ANNUAL REPORT

2024-2025

Innovation and Entrepreneurship Development Centre (IEDC)

SCMS School of Engineering and Technology (SSET), Karukutty, Ernakulam

1. EXECUTIVE SUMMARY

The Innovation and Entrepreneurship Development Centre (IEDC) of SCMS School of Engineering and Technology has successfully executed a robust portfolio of initiatives during 2024-2025 designed to foster innovation, entrepreneurship, and sustainable development among students. As a key platform for nurturing innovative intellectual capital and facilitating industry-academia collaboration, IEDC has worked in close association with the Kerala Startup Mission (KSUM) to create an enabling ecosystem for transforming student ideas into commercially viable products and services.

During 2024-2025, IEDC-SSET organized 18 major initiatives engaging 400+ students across multiple disciplines. These initiatives spanned hackathons, boot camps, workshops, industrial visits, and skill-development programs. The year was marked by increased institutional recognition, inter-collegiate participation, and successful representation at the Asia's largest student entrepreneurship event (IEDC Summit 2024 at NIT Calicut with 10,000+ participants). The center has demonstrated strong effectiveness in promoting innovation culture, entrepreneurship mindset, and industry-relevant skill development while maintaining focus on social responsibility and sustainable development.

2. INITIATIVES UNDERTAKEN IN 2024-2025

2.1 Smart India Hackathon (SIH) - Internal Selection

Date: September 18, 2024
Duration: Full-day competition
Participants: 150+ students from multiple engineering disciplines
Organizing Department: IEDC-SSET

The Internal Hackathon served as a preliminary selection process for the National Level Smart India Hackathon. This innovation marathon aimed to foster creativity, teamwork, and real-world problem-solving skills while identifying top talents for national-level representation.

Key Objectives: - Foster innovation and creative problem-solving - Develop teamwork and interdisciplinary collaboration skills - Identify high-potential innovators for national platform -

Address real-world challenges through technological solutions - Promote engineering design thinking among students

Outcomes & Impact: - 150+ students participated from diverse engineering branches - Multiple innovative solutions developed across various problem domains - Top-performing teams nominated for Smart India Hackathon National - Enhanced visibility for SSET in national innovation ecosystem - Demonstrated institutional commitment to hackathon-based learning

2.2 IEDC Cluster Meet at ASIET

Date: September 25, 2024
Venue: Adi Shankara Institute of Science and Technology, Kalady
Participants: Students and faculty from multiple engineering colleges
Organizing Department: IEDC-SSET

The cluster meet fostered collaboration, innovation, and entrepreneurship among participating institutes within the region. The event provided a platform for cross-institutional networking and knowledge sharing.

Event Highlights: - Inter-collegiate student participation and networking - Faculty discussions on innovation and entrepreneurship - Exchange of best practices among participating institutions - Professional networking opportunities - Collaborative project identification across colleges

Benefits: - Strengthened regional innovation ecosystem - Expanded SSET's collaborative networks - Exposed students to diverse innovation approaches - Facilitated knowledge exchange among peer institutions

2.3 IEDC Summit 2024 at NIT Calicut

Date: October 19, 2024
Venue: National Institute of Technology (NIT) Calicut
Theme: "Beyond the Horizon"
Scale: Asia's largest student entrepreneurship event with 10,000+ participants

This landmark event was organized by Kerala Startup Mission (KSUM) and brought together students, academics, entrepreneurs, and industry leaders across 15 venues with 100+ sessions.

Event Features: - **Participation Scale**: 10,000+ participants from across India - **Session Coverage**: 100 sessions across 15 venues - **Focus Areas**: Innovation, technology, skill development, entrepreneurship - **Notable Speakers**: - Anoop Ambika (KSUM CEO) - Dr. B.K. Das (DRDO Director-General) - Prof. Prasad Krishna (NIT Calicut Director)

Key Activities: - Workshops on entrepreneurship and innovation - Networking sessions with industry professionals - Build On Chain 2024 Web3 Hackathon - Blockchain solutions showcase - Recognition of innovative projects and teams - Skill development workshops - Investor pitching opportunities

SSET Participation & Outcomes: - 30+ SSET students attended the summit - SSET teams networked with national-level innovators - Exposure to emerging technologies (Web3, blockchain) - Enhanced understanding of national startup ecosystem - Potential partnerships and collaboration opportunities identified - Increased institutional visibility in national innovation space

2.4 IEDC Boot Camp at SSET

Date: November 5-6, 2024
Duration: 2 days
Participants: 80+ students and faculty
Associated Partners: K-DISC, IIC, YIP

The IEDC Boot Camp was an intensive entrepreneurship and innovation program designed to equip students with essential skills for the fast-evolving business landscape.

Boot Camp Sessions & Content:

Session 1: Introduction to Entrepreneurship - Overview of startup ecosystem in India - Entrepreneurship opportunities and challenges - Success stories and case studies - Key competencies for entrepreneurs

Session 2: Intellectual Property Rights (IPR) - Understanding patents, trademarks, copyrights - Importance of IP in innovation - Patent filing procedures in India - Protection strategies for intellectual property

Session 3: Business Planning & Financial Management - Business model canvas development - Financial planning for startups - Funding mechanisms and sources - Risk management in ventures

Session 4: Pitch Development & Presentation - Crafting compelling pitches - Investor communication strategies - Presentation skills for entrepreneurs - Feedback and iteration process

Key Outcomes: - 80+ students gained entrepreneurship fundamentals - Enhanced understanding of IP protection - Developed basic business planning skills - Improved presentation and communication abilities - Networking with industry mentors and entrepreneurs - Identified 8-10 promising startup ideas for further development

2.5 Business Plan Competition & MSME Awareness Session

Date: November 16, 2024
Participants: S5 students (3rd year) from Civil Engineering
Organizing Departments: IEDC, Civil Engineering Department

The competition aimed to cultivate entrepreneurial thinking and familiarize students with MSME (Micro, Small, and Medium Enterprises) opportunities.

Competition Format: - Business plan development - Pitch presentation - Evaluation by industry experts - Judging criteria: Innovation, feasibility, market potential, social impact

MSME Awareness Coverage: - Classification of enterprises (micro, small, medium) - Government support schemes and incentives - Registration and compliance procedures - Business opportunities in MSME sector - Success stories of MSME entrepreneurs

Outcomes: - 25+ student teams participated - Developed basic entrepreneurial competencies - Awareness of government support mechanisms - Identified potential startup opportunities - Enhanced business planning skills among participants

2.6 Mix Master - Mix Design Training & Casting Competition

Date: January 22, 2025
Participants: Final-year and pre-final-year polytechnic students
Organizing Departments: Department of Civil Engineering, IEDC

A one-day practical training and competition event focusing on concrete mix design, a key component of civil engineering.

Training Components: - Mix design theory and calculations - Materials selection and proportioning - Quality control in mix design - Environmental considerations

Competition Format: - Cube casting using designed mixes - Compression testing and evaluation - Performance assessment - Creative approach evaluation

Learning Outcomes: - Practical understanding of mix design principles - Hands-on experience in concrete preparation - Quality assurance and testing procedures - Real-world engineering problem-solving - Team collaboration in practical settings

Participation Metrics: - 50+ polytechnic students participated - 15+ teams competed - Industry-relevant skills demonstrated - Career pathways in construction industry explored

2.7 KSUM FabLab Tinkerspace Visit

Date: January 29, 2025
Participants: 28 SSET students (various branches)
Venue: KSUM FabLab and Tinkerspace, Technopark, Thiruvananthapuram
Faculty Coordinator: Dr. Rahul R. Pai, Nodal Officer IEDC
Faculty Accompaniment: Mr. Anoob Jose, Asst. Professor, Dept. of ME

This visit exposed students to cutting-edge manufacturing and VR technologies, providing practical insights into prototyping and innovation infrastructure.

FabLab Facility Exposure: - 3D printing technologies (FDM, SLA, Polyjet) - Laser cutting and engraving systems - CNC milling machines - Water jet cutting technology - Electronics and Arduino workstations - 3D scanning capabilities

Tinkerspace Technology Experience: - Virtual Reality (VR) applications and immersive experiences - Problem-solving through VR-based puzzles - Hands-on experience with cutting-edge tech - Innovation space and collaboration environment

Student Observations & Learning: - Practical understanding of digital fabrication - Feasibility of rapid prototyping - Equipment capabilities and limitations - Real-world application possibilities for their projects - Entrepreneurial opportunities in maker spaces

Impact: - 28 students gained hands-on exposure to advanced technologies - Enhanced prototyping knowledge for their project ideas - Motivation for innovation and product development - Awareness of available resources for startups - Networking with FabLab professionals

2.8 Two-Day Online Workshop on IPR & Patent Filing

Date: February 4 & 6, 2025
Format: Online (virtual delivery)
Participants: 41 faculty members from SSET
Organizing Department: Department of Civil Engineering

A specialized workshop designed to enhance faculty understanding of Intellectual Property Rights and patent filing procedures.

Workshop Curriculum:

Day 1 - IPR Fundamentals: - Concept and importance of IP - Types of intellectual property (patents, trademarks, copyrights, designs) - IP in research and academic innovation - Global IP trends and statistics - Case studies of successful patent portfolios

Day 2 - Patent Filing Procedures: - Indian patent system overview - Patent filing procedures and documentation - Application process timeline - Prior art searching methodology - Patent examination process - Common rejection reasons and responses

Key Learning Outcomes: - 41 faculty members enhanced IP awareness - Understanding of patent procedures in India - Ability to identify patentable inventions - Knowledge of IP protection strategies - Enhanced capacity to guide student innovations

Impact on Institution: - Increased faculty capability in IP mentoring - Expected improvement in patent generation from SSET - Better guidance for student-led innovations - Strengthened research output documentation

2.9 Ethical Leadership & Human Values in Professional Environments

Date: February 5, 2025

Participants: 60+ ECE department students

Organizing Department: Department of Electronics & Communication Engineering

A seminar addressing ethical leadership and human values in professional contexts.

Session Content: - Concept of ethical leadership - Core values in organizations - Sustainable growth through ethical practices - Trust, respect, and integrity in business - Decision-making frameworks for ethical leaders - Organizational culture and values alignment - Real-world ethical dilemmas and case studies - Building ethical organizational legacy - Stakeholder responsibility and societal impact

Key Themes: - Ethical decision-making in complex situations - Balancing profit with social responsibility - Leadership integrity and credibility - Organizational culture development - Employee well-being and engagement

Learning Outcomes: - 60+ students enhanced ethical awareness - Understanding of human-centered leadership - Knowledge of sustainable business practices - Awareness of social responsibility - Enhanced professional values

2.10 Robotics Workshop for School Students

Date: February 10-11, 2025

Venue: CAD Lab, Mechanical Engineering Department

Participants: 30 students from Grade 9, GHS Palissery

Organizing Department: Department of Mechanical Engineering

An outreach workshop introducing robotics concepts to high school students.

Workshop Instructors: - Mr. Dinil Babu, Asst. Professor, ME Dept. - Mr. Ajith Kumar R, Asst. Professor, ME Dept. - Mr. Nikhil Asok N, Asst. Professor, ME Dept. - Mr. Suraj R, Asst. Professor, ME Dept. - Student volunteers from S8 ME

Workshop Modules: - Robotics fundamentals and applications - Mechanical design principles - Sensor and actuator concepts - Programming basics for robotics - Hands-on robot assembly and testing - Problem-solving through robotics - Career opportunities in robotics

Hands-on Activities: - Robot kit assembly - Programming exercises - Competition challenges - Troubleshooting practice

Student Impact: - 30 high school students introduced to robotics - Enhanced STEM interest and engagement - Career pathway exploration - Practical engineering experience - Motivation for engineering education

Institutional Impact: - Community outreach and engagement - School-college collaboration strengthened - Enhanced institutional visibility in local community - Pipeline development for future engineering students

2.11 Two-Day Workshop on Startups

Date: February 12-13, 2025
Participants: 30 student teams (~120 students)
Organizing Departments: IEDC, YIP, IIC

An intensive workshop focused on converting innovative ideas into startup ventures and securing funding.

Workshop Day 1 - From Idea to Startup: - Ideation and concept development - Market research and validation - Business model canvas - Problem identification and solution design - Target market analysis - Competitive landscape assessment

Workshop Day 2 - Funding & Implementation: - Funding mechanisms and sources - Bootstrapping strategies - Angel investors and venture capital - Government schemes for startups - Pitch development for funding - Legal and regulatory requirements - Implementation roadmap

Practical Components: - Group ideation sessions - Business model workshops - Mock pitching practice - Investor feedback sessions - Q&A with successful entrepreneurs

Key Outcomes: - 30 teams developed startup concepts - Enhanced understanding of funding landscape - Improved business planning skills - Developed pitch presentations - 5-8 teams identified for further mentoring - Overall participant satisfaction: 88%

2.12 Two-Day Workshop on Tinkercad, Arduino & ECU Remapping

Date: February 17-18, 2025
Participants: 60+ students from S2, S4, S6, S8 Automobile Engineering
Organizing Departments: TORQUE (Auto Dept. Association), SAE India Collegiate Club, IEDC, IQAC, IIC

A comprehensive hands-on workshop on embedded systems and vehicle electronics.

Workshop Facilitators: - Mr. Aravind P V, Asst. Professor, Dept. of Automobile Engineering - Dr. Vinoj P G, Associate Professor, Dept. of Electronics & Communication - Training team from KIA Motors and Lap 47

Workshop Sessions:

Session 1: Tinkercad Basics - Circuit design using Tinkercad - Component selection and circuit simulation - Basic electronics concepts - Prototyping workflow

Session 2: Arduino Programming - Arduino microcontroller introduction - Programming fundamentals - Sensor interfacing - Hands-on coding exercises - Project development

Session 3: ECU Remapping & Onboard Diagnostics - Engine Control Unit (ECU) concepts - Vehicle diagnostics systems - Sensor and actuator operation - Performance tuning basics - Diagnostic tools and techniques

Practical Exercises: - Circuit breadboarding - Arduino code development and testing - ECU scanning and interpretation - Real vehicle diagnostic procedures - Hands-on troubleshooting

Key Outcomes: - 60+ students gained practical embedded systems knowledge - Enhanced understanding of vehicle electronics - Certificates awarded to all participants - Industry-relevant skills developed - Enhanced career readiness in automotive sector - Strong industry collaboration demonstrated

2.13 VR-Integrated Structural & Interior Design Workshop

Date: February 18, 2025

Participants: 35 S8 Civil Engineering students

Venue: Department of Civil Engineering

Facilitated by: TECH AGHI (DPIIT-recognized Ed-Tech startup)

Organizing Department: FRAMES (CE Department Association)

An innovative workshop combining virtual reality with architectural and interior design, including career guidance.

Workshop Components:

VR Technology Introduction: - Virtual Reality fundamentals - VR applications in construction and design - Immersive design visualization - 3D modeling in virtual environments

Structural Design in VR: - Building models in virtual space - Structural analysis visualization - Design problem-solving in VR - Walkthrough and assessment

Interior Design Applications: - Space planning in VR - Material selection and visualization - Lighting and acoustics simulation - Client presentation using VR

Career Guidance: - Career pathways in architectural technology - VR designer roles and opportunities - Industry trends in architectural tech - Skill requirements for emerging roles - Internship and placement opportunities

Learning Outcomes: - 35 students experienced immersive design technology - Enhanced visualization and spatial reasoning skills - Understanding of future design tools - Career pathway clarity in tech-enabled architecture - Networking with EdTech professionals

2.14 Industrial Visit - Nitta Gelatin India Ltd. (NGIL)

Date: February 19, 2025

Participants: 40 EEE department students

Organizing Department: Department of Electrical & Electronics Engineering

A field visit to a major industrial facility providing practical exposure to manufacturing processes, automation, and environmental management.

Company Overview - Nitta Gelatin India Ltd: - Converts raw cattle bone into products: Collagen, Di-calcium Phosphate - Advanced manufacturing processes and automation - Sophisticated quality control systems - Multi-stage conversion (57 days processing time)

Visit Itinerary:

Morning Session (9:55-11:30 AM): - Welcome by HR Manager Mr. Suraj - Company overview and product portfolio - Manufacturing processes and raw materials - Corporate social responsibility initiatives - Sustainable development measures

Field Visit (11:30 AM-1:00 PM): - Plant floor walkthrough - Observation of key processes: - Cleaning of cattle bones - Grinding operations - Acidification procedures - Electrical and control systems observation - Equipment and machinery tour - Automation and control explanations

Key Observations:

Manufacturing Excellence: - Advanced machinery ensuring efficiency - Multi-stage processing and quality control - Strict hygiene standards maintained - Well-trained workforce with safety protocols

Environmental Management: - Comprehensive Effluent Treatment Plants (ETP) - Wastewater purification systems - Treated water diversion to natural channels - Waste recovery and recycling programs - Air pollution control measures

Workplace Safety: - Hazard-free work environment - Safety protocol compliance - Employee training on safety measures - Occupational health monitoring

Learning Outcomes: - 40 students gained practical industrial exposure - Understanding of electrical systems in manufacturing - Awareness of environmental responsibility - Knowledge of automation and control systems - Insights into corporate social responsibility - Career opportunities in industrial sector

2.15 Overview of SAE Student Activities

Date: February 25, 2025

Participants: 40+ Automobile Engineering students

Speaker: Mr. Kasiraja, SAE India Representative

Organizing Department: Automobile Engineering Department

An informational session on SAE India and its student activities, emphasizing industry practices and multidisciplinary collaboration.

Session Coverage:

SAE Organization Overview: - Mission and vision of SAE - Membership benefits and advantages - Professional development opportunities - Industry recognition of SAE membership

Event Opportunities: - Design competitions (multidisciplinary focus) - Formula Student events - Baja SAE competitions - EcoCAR and similar challenges - Student conferences and workshops

Industry Best Practices: - Diverse industrial methodologies - Automotive industry standards - Emerging technologies in automotive - Sustainability and electrification trends - Future of mobility

Multidisciplinary Approach: - Importance of cross-functional teams - Integration of mechanical, electrical, software - Project management in team settings - Collaborative problem-solving - Industry-standard practices

Career Development: - Networking with industry professionals - Internship and placement opportunities - Skill development through competitions - Industry certifications - Career progression pathways

Key Outcomes: - 40+ students enhanced understanding of SAE - Awareness of competitive opportunities - Motivation for multidisciplinary collaboration - Career pathway clarity - Registration for SAE events increased

2.16 Workshop on Career as a Builder for CE Students

Date: February 27, 2025

Participants: 46 students from 2nd, 3rd, and final year CE

Organizing Department: Department of Civil Engineering

Key Speaker: Mr. K. Anil Varma (Construction Industry Expert)

A comprehensive career guidance workshop exploring pathways and opportunities in the construction and building industry.

Workshop Sessions:

Session 1: Construction Industry Overview - Market size and growth trends - Key sectors (residential, commercial, infrastructure) - Project types and scales - Career opportunities across sectors

Session 2: Career Pathways for Civil Engineers - Site engineer roles and responsibilities - Project management positions - Design and consulting careers - Specializations (structural, geotechnical, etc.) - Entrepreneurial opportunities in construction

Session 3: Required Skills & Competencies - Technical expertise - Project management skills - Leadership and team management - Communication and stakeholder management - Financial and cost management - BIM and modern construction technology

Session 4: Educational Pathways - Certifications and specializations - Continuous professional development - Industry-recognized credentials - Advanced degree opportunities - Skill development programs

Key Outcomes: - 46 students gained career clarity - Enhanced understanding of construction industry - Awareness of skill requirements - Motivation for career in civil engineering - Networking with industry professionals - Placement and internship opportunities identified

2.17 Two-Day Drone Workshop

Date: March 3-4, 2025

Participants: 50+ students from Mechanical Engineering

Organizing Department: Department of Mechanical Engineering
Resource Persons: Drone technology experts

A hands-on workshop on drone technology, applications, and operations.

Workshop Content:

Day 1: Drone Fundamentals - Types of drones (multicopter, fixed-wing, hybrid) - Components and systems - Aerodynamics principles - Flight dynamics and control - Sensor technologies (camera, LiDAR, thermal) - Communication and telemetry systems

Day 2: Practical Operations & Applications - Flight controls and maneuvering - Safety protocols and regulations - Applications in various industries: - Aerial surveying and mapping - Photography and videography - Agriculture and monitoring - Search and rescue - Infrastructure inspection - Delivery systems

Hands-on Activities: - Simulator-based flight training - Drone assembly and configuration - Sensor operation and calibration - Flight demonstration and practice - Troubleshooting procedures - Application-specific use cases

Key Outcomes: - 50+ students gained drone technology knowledge - Practical flight experience acquired - Understanding of drone applications - Awareness of regulatory requirements - Career opportunities in drone industry - 10+ students interested in drone-based projects

2.18 Leadership & Entrepreneurship Enrichment Program (LEEP) 2025

Date: March 20-21, 2025
Duration: 2 days
Participants: 143 undergraduate students from various departments
Organizing Departments: SSET, IEDC, IIC, IQAC
Partner: EY GDS (Ernst & Young Global Delivery Services) in collaboration with Mission Better Tomorrow

An intensive program on leadership, entrepreneurship, sustainability, and emerging technologies.

LEEP 2025 Program Structure:

Day 1 - Foundations & Visioning:

Session 1: Leadership Fundamentals - Concept of transformational leadership - Emotional intelligence and self-awareness - Decision-making frameworks - Ethical leadership principles - Change management and adaptability

Session 2: Entrepreneurship Essentials - Startup ecosystem overview - Innovation and ideation processes - Business model development - Risk management and mitigation - Funding pathways for ventures

Day 2 - Innovation & Future Technologies:

Session 3: Sustainability in Business - Sustainable development goals (SDGs) - Environmental responsibility - Social impact measurement - Circular economy concepts - Corporate social responsibility

Session 4: AI & Cybersecurity Basics - Artificial Intelligence fundamentals - Machine learning applications - Cybersecurity threat landscape - Data privacy and protection - Future of AI and cyber trends

Interactive Components: - Case study analyses - Group discussions and debates - Real-world problem scenarios - Peer learning sessions - Expert Q&A interactions

Deliverables & Assessments: - Business pitch development - Sustainability action plans - Digital transformation proposals - Group project presentations - Certificates of participation

Key Outcomes & Impact: - 143 students participated (48% female, 52% male) - Enhanced leadership competencies - Entrepreneurial mindset development - Awareness of sustainability imperatives - Basic AI and cybersecurity understanding - Overall satisfaction rating: 92% - 25+ students identified for leadership mentoring program - 15+ potential startup ideas generated - Strong interest in follow-up advanced programs

Post-Program Impact: - Establishment of Leadership Club within SSET - Formation of 8 student-led sustainable initiatives - Increased participation in entrepreneurship challenges - Enhanced focus on social impact projects

3. FACILITIES CREATED & SUPPORT SYSTEMS

3.1 Physical Infrastructure

Available Facilities: - Seminar halls for workshops and events - Laboratory spaces for hands-on training - CAD labs with advanced design software - Maker spaces (through KSUM FabLab partnership) - Conference rooms for meetings and mentoring - Display areas for innovation showcase

Technology Infrastructure: - Computer labs with essential software - 3D printing capabilities - Laser cutting and engraving systems - CNC machines and other fabrication tools - VR/AR demonstration equipment

3.2 Support Mechanisms

Mentoring Support: - Faculty mentors from all departments - Industry professional mentors - Successful entrepreneur advisors - Peer mentoring programs

Training & Skill Development: - Hackathon training and support - Business plan development workshops - Technical skill-building programs - Leadership and soft skills training - Patent and IP awareness programs

3.3 Partnerships & Collaborations

Key Partners: - Kerala Startup Mission (KSUM) - Primary state-level partner

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4. EFFECTIVENESS: EVIDENCE OF IMPACT

4.1 Quantitative Impact Metrics

Participation Data: - **Total Participants**: 400+ students across all initiatives - **Average Session Satisfaction**: 87% - **Female Participation**: 38% of total participants - **Faculty Engagement**: 41 faculty members in IPR workshop - **School Outreach**: 30 high school students (robotics workshop)

Event Performance: - **18 Major Initiatives** organized successfully - **0% Cancellation Rate** - All events completed as planned - **Average Attendance Rate**: 92% of registered participants - **Cross-disciplinary Participation**: 7 engineering branches represented

4.2 Qualitative Evidence

Student Feedback: - Strong positive feedback on workshop quality - High satisfaction with industry exposure - Appreciation for practical learning approaches - Enhanced career clarity post-events - Improved entrepreneurial confidence

Faculty Feedback: - Enhanced understanding of IP and patents (from IPR workshop) - Better equipped to guide student innovations - Improved industry exposure and connections - Recognition of IEDC's role in institutional development

4.3 Innovation & Project Generation

Startup Ideas Generated: - 25+ business concepts identified through workshops - 8-10 ideas selected for further mentoring - 3 teams pursuing formal startup registration - Patent filing by 2 faculty-student teams

Project Outcomes: - Multiple student projects recognized at inter-college events - 2 projects selected for state-level competition - 1 project awarded recognition at national forum

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5. LIST OF BENEFICIARIES

5.1 SIH Internal Hackathon Beneficiaries

Participants: 150+ students from: - Computer Science & Engineering - Mechanical Engineering - Civil Engineering - Electrical & Electronics Engineering - Electronics & Communication Engineering - Automobile Engineering

5.2 Boot Camp Beneficiaries

Participants: 80+ students and faculty members - Interdepartmental participation - Enhanced entrepreneurship knowledge - Networking opportunities with mentors

5.3 IEDC Summit Participants (NIT Calicut)

SSET Representatives: 30+ students - National-level exposure - Peer learning from 10,000+ participants - Industry and investor networking

5.4 Robotics Workshop Beneficiaries (School Students)

Participants: 30 Grade 9 students from GHS Palissery - STEM interest enhancement - Career pathway introduction - Community outreach impact

5.5 Business Plan Competition

Teams: 25+ student teams from Civil Engineering - Entrepreneurial thinking development - MSME sector awareness - Business planning skills

5.6 FabLab & Tinkerspace Visit

Participants: 28 students from multiple branches - Advanced technology exposure - Prototyping capability understanding - Innovation infrastructure awareness

5.7 IPR & Patent Filing Workshop

Faculty Participants: 41 faculty members - Enhanced IP knowledge - Better student guidance capability - Increased patent filing potential

5.8 Startup Workshop

Teams: 30 student teams (~120 students) - Startup concept development - Funding awareness - Business model understanding

5.9 Arduino & ECU Workshop

Participants: 60+ automobile engineering students - Embedded systems knowledge - Vehicle electronics expertise - Industry-relevant skills

5.10 VR Design Workshop

Participants: 35 Civil Engineering students (S8) - VR technology experience - Advanced design visualization - Career pathway in architectural technology

5.11 Industrial Visit (Nitta Gelatin)

Participants: 40 EEE department students - Manufacturing process understanding - Electrical systems in industry exposure - Environmental management awareness - Career opportunities recognition

5.12 LEEP 2025 Participants

Students: 143 undergraduate students - Leadership skill development - Entrepreneurship foundation - Sustainability awareness - AI and cybersecurity introduction

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APPENDICES

Appendix A: Detailed Event Timeline

Sl. No.	Activity	Date	Participants	Status
1	Smart India Hackathon Internal	18-09-2024	150+	Completed
2	Cluster Meet at ASIET	25-09-2024	100+	Completed
3	IEDC Summit at NIT Calicut	19-10-2024	30+	Completed
4	IEDC Boot Camp	05-06-11-2024	80+	Completed
5	Business Plan Competition	16-11-2024	25+ teams	Completed
6	Mix Master Competition	22-01-2025	50+	Completed
7	KSUM FabLab Visit	29-01-2025	28	Completed
8	IPR & Patent Workshop	04, 06-02-2025	41 faculty	Completed
9	Ethical Leadership Session	05-02-2025	60+	Completed
10	Robotics Workshop (School)	10-11-02-2025	30 school	Completed
11	Startup Workshop	12-13-02-2025	30 teams	Completed
12	Arduino & ECU Workshop	17-18-02-2025	60+	Completed
13	VR Design Workshop	18-02-2025	35	Completed
14	Industrial Visit	19-02-2025	40	Completed
15	SAE Overview Session	25-02-2025	40+	Completed
16	Career as Builder Workshop	27-02-2025	46	Completed
17	Drone Workshop	03-04-03-2025	50+	Completed
18	LEEP 2025	20-21-03-2025	143	Completed
TOTAL	**18 Major Initiatives**	**2024-2025**	**400+**	

Appendix B: Key Performance Indicators

Participation Metrics: - Total participants: 400+ - Average event attendance: 92% - Repeat participants: 35% (showing sustained engagement) - Cross-disciplinary participation: 7 engineering branches

Quality Metrics: - Average satisfaction rating: 87% - Positive feedback: 91% - Event completion rate: 100% - Faculty satisfaction: 89%

Outcome Metrics: - Startup ideas generated: 25+ - Teams pursuing startups: 8-10 - Patent filings initiated: 2 - Student projects recognized: 3+

Partnership Metrics: - Industry partners engaged: 8+ - Government partnerships: 2 (KSUM, Government of Kerala) - Academic partnerships: 5+ colleges

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This comprehensive report documents all activities, initiatives, and outcomes of IEDC-SSET in association with departments and IQAC during the 2024-2025 academic year. All data has been compiled from event reports, participant feedback, and institutional records.