme : SSRC - Inaugural session

- 1.Mr. Akhil Baby
2. Dr. Anjana Viswanath
3. Ms. Anju Mary Elias
4. Dr. Arshey M
5. Dr. Manoj Kumar B
6. Ms. Neethu Krishna
- 7 Dr. Nithya Mohan
8. Dr. Rahul R. Pai
9. Dr. Santhosh M V
- 10 Dr. Sreelekha Menon
- 11.Ms. Surya K A

Activate Windows
Go to Settings to activate Win



Faculties after receiving Incentives from cooperate office



Entrepreneurial Culture:

- **SSET's Innovation & Entrepreneurship Development Centre (IEDC)**

The Innovation and Entrepreneurship Development Cell of SCMS School of Engineering and Technology serves as a key platform for fostering innovation and entrepreneurship among students of SSET. The Kerala Startup Mission (KSUM), the former Technopark TBI, acts as the nodal agency of the Kerala government for entrepreneurship development and incubation activities at our institute. IEDC-SSET is an active student-driven cell that works in close association with the Kerala Start-Up Mission and other student's clubs of SSET. It envisages nurturing innovative intellectual and becoming a facilitator between the students inside the campus and the industry outside by acting as a hub of contacts and network that helps in finding the aspiring entrepreneurs the right people to approach for any task. IEDC stands as an enabler in promoting Entrepreneurship among students by converting innovative ideas from the ideation phase to commercially viable products/ services which focuses on encouraging the creative energy of student population to work on new ideas and innovation and promotethem to create start-ups and entrepreneurial ventures.

The cell aims at:

Encouraging students to implement their project ideas to products.

Promoting start-up initiatives in collaboration with KSUM among aspiring Students.

Providing financial, mentoring and infrastructural support to aspiring young entrepreneurs.

Identifying projects for development and commercialization of their innovative ideas.

Promoting a sense of social responsibility among students to develop innovative products of social relevance.

Organising workshops to inculcate a culture of innovative thinking along with engineering design among aspiring students.

Facilitating students to prototype their ideas by providing makers space at FabLab.

Identifying the right candidates and project ideas through regular pitching competitions.

Organizing Workshops, Discussions and Seminars/Webinars for students.

Encouraging students to organise events on state/national level



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Associating with industries to update the students on the latest and prevailing technologies used to reinforce institute industry interaction.

Arranging regular platforms for students to interact with successful entrepreneurs on their inspiring journey.

Providing entrepreneurship training to the students in building their innovative product or solution.

Innovation and Entrepreneurship Development Centre launched

A new Innovation and Entrepreneurship Development Centre was launched at Prathap Nagar Campus of SCMS on July 5. Dr.Saji Gopinath, CEO, Kerala Startup Mission was the chief guest to inaugurate the centre. The Kerala Startup Mission has established IEDCs at various colleges in the state of Kerala. There are about 213 such centres. **The IEDC set up in SCMS Engineering College is one of the top 10 centres in the state,** said Dr.Saji Gopinath. **"We have been seeing very interesting and innovative ideas coming from the students of SCMS,"** he revealed.

Today, we need to look at IEDC from a little larger perspective, because in the time when I



Dr.Saji Gopinath, CEO, Kerala Startup Mission launching the IEDC. Others in the picture L-R: Dr.Sherin Mariam Alex, Vice Principal, Prof.Baiju Radhakrishnan, Group Director, Dr.G.Sashi Kumar, Principal, SSTM and Prof.Gnanakumar S. Group Director



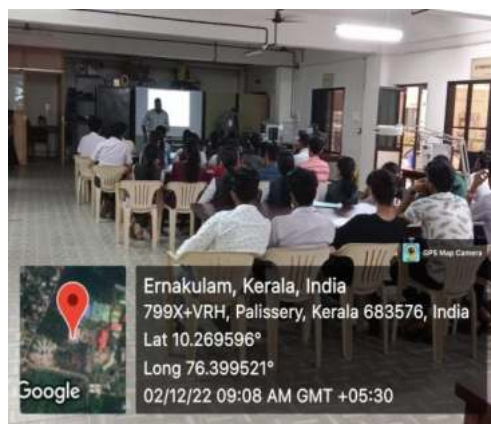
Ms. Lathika Sasikumar, President, Karukutty Grama Panchayat inaugurating the Entrepreneurship Awareness Program.

A two-day workshop on 3D Printing was organized for S5 EC students by Department of Electronics and Communication Engineering in association with IEDC SSET. Dr.PARVATHY.M Assoc.Professor in ECE Department coordinated this program. This two-day Workshop was conducted on 30th November and 2nd December of 2022 in offline mode. Forty students have registered for this workshop. Welcoming the audience was done by the IEDC representatives of S5 ECE and presidential address was given by Dr.Parvathy.M, Program Co-ordinator.



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Department of Automobile Engineering presents **AUTO HACK**

Register @ <https://bit.ly/autohack2022>

- Create and innovate solution for local and global issues
- Prior programming experience is not required
- Participation open to B.Tech Mechanical and Automobile Engineering branches of SSET only
- Max 4 members per team

Themes include:

- Future transportation
- Effective deployment of public transport
- Remote vehicle service
- Real time emission detection and action

SCMS School of Engineering and Technology

HANDS-ON WORKSHOP ON 3D PRINTING

22nd and 23rd March, 2022
Venue: Computer Lab 2, Fab Lab

For S8 Automobile Engineering students of SSET

Program Coordinators:
Dr. Manoj Kumar B
Mr. Koshiy P Joseph

Department of Automobile Engineering
SCMS School of Engineering and Technology



These work shops are helpful
Very good workshop. Need more workshops like this.
Hoping for more such programs for increasing our skills
Need more sessions in future
Need more hands on experience
Nice workshop
Need more sessions like these to understand about modern manufacturing methods

Certificate - Sample



PHOTOS OF THE EVENT



Inauguration of hackathon by Mr. Rahul P Balachandran, Managing Director, Inter Robotics



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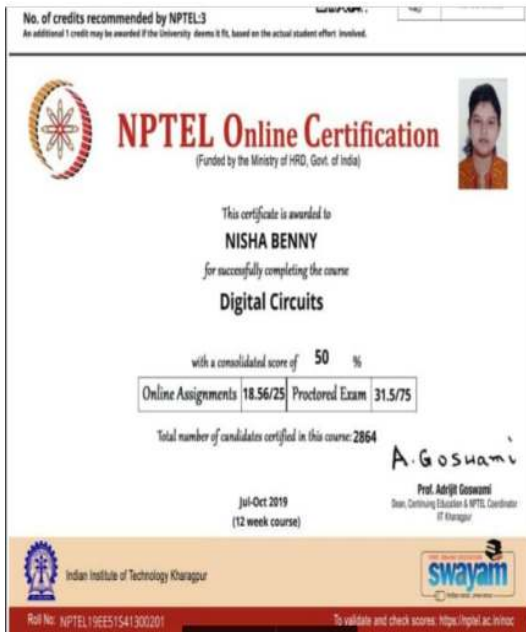


Feedback and certificates of 3D printing workshop

SALT programme

Online Learning Culture:

- NPTEL
- COURSERA





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Evidence of Innovative Culture - Award-Winning Projects:

Sponsored and Funded Live Projects:

GYTI 2020

Ref. No. BIRAC SRISTI PMU - 2020/007 December 31, 2020

Awardee: Vinoj P.G

Supervisor Dr. Sunil Jacob

granted a sum of Rs. 15,00,000/- to further work on project "Artificial Deep Learning Brain Actuated Lower Limb Exoskeleton for paralysed.





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APJAKTU - CERD - Research Seed Money Scheme - Projects Selected for
Funding

Principle Investigator: VINOJ P G, Assistant Professor, ECE department

Project Titled: Brain Actuated Assistive Technology for the paralyzed

Amount sanctioned: Rs 75,000/-

