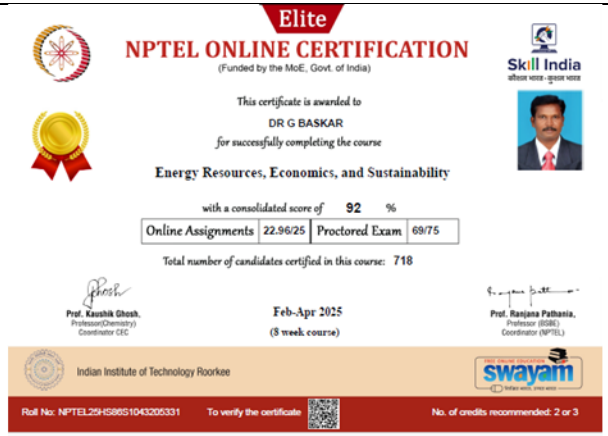
MAY 2025

DEPARTMENT OF BIOTECHNOLOGY

S.No.	Title of the Events and Photographs	Details of the Event
1.	COLLABARATIVE QUALITY INITIATIVES WITH OTHER INSTITUTIONS	
2.	INDUSTRIAL VISIT	
3.	GUEST LECTURE	
4.	BIOTECH CLUB ACTIVITY	
5.	FDP/WORKSHOP/CONFERENCE/SKILL DEVELOPMENT	Dr. G. Baskar has successfully completed their NPTEL/Swayam Online Certification in Energy resources, economics and sustainability. Ms. A. Anli Dino has successfully completed their NPTEL/Swayam Online Certification in animal waste management. Dr. M. Shree Rama has successfully completed their NPTEL/Swayam Online Certification animal waste management.



Elite

NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

DR G BASKAR

for successfully completing the course

Energy Resources, Economics, and Sustainability

with a consolidated score of 92 %

Online Assignments	22.96/25	Proctored Exam	69/75

Total number of candidates certified in this course: 718

Prof. Kaushik Ghosh, Professor(Chemistry) Coordinator CEC

Feb-Apr 2025

(8 week course)

Prof. Ranjana Pathania, Professor (EGBE) Coordinator (NPTEL)

Indian Institute of Technology Roorkee

swayam

Roll No: NPTEL25HS86S1043205331 To verify the certificate No. of credits recommended: 2 or 3

INI

SWAYAM ONLINE COURSE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

ANLI DINO A

for successfully completing the course

Animal Waste Management

with a consolidated score of 70 %

Online Assignments	24.17/25	Proctored Exam	45.92/75

Total number of candidates certified in this course: 192

Feb-Mar 2025

(4 week course)

Dr. Ashutosh Mohan, Coordinator, B.H.U., Varanasi

BANARAS HINDU UNIVERSITY

swayam

Roll No: INI25BT01S143206353 To verify the certificate No. of credits recommended: 1 or 2

INI

SWAYAM ONLINE COURSE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

SHREE RAMA M

for successfully completing the course

Animal Waste Management

with a consolidated score of 81 %

Online Assignments	23.33/25	Proctored Exam	58.16/75

Total number of candidates certified in this course: 192

Feb-Mar 2025

(4 week course)

Dr. Ashutosh Mohan, Coordinator, B.H.U., Varanasi

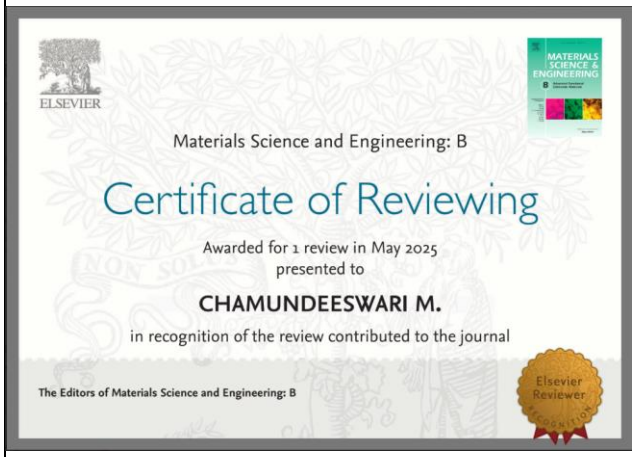
BANARAS HINDU UNIVERSITY

swayam

Roll No: INI25BT01S143206417 To verify the certificate No. of credits recommended: 1 or 2

AWARDS WON BY FACULTY/STAFF ACHIEVEMENTS

6.	 	**Dr. G. Baskar has received reviewer certification for his contribution in BMC Biotechnology and Urolithiasis** **Dr. M. Chamundeeswari has received reviewer certification for her contribution to Journal of Material Sciences and Engineering**

	Dr. G. Baskar – *a copy of proof*  ***Dr. M. Chamundeeswari -a copy of proof***	
7.	**INDUSTRIAL PROJECTS DONE BY STUDENTS**	**-**
8.	**PAPER PUBLICATIONS/ BOOK CHAPTERS/PATENT PUBLICATIONS** (12) PATENT APPLICATION PUBLICATION (19) INDIA (22) Date of filing of Application :09/05/2025 (21) Application No.202541044828 A (43) Publication Date : 30/05/2025 (54) Title of the invention : Smart Milk Analyzer: A Compact, Paper-Based Device for Rapid and CostEffective Milk Quality Testing and Retail Integration (51) International classification :G01N0033543000, G02B0030560000, C12Q0001689700, A23C0009120000, G01N0033020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA (71)**Name of Applicant :** **1)Dr. M. CHAMUNDEESWARI** Address of Applicant :DEPARTMENT OF BIOTECHNOLOGY, St. JOSEPH'S COLLEGE OF ENGINEERING, OMR, CHENNAI - 119 Chennai ---------- ---------- **Name of Applicant : NA** **Address of Applicant : NA** (72)**Name of Inventor :** **1)Dr. M. CHAMUNDEESWARI** Address of Applicant :DEPARTMENT OF BIOTECHNOLOGY, St. JOSEPH'S COLLEGE OF ENGINEERING, OMR, CHENNAI - 119 Chennai ---------- ---------- **2)ARJUN SATHISH R** Address of Applicant :DEPARTMENT OF BIOTECHNOLOGY, St. JOSEPH'S COLLEGE OF ENGINEERING, OMR, CHENNAI - 119 Chennai ---------- ---------- **3)HEMAVARSHINI R** Address of Applicant :DEPARTMENT OF BIOTECHNOLOGY, St. JOSEPH'S COLLEGE OF ENGINEERING, OMR, CHENNAI - 119 Chennai ---------- ---------- **4)SUCHARITA NAGESH** Address of Applicant :DEPARTMENT OF BIOTECHNOLOGY, St. JOSEPH'S COLLEGE OF ENGINEERING, OMR, CHENNAI - 119 Chennai ---------- ---------- (57) Abstract : Abstract In the evolving landscape of food technology and quality assurance, the need for an efficient and accessible dairy testing has become increasingly important. This project addresses the challenge of creating a single, compact device capable of testing essential milk parametersincluding fat content, solids-not-fat (SNF), protein levels, and common adulterants—while also doubling as a modular and appealing unit for the sale of milk and dairy products. The proposed solution revolves around a paper-based biosensor strip integrated with a digital detection system. Each strip is chemically coated to detect specific milk quality indicators, supported by a chitosan-selenium nanoparticle coating for stability. The results are interpreted through a color sensor connected to an Arduino Uno or ESP32 system, which can relay data via Bluetooth or Wi-Fi to an optional mobile application or LCD display.This innovative device delivers rapid, reliable, and low-cost testing with high scalability. A single test strip costs approximately ₹7, and the overall device ranges between ₹5,000 and ₹15,000, making it accessible for rural vendors, dairy farmers, and households. With a turnaround time of just minutes and the ability to detect multiple parameters simultaneously, the device addresses critical needs in food safety, public health, and industrial quality control. The project aligns with key Sustainable Development Goals (SDGs), including Zero Hunger, Good Health and Well-being, and Industry, Innovation, and Infrastructure. Currently at TRL 4, the system has been validated in laboratory settings and is ready for further development and field testing to enable broader adoption. No. of Pages : 14 No. of Claims : 8	**Dr. Chamundeeswari has published a patent entitled "Smart Milk Analyzer: A Compact, Paper-Based Device for Rapid and Cost-effective Milk Quality Testing and Retail Integration"**

9.	**FUNDED PROJECTS**	
10.	**STAFF CONFERENCE PRESENTATION**	

DEPARTMENT OF CIVIL ENGINEERING

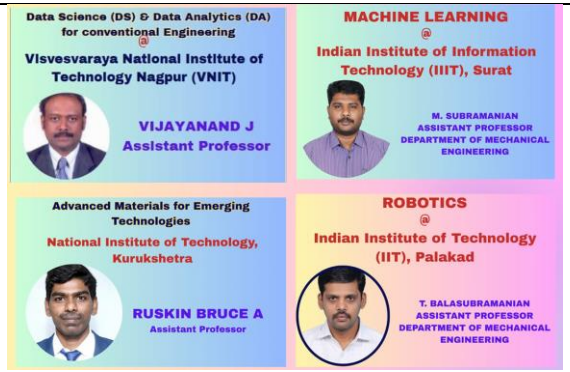
Sl. No.	**Photographs Captured During Events (Briefs About the Photographs)**	**Corresponding remarks (Minimum 300 words) in regarding the status of activity execution stating**
1.	**Other activities (if any)**	Dr. K.Vijai published a patent titled as " Nano Silica Infused High Performance Concrete for Improved Durability on 02/5/2025.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

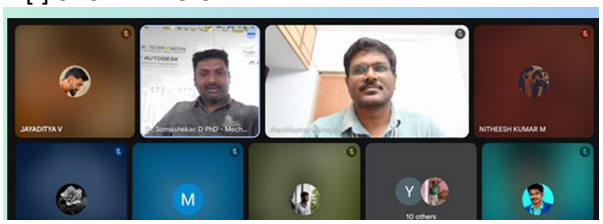
Sl. No.	Event with Photo	Description
1	Seminar - II ,III &IV Year students	
		**Date** : 14.05.2025 **Venue** : **mini auditorium** **Nature of Event** : Seminar Participants : II ,III &IV Year students Organized by : New Prince Shri Bhavani College of Engineering & Technology Objective : • To educate participants about a specific topic, foster discussions and interactions, and promote knowledge sharing and networking among attendees. • It also serve as a platform for professional development, skill enhancement, and exploring new ideas Outcome : • To improve communication and critical thinking skills to deepened knowledge and enhanced career prospects. • To gain a more nuanced understanding of a specific topic through discussions and presentations, developing abilities like persuasive speaking, effective communication, and problem-solving

DEPARTMENT OF MECHANICAL ENGINEERING

Sl No	Name of the Activity	Remarks
1	INDUSTRY COLLABORATION: 	Mr. N. Sathishkumar, Assistant Professor and faculty member of the PEP CAD & 3D Printing Centre, along with his team, visited Stellantis Corporation on 09.05.2025 to explore potential opportunities for student internships, placements, and collaborative projects. This visit represents a significant step toward strengthening our industry relationships and enhancing the practical learning experience for our students
2		➢ Dr. RGS. Nixon, Associate Professor from the department of Mechanical Engineering published a article titled " Preparation of S, Zn co-doped Sn02 nanostructures and their insight into the structural, morphological, optical and photocatalytic activity" in Research on chemical Intermediates, Q2 Journal. ➢ Mr. G. Ashwin Prabhu, Assistant Professor & Dr. K. M. Kumar, Associate Professor from the Department of Mechanical Engineering has Successfully Published an Indian Utility Patent titled "Multi-Functional Robotic Arm for Precision Manufacturing" on 02/05/2025. Application No: 202541033426 A. ➢ Mr. M. Subramanian, Assistant Professor from Department of Mechanical Engineering has published a paper titled "Telugu text for high-quality bird imagery synthesis with an enhanced stable diffusion model" in International Journal of Information Technology, Springer Publications. DOI : 10.1007/s41870-025-02564-3

3	 **Staffs Selected For AICTE QIP Program**	➢ Staffs got selected for QIP program on different topics at different centres.
5	TNSCST 	➢ The Department of Mechanical Engineering proudly congratulates Parasuram S. and Naveen K. (Batch 2021–2025) for their remarkable achievement in securing project approval under the Student Project Scheme (2024–25) by the Tamil Nadu State Council for Science and Technology (TNSCST). Their innovative project titled "Development of a Hybrid Solar with Backup Heating System for Continuous Operation" has been awarded a grant of ₹7,500. The project is guided by Dr. G. M. Lionus Leo, Associate Professor, who has been instrumental in mentoring and supporting the team throughout their research journey. This achievement highlights our department’s commitment to fostering creativity, sustainability, and real-world problem-solving through student led initiatives

6		➢ Final year Mechanical Engineering students Gokul R and Harlan Rhodicson G, mentored by Mr. K. Pravinkumar, M.E., (Ph.D.), have been shortlisted from over 15,337 teams across Tamil Nadu in the Naan Mudhalvan – Niral Thiruvizha 2.0 innovation challenge organized by the Tamil Nadu Skill Development Corporation. Their project, titled "Advanced Mechanization and Hygienic Infrastructure Development for Jaggery Production Units," focuses on improving hygiene, automation, and procurement efficiency in jaggery manufacturing. The team successfully presented a prototype to the jury at Anna University Industry Collaboration Centre on 19/05/2025, earning an initial ₹10,000 grant. If they win this round, they will receive ₹1,00,000 to develop a real-time model. We congratulate the team and wish them success in the upcoming stages of the competition
	INTERNSHIP: 	➢ Our students continue to make us proud by gaining prestigious internships in reputed institutions and industries ➢ Logaraj R (Batch: 2022–2026) has been selected as a Nano Research Trainee at NIT Tiruchirappalli. ➢ Jai Akash Lal A (Batch: 2022–2026) secured an HVAC Engineer Intern role at Innowell, supported by ISHRAE, with a stipend of ₹4000. ➢ Ravikrishnan M (Batch: 2022–2026) has been selected for a Research Work internship at IIITDM Kancheepuram. During the internship, Ravikrishnan actively contributed to the research and development activities focused on hydrogen production through water electrolysis. ➢ Jeriel Samuel J (Batch: 2022–2026) has earned a Machinery Engineer Intern position at Larsen & Toubro Limited ➢ A total of 12 students from Batch: 2022–2026) has been selected for a Brakes India Private Limited internship. It is one the be top most core company. ➢ We are delighted to announce that four second-year students from the Department of Mechanical Engineering, St. Joseph's College of Engineering (Batch: 2023–2027), have secured internships at Bharat Heavy Electricals Limited (BHEL), Trichy — one of India's foremost engineering and manufacturing enterprises in the power sector.

		Congratulations to Reshma S, Sathish S, Dhinakaran R, and Kokul S for this remarkable opportunity to explore cutting edge technologies and industrial practices. Their selection reflects the department's dedication to nurturing practical exposure and industry readiness. We wish them a successful and enriching internship experience ahead
	IE[I] STUDENT'S CHAPTER 	➢ The IE[I] Students Chapter of the Department of Mechanical Engineering organized an enlightening and career-defining session for its members, focusing on CAE, Automotive Design, and Masters in Industrial Design. The guest speaker, Dr. Somasheaker D, Head of the Design Division at Pumo Technology, Bangalore, delivered an eye-opening talk that explored the current trends, future scope, and industry demand in these specialized domains.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

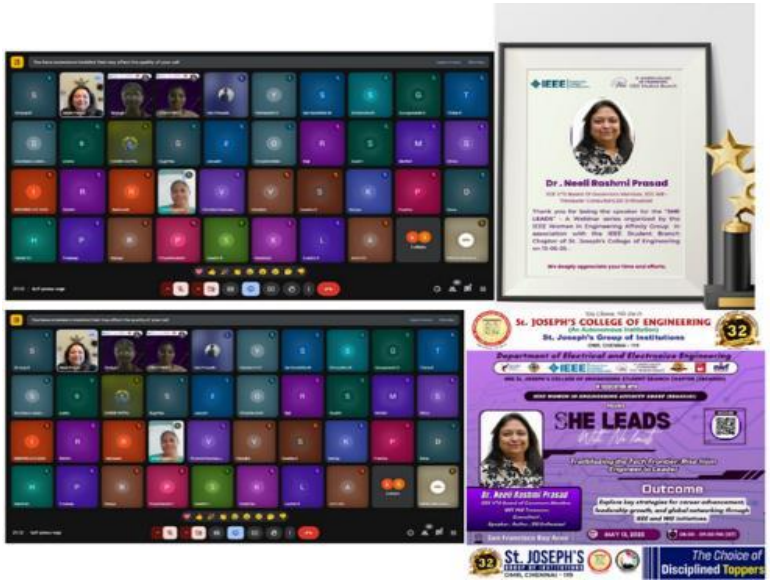
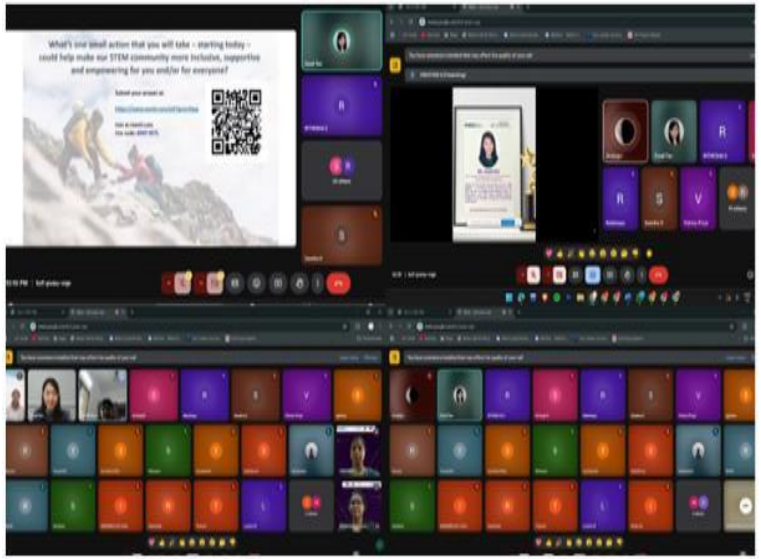
Sl.	Photographs Captured During Events	Corresponding remarks (Minimum 300 words)

No.		
1.	**Graduation day**  *PIC: EVENT PHOTO*	Graduation day was held on May 10 2025, 2019-23 batch and 2020-24 batch graduates got their degree certificates. Rank certificates were distributed to eligible graduates.
2.	**IGEN**	IGEN ENERGATHON event was a one of its kind event where a confluence of students and faculty was facilitated for insightful discussion on attainment of Sustainable Development Goals and to create awareness on Green Energy initiatives and Sustainability

	 *PIC: EVENT POSTER*	
3.	**YOUNG INNOVATORS PROGRAM**  *PIC: EVENT POSTER*	Young innovators program for school and college students was organized by St. Joseph's college of Engineering on 17th May 2025. Stall of Drone lab from EEE department was available.

4.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE SB of St. Joseph's College of Engineering (SBC60101), in collaboration with the IEEE SJCE WIE Affinity Group (SBA60101), organized a webinar titled **"SHE LEADS – With No Limit: Session 4"** on 6.5.25. The topic of the session was "IEEE and WIE – A Journey of Growth, Opportunities, and Celebrations." **Dr. Windhya Rankothge, Post-Doctoral Research Associate at the Canadian Institute for Cybersecurity and Chair – IEEE WIE Day Cybersecurity R&D,** led the session. She shared her journey in cybersecurity, highlighting the role of IEEE and WIE in enabling leadership, global networking, and career growth. The webinar saw active participation from 35 attendees, with an engaging Q&A segment.
5.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE IAS Student Branch Chapter of St. Joseph's College of Engineering, in association with the Department of Electrical and Electronics Engineering and IEEE IAS Madras Section, successfully conducted a technical webinar titled **"VisionCraft – AI Based Video Analytics"** on May 08, 2025. **Dr. Supavadee Aramvith, Head of the Multimedia Analytics and Processing Research Unit, Chulalongkorn University, Thailand,** delivered an insightful session on the role of AI in real-time video analysis and its applications across sectors like security, healthcare, and urban management. With participation from over 30 students, the session explored AI techniques in video analytics, system architecture, ethical concerns, and career opportunities.

6.	**IEEE activities**  ***PIC: EVENT PHOTO***	The IEEE IAS SJCE Student Branch Chapter, in association with the Department of Electrical and Electronics Engineering and IEEE Industry Applications Society Madras Section, successfully organized a technical webinar titled "**Data Horizon – Discovering Research Frontiers**" on May 11, 2025. The distinguished speaker, **Mr. Stephen Okwiri, Secretary of IEEE Kenya Section and IEEE DataPort Ambassador,** delivered an enlightening session on **"Opportunities for Students & Researchers in IEEE DataPort**." He elaborated on how IEEE DataPort serves as a dynamic platform offering access to high-quality datasets and fostering collaborative research. Mr. Okwiri emphasized the significance of data-driven research and showcased pathways for students to engage with global research communities through IEEE DataPort.
7.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE SJCE Women in Engineering (WiE) Affinity Group (SBA60101), successfully conducted a touching Mother's Day tribute titled **"Moments with Mom – A Mother's Day Tribute"** on May 11, 2025. This initiative was launched to celebrate the incredible love, strength, and dedication of mothers, encouraging students and staff to express their heartfelt gratitude. As part of this tribute, **participants were invited to submit a photo with their mother and a one-line message expressing their love and appreciation.** These submissions were compiled into a beautiful digital collage/poster shared during the Mother's Day celebration to commemorate the occasion and spotlight the essence of maternal love. A total of 16 responses were received, each reflecting personal and emotional connections between the participants and their mothers.

8.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101), in collaboration with the IEEE SJCE Women in Engineering Affinity Group (SBA60101), successfully organized a webinar titled **SHE LEADS - Trailblazing the Tech Frontier: Rise from Engineer to Leader**, on 13th May, 2025. The session was led by **Dr. Neeli Rashmi Prasad, IEEE VTS Board of Governors Member IEEE WIE Treasurer Consultant, Speaker, Author, DEI Enthusiast**. She delivered an insightful session exploring Trailblazing the Tech Frontier: Rise from Engineer to Leader. The event witnessed enthusiastic participation from students and professionals, who engaged in discussions on the transformative impact of smart solutions in creating a greener tomorrow.
9.	**IEEE activities**  ***PIC: EVENT POSTER & PHOTO***	The IEEE St. Joseph's College of Engineering Student Branch (SBC60101), in collaboration with the IEEE SJCE Women in Engineering Affinity Group (SBA60101), successfully organized a webinar titled **SHE LEADS – Impact | Influence | Independent** on 20th May 2025. The session was led **Ms. Ewell Tan Certified senior project manager ,Certified associate NLP Practition**. She delivered an insightful session on the topic "Beyond boundaries, Building futures". The event witnessed enthusiastic participation from students and professionals, who engaged in discussions on the impact of artificial intelligence in empowering women, leadership, innovation, and mentorship. The discussions also highlighted the importance of diversity, inclusion, and mentorship in contributing to equal opportunities in the STEM field. Attendees appreciated the session's practical insights and inspiring real-life experiences. As a token of appreciation, a memento was presented to the speaker. The event concluded with a vote of thanks, acknowledging Ms. Ewell Tan valuable insights and the participants' active involvement.

10. **Faculty NPTEL Acheivers**

S.NO.	Name of the Staff	Name of the Course	Number of Weeks	Certification Level
1.	Mr S S Harish	Education For Sustainable Development	12 weeks	Elite with Silver
2.	Mr H Umesh Prabhu	Deep Learning	12 weeks	Elite
3.	Mr H Umesh Prabhu	Affective Computing	12 weeks	Elite with Silver
4.	Mr T Sri Ananda Ganesh	Deep Learning	12 weeks	Elite
5.	Mr H Prasad	Deep Learning	12 weeks	Elite
6.	Mr H Prasad	Data Analytics with Python	12 weeks	Elite

11. **Faculty Publication**

- Our faculty **Dr. Jayarama Pradeep** published an article titled "Smart cold controlled Onion warehouse design to improve shelf life" in Internatonal conference on advanced computing and communication systems.
- Our faculty **Dr. Narmadha T V** published an article titled "IDNLS: A robust development of multiple sclerosis segmentation and classification methodology using Intelligent deep neural learning scheme in 4th Asian conference on innovation in Technology
- Our faculty **Mr.K.Aravindhan** published a book chapter titled "Consumer Behavior Prediction Using Machine Learning Algorithms" in Exploring Psychology, Social Innovation and Advanced Applications of Machine Learning
- Our faculty **Mr.N.Jeyaprakash** published a book chapter titled "Machine Learning for Fraud Detection and Financial Crimes" in Forensic Intelligence and Deep Learning Solutions in Crime Investigation.
- Our faculty **Dr.N.Chidambararaj** published a book chapter titled "Machine learning for natural disaster prediction and prevention" in Exploring Psychology, Social Innovation and Advanced Applications of Machine Learning.
- Our faculty **Mr.N.Jeyaprakash** published a scopus indexed Perl eBook: "Unleashing Machine Learning with TensorFlow.js in a Node.js and SQL Environment" in SPRINGER- Computer, Communication, and Signal Processing. Smart Solutions Towards SDG.
- Our faculty **Dr.C.Venkatesh Kumar** published a paper titled "War Strategy Optimization Algorithm to Solve Economic Dispatch Problems" in 10th International Conference on Advanced Computing and Communication Systems (ICACCS)
- Our faculty **Mr H Umesh Prabhu** has co – authored a paper titled Recent Advances in Graphene Based Metal Oxide Composites for Super Capacitors, which has been published in Advanced Sustainable Systems

12. **Faculty recognition and patent**

- Our faculty **Dr.T.V.Narmadha** is shortlisted for Centre of Engineering Education Excellence(CEEE) with a stipend of Rs.50000 at IIT Madras
- Our faculty **Ms. R.G.Nirmala** has received fund under Tamilnadu State council for Science and Technology for the project Enhanced hybrid

		bidirectional DC DC convertor with high conversion ratio for advanced electric vehicle system. • Our faculty **Ms. R.G.Nirmala** has participated in FDP on Electric vehicle and sustainability conducted by SIMATS, Thandalam • Our faculty **Dr.M.Venmathi** acted as reviewer for springer nature scientific reports • Our faculty **Dr.T.V.Narmadha, Mr.H.Prasad, Mr.H.Umesh Prabhu** have published a patent.
13.	PLACEMENT DETAILS FOR THE MONTH OF MAY 2025	**2021-2025 Batch** Total No of students placed = 94 Students Total No of Offers = 119 Offers Total No of Students (UG) = 194 Total No of Eligible Students (UG) = 160 (All Clear) % of students Placed (UG) = 94/194 = 48.5 % No of students having single offers = 73 No of students having Double offers = 17 No of students having Triple offers = 4

DEPARTMENT OF SCIENCE

Sl. No.	Events	Remarks

1	**Collabarative Quality initiatives with other institutions**	***Consultancies:*** 1. Dr. S.M. Prakash is currently doing a translation consultancy from IIT Madras for NPTEL Translation Project for various courses including "Computational Fluid Dynamics and Optical Spectroscopy and Microscopy and Waste to Energy Conversion". ***Professional body memberships:*** 1. Dr. S. Suresh, Dr. A. Arulmozhi, Dr. A. Mahalakshmi, Dr. G. Senthilmurugan, Dr. K. Jayamoorthy and Dr. C Chandrasatheesh were awarded Life Membership in the International Association of Engineers (IAENG) in May 2025.
2	**Industrial Visits,Inplant Training,Internships**	1. Dr. A. Uma Devi, has successfully completed an internship training at Tamilnadu Petroproducts Limited, Manali, from 19.5.25 to 24.5.25. 2. Dr. N. Punitha, has successfully completed an internship training at Sattur Sri Venkateshwara Duplex Boards (P) Ltd., Virudhunagar from 26.5.25 to 31.5.25.
3	**Guest Lecture**	-
4	**FDP/Workshop/Conference**	***NPTEL FDP*** 1. Dr. G. Senthil Murugan has received NPTEL course (Silver medal) & FDP Certification on " Experimental Nanobiotechnology " offered by the Indian Institute of Technology Roorkee from January to March 2025. 2. Dr. B. Subash has received NPTEL course (Silver) & FDP Certification on " Chemistry of Main Group Elements " offered by the Indian Institute of Technology, Bombay during January to April 2025. 3. Dr. G. Sasikumar has received NPTEL course (Elite) & FDP Certification on " Chemistry of Main Group Elements " offered by the Indian Institute of Technology, Bombay during January to April 2025. 4. Dr. G. Sasikumar has received NPTEL course & FDP Certification on " Chemistry of Main Group Elements " offered by the Indian Institute of Technology, Bombay during January to April 2025. ***CONFERENCE CHAIR*** 1. Dr. P. Saravanan served as the Conference Chair for the First International Conference on Research Communications in Engineering, Science and Management (ICRCESM) – 2025. held online on 30th and 31st May 2025, organized by the Ramachandra College of Engineering (Autonomous), Eluru, Andhra Pradesh. ***ATTENDED*** 1. Dr. A. Mahalakshmi has attended online Faculty Development Programme titled "QT-02 Foundations of Quantum Technologies", held from April 11 to May 03, 2025. The programme consisted of 40 hours (equivalent to 3 academic credits) and was organized by the Electronics & ICT Academies of MNIT Jaipur, NIT Patna, IIT Kanpur, IIT Roorkee. 2. Dr. A. Arulmozhi, Dr. N. Punitha, Dr. A. Mahalakshmi had participated in the

		Professional Development Programme on " Crafting COs, POs, and PEOs " organized by the National Institute of Technical Teachers Training and Research (NITTTR), Chennai, held from 19.05.2025 to 23.05.2025.
9	**Awards/Prize won by students / Staff**	1. Dr. P. Saravanan and Dr. P. Krishnan have been honored with the IGEN Energathon Award - 2024, for Research Publication Category, during May 2025. ***Staff - NPTEL Awards*** 1. Dr. G. Senthil Murugan – Experimental Nanobiotechnology -Silver Medal 2. Dr. B. subash - Chemistry of Main Group Elements – Silver Medal ***Student - NPTEL Award*** 1. Mr. Barath Krishnamurthy S, I ECE-A, has successfully completed the NPTEL Online Certification course titled "Data Base Management System" during the January–April 2025 session. He was awarded an Elite with Gold certificate.
11	**Publications(only published) details**	Journal Publications: 1. Dr. P. Saravanan has published an article titled "Molecular structure, vibrational spectra, RDG, biological activities and experimental and theoretical investigation: N-(4-(−4-(2-(4-Hydroxyphenyl)-4,5-diphenyl-1H-imidazol-1-yl)phenylsulphonyl)phenyl)acetamide" in the journal of "Results in Chemistry"., 16 (2025) 102409. DOI: https://doi.org/10.1016/j.rechem.2025.102409 2. Dr. K. Jayamoorthy has published an article titled "Imidazole derivatives synthesis: exploring different methods" in the journal Phosphorus, Sulfur, and Silicon and the Related Elements. 200(5), 413–430, 2025DOI: 10.1080/10426507.2025.2498440 3. Dr. K. Dhanraj has published an article titled "A Comprehensive Review of Recent Work on Hydroxyapatite and Glass Ionomer Cement: Properties, Limitations, and Synergistic Dental Applications" in the journal of "Physica Scripta". 100 (6), (2025), 062002. DOI: https://doi.org/10.1088/1402-4896/add667 4. Dr. G. Senthil Murugan has published an article titled "Spin Dynamics and 1/3 Magnetization Plateau in the Coupled Distorted Diamond Chain Compound $K_2Cu_3(MoO_4)_4$" in the journal Physical Review. 111 (2025) 144420, doi: https://doi.org/10.1103/PhysRevB.111.144420 5. Dr. G. Sasikumar has published an article titled "Sustainable Epoxy Composites Enhanced by Cellulose Nanocrystals for Structural and Thermal Applications" in the journal Journal of Polymer and Composites, 13 (03) ,2025, 126–134, DOI: https://doi.org/10.37591/JOPC.v13i03.210188 ***Patents*** 1. Dr. P. Krishnan has published a patent titled "3D Printed Meta-Materials with AI-optimized Lattice Structures for Customized Mechanical Properties" in the "Official Journal of the Patent Office – Journal issue 19/2025" – Application No. 202541037504, dated 09-05-2025. 2. Dr. C. Chandrasatheesh has published a patent titled "Elevating Agriculture:

		Advanced Hops Classification for Precision crop Management and Quality harvest" in the "Official Journal of the Patent Office – Journal issue 22/2025" – Application No. 202541043218, dated 30-05-2025. ***Reviewer:*** 1 Dr. P. Saravanan – Discover Chemistry 2 Dr. N.R. Rajagopalan – American Journal of Applied and Industrial Chemistry 3 Dr.P. Krishnan - Spectrochimica Acta Part A: Molecular Biomolecular Spectroscopy 4. Dr. S. Suresh - Current Organic Chemistry 5. Dr. K. Jayamoorthy – • Mini-Reviews in Organic Chemistry • Nuclear Inst. and Methods in Physics Research, B • Current Organic Chemistry • Desalination • Journal of Molecular Structure • International Journal of Biological Macromolecules • Journal of Photochemistry & Photobiology, B: Biology • Chemical Physics Impact • Measurement • Materials Science in Semiconductor Processing • Separation and Purification Technology

DEPARTMENT OF INFORMATION TECHNOLOGY		
5	**Photographs Captured During Event/Screenshot**	**Corresponding remarks in regarding the status of activity execution**
1.	 **Co-Author** **Dr. C. Heltin Genitha,** published a paper indexed in SCIE	**<u>Staff Publication</u>** Rejini, K., J. Visumathi, and **C. Heltin Genitha**, "Application of Transformer-Based Deep Learning Models for Predicting the Suitability of Water for Agricultural Purposes" Water 17, no. 9: 1347, ISSN: 2073-4441, https://doi.org/10.3390/w17091347, 2025. **(Indexed in SCIE)** **Abstract:** Water is the most vital component for the sustainability of living beings on Earth. From plants to human beings, every single living being on Earth needs water for its survival. In this research, a novel model has been developed in order to predict the suitability of water for agricultural purposes. This research developed the ALBERT Base v2 model for detecting water quality and suitability and a model named the ALBERT Water Potability Detection (ALBERT-WPD) model, customized from the ALBERT Base v2 transformer model. The model was tested using a dataset from Kaggle, and the performance was evaluated. The findings revealed that the ALBERT models gained higher accuracies than the traditional models: the Base v2 model gained 91% and the altered ALBERT-WPD rendered 96% accuracy. The classification results (precision, recall, and F1-score) obtained for the ALBERT-WPD model for the potability class were 93%, 98%, and 96% and those for the non-potability class were 98%, 95%, higher accuracy with the model optimization method. The study concludes that using transformer models (BERT-based) in water potability detection procures higher accuracy (>95%) with fewer parameters in comparison with traditional models (CNN and RNN) which utilize more parameters. Thus, the significance of the proposed research dwells within the use of “transformers” as an advanced machine learning model to predict water potability and quality, showing that transformers are the future of machine learning.

2.	 **Co-Author** **Mrs. V. P. Anitha,** published a paper indexed in SCIE	Devi, Amirtha Saravanan, R. Reeta & **V. P. Anitha**, "Transforming waste management: leveraging recycle transformernet for effective recycling strategies", Clean Techn Environ Policy (2025). https://doi.org/10.1007/s10098-025-03161-5. **(Indexed in SCIE)** Abstract: Waste classification and recycling are essential strategies for transforming waste into useful and functional waste, that helps protect land, reduce pollution, and improve resource use. However, in the real world, sorting and identifying recyclable wastes faces significant challenges due to the complexity and unpredictability of waste, and the lack of comprehensive waste datasets. These constraints limit the effectiveness of current research efforts in waste management. In this paper, we propose a 'RecycleTransformerNet' method for classifying recyclable waste. The pre-processing phase includes data normalization and image augmentation steps to improve model performance. The feature extraction is performed using a modified AlexNet framework, known as Trans-AlexNet. The proposed RecycleTransformerNet framework facilitates waste classification at four levels and integrates the external transformer, adaptive patch merging, and pixel transformer. These modules extract hierarchical features, store local information, and allow accurate waste classification. This study uses the cross-entropy loss function for classification tasks. The proposed model is validated on two datasets for recyclable classification, and its performance is compared with other algorithms. Experimental results demonstrate that this model achieves a waste classification accuracy of 99.15% and 99.07% on the TrashNet and Garbage classification datasets, respectively.
3.	 **Co-Author** **A.Tamizhselvi** Published a paper in Scopus indexed Journal	Ahilan Appathurai, P. Bachan, Ruchi Kaushik, **A. Tamizhselvi**, Rajshree Jodha & Kulwant Singh, Intrusion detection system with walrus optimization algorithm (WOA) and BiGRU-CNN for securing IoT systems. International Journal of Information Technology, ISSN : 2511-2104, E-ISSN : 2511-2112, https://doi.org/10.1007/s41870-025-02523-y, 2025. **(Indexed in Scopus)** **Abstract:** Security has become a primary issue in IoT (Internet of Things) because of its complex environment, handling multiple devices, several connection methods, and transmission of a huge volume of data. Traditional techniques don't manage datasets or learn features optimally, which degrades attack detection accuracy. To solve the issues, an effective Intrusion Detection System (IDS) is proposed for detecting security risks in IoT systems. The framework comprises three phases, namely data pre-processing, feature selection, and classification. Pre-processing is applied to the data gathered from the public repository. It is followed by data classification using Bidirectional Gated Recurrent Unit-Convolutional Neural Network (BiGRU-CNN). This framework can classify data into five categories, such as normal (benign), DoS (Denial of Service), Shellcode (U2R), Fuzzers (R2L), and Probe attacks.

4.	 **Authors** **Kavitha A; Gokul C; Agilan S** Published a paper in Scopus indexed Conference	**Staff-Student Conference Publication** **Kavitha A; Gokul C; Agilan S**, "Advanced Colorectal Cancer Prediction Using CNN and XGBoost Algorithm," 2024 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES), Chennai, India, 2024, pp. 1-6, Electronic ISBN:979-8-3315-4362-4 Print ISBN:979-8-3315-4361-7, doi: 10.1109/ICSES63760.2024.10910516. **(Indexed in Scopus)** **Abstract:** Despite advances in medical prognosis and early cancer detection, colorectal cancer (CRC) remains the third most deadly cancer in the world. Deborah L. Davidson further asserts the need for better models of prediction. This research proposes a hybrid model of CRC prediction that employs a combination of medical image analysis - using convolutional neural network - and structured clinical data processing, which is a tool called XGBoost. It uses CNN model which is trained on colonoscope and histopathological images to detect any cancerous pattern and XGBoost to process patient's demographics, genetic markers and lifestyle factors. A combined feature set is created, which incorporates both the CNN and the XGBoost features, thus allowing the ultimate classifier to evaluate the chances of disease progression.
5.	 **Authors** **Divya J; Aakash G; Bevincent Edward E** Published a paper in Scopus indexed Conference	**Divya J; Aakash G; Bevincent Edward E**, "AI-Driven Personalized Dietary Recommendation System Leveraging Regional Cuisine," 2025 3rd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT), Bengaluru, India, 2025, pp. 1435-1440, E ISBN:979-8-3315-2754-9, Print ISBN:979-8-3315-2755-6, doi: 10.1109/IDCIOT64235.2025.10914922. **(Indexed in Scopus)** **Abstract:** Diet related health issues are a growing concern, with individuals often struggling to make informed dietary choices. Existing dietary recommendation systems rarely include regional foods, making it difficult for users to access or prepare the recommended meals. Despite the availability of a diverse array of nutritious local foods, this gap necessitates the development of a system that provides culturally relevant and accessible dietary recommendations. In this project, an AI based dietary recommendation system is designed to cater to regional needs. Personalized meal plans are generated from regional foods, ensuring they are culturally appealing, nutritionally balanced, and aligned with seasonal availability. The outcome of this research is to bridge the gap in existing systems by generating meal plans rooted in regional foods, empowering users to achieve healthier diets through accessible and culturally resonant recommendations.
6.		**Patent Published**

	 **Mrs. Gnanasoundharam.J** Published an India Patent	**Title of the invention:** BLOCKCHAIN-INTEGRATED SUPPLY CHAIN SYSTEM FOR SUSTAINABLE MANUFACTURING **Name of Inventor:** 1. Anand Kumar Mishra 2. Hemanth Kumar K S 3. Dr. Pratibha C. Kaladeep Yalagi 4. Mr. D. Manikandan 5. Dr. Chetan Chauhan 6. Deepak Kaushik 7. Neelam Oberoi 8. Dr. RVS Praveen 9. Gnanasoundharam J 10. Dr.J.Nithya 11. Dhainje Prakash Bhagwan 12. Aakanksha Jain **Patent Application Number:** 202511037037 **Date of filing of Application:** 17/04/2025 **Publication Date:** 02/05/2025

15.

Seminar/ FDP Attended by Faculty

S.No	Title of the topic	Name of the Staff	Conducted By	Date
1.	Data Analytics using Python	Mrs.Hepsi Ajibah A S, Mrs. Annie T A	ICT Academy	12 May 2025 to 16 May 2025
2.	Microsoft PowerBI Data Analyst Associate	Mr. Abdhur Rahman	ICT Academy	5-5-2025 to 9-5-2025
3.	Introduction to Internet of Things	Mrs. I.Domilin Shyni	NPTEL	20-1-2025 to 26-05-2025(3 weeks)

DEPARTMENT OF MATHEMATICS AND ENGLISH

Publications(only published) details	1. **P. Agilan,** K. Julietraja, Ahmad Aloqaily, Nabil Mlaiki, A Modern Stability Analysis of Mixed Duodecic-Tridecic Functional Equations in Neutrosophic Normed Spaces: A Hyers-Ulam Perspective, Int. J. Anal. Appl., 23 (2025), 93.
Funded Projects	-
Other activities	

DEPARTMENT OF MBA

INDUSTRY INSTITUTE INTERACTION
KIKAI – INTERNSHIP DRIVE 2025

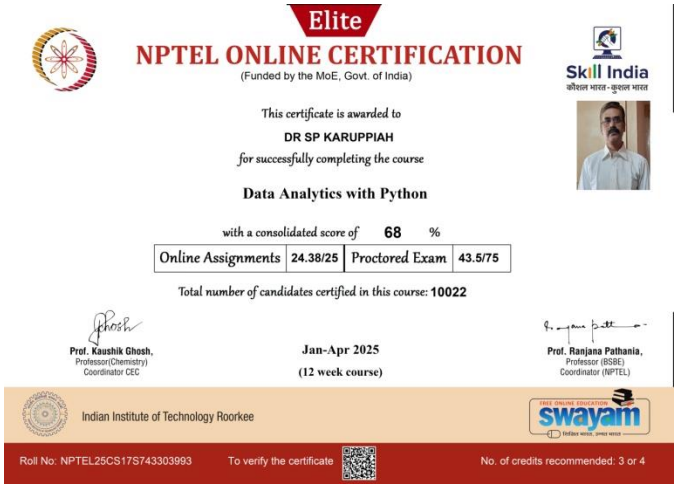
The Department of Management Studies organized a Two-Day Industry Institute Interaction Internship Drive on May 13 and 14, 2025. The event aimed to bridge the gap between academia and industry by providing internship opportunities to students. Mr. Siddhartha Sethukumar, Director - Human Resources at Birlasoft, graced the occasion as the chief guest. His inaugural address highlighted the importance of industry exposure and skill development for budding managers.

A total of 17 reputed companies participated in the internship drive, representing diverse sectors. The event witnessed enthusiastic participation from students across various specializations. Companies conducted interviews, group placement talks during the drive.

The interaction sessions provided students with valuable insights into current industry expectations. The drive was successful in creating internship and networking opportunities for more than 200 students. Students where offered with internship stipend varying from Rs.4000 to Rs. 8500 and some organizations offer incentives, which will be based on the performance of the students. The department received appreciation from both recruiters and Students for the well-organized event.

MEMORANDUM OF UNDERSTANDING (MOU): 	A Memorandum of Understanding (MoU) has been formally entered into between the Department of Management Studies, St. Joseph's College of Engineering, Chennai and Imarticus Learning Private Limited, Mumbai. This MoU establishes a collaborative partnership aimed at enhancing academic learning and promoting industry-relevant skill development among Students and faculty. The primary areas of collaboration include: Curriculum Design Training & Industrial Visits Skill Development Programs Guest Lectures Faculty Development Programs This MoU will remain in effect from 29th April 2025 to 28th April 2028, unless terminated earlier by mutual written agreement or due to a breach of terms by either party. This partnership reflects a shared vision of fostering academic excellence and preparing students to meet the evolving demands of the global business environment.

FACULTY PUBLICATIONS / ONLINE CERTIFICATION:



Elite

NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

DR SP KARUPPIAH

for successfully completing the course

Data Analytics with Python

with a consolidated score of 68 %

Online Assignments	24.38/25	Proctored Exam	43.5/75

Total number of candidates certified in this course: 10022

Prof. Kaushik Ghosh, Professor(Chemistry) Coordinator CEC

Jan-Apr 2025

(12 week course)

Prof. Ranjana Pathania, Professor (BSBE) Coordinator (NPTEL)

Indian Institute of Technology Roorkee

swayam

Roll No: NPTEL25CS17S743303993 To verify the certificate No. of credits recommended: 3 or 4

- Dr. Karuppiah SP has published a research article titled “Establishing a Balance between Precision and Operations in AI Systems for Essential Decision Making: Interpretable Deep Learning Models” in IEEE, Xplore, presented at ESIC 2025 Conference.
  ISBN: 9798-3315-2210-0
  DOI: 10.1109/ESIC64052.2025.10962662
- Dr. Karuppiah SP, Professor, successfully completed two prestigious 12-week NPTEL Online Certification Courses:
  Data Analytics with Python (January – April 2025), conducted by IIT Roorkee
  Introduction to Machine Learning (January – April2025), conducted by IIT Madras
- Dr.Angelin S. Kirupa, Faculty Member, has successfully published a patent titled "Real-Time Monitoring of Industrial Emissions Using IoT and AI" on May 2, 2025.
- Dr. A. Menaga who has published a research article titled: "The Impact of Augmented Reality on Consumer Purchase Intention: The Mediating Role of Hedonic and Utilitarian Value" This article appears in the journal Advances in Consumer Research, Vol. 2, Issue 3 (2025), pp. 12–18.

JOURNAL REVIEWER / RESOURCE PERSON: 	Dr. R. Arun, Assistant Professor, has been awarded a Certificate of excellence in Reviewing by the Asian Journal of Education and Social Studies. This recognition was awarded in appreciation of Dr. Arun's outstanding contribution to maintaining and enhancing the quality of scholarly publications through his meticulous and constructive peer reviews.