



# *Hindusthan*

College of Engineering and Technology  
An Autonomous Institution

## **MASTER OF COMPUTER APPLICATIONS**

### **VISION OF THE DEPARTMENT**

To be a center of excellence dedicated to providing education in computer applications, fostering a learning environment that cultivates professionals capable of contributing to innovation and social development.

### **MISSION OF THE DEPARTMENT**

To achieve the vision of the department with sustained efforts to,

DM1: To excel in computer applications education by implementing innovative teaching methods, striving for academic excellence.

DM2: To empower students with creative skills and leadership qualities, fostering an environment that encourages innovation and readies them for successful professional careers.

DM3: To emphasize ethical practices in technology, ensuring that our graduates make meaningful contributions to society by utilizing their expertise for the greater good.

### **PROGRAM EDUCATIONAL OBJECTIVES**

These objectives describe the expected accomplishments of our graduates during the several years following graduation...

PEO 1 : Graduates of the MCA Programme will possess a deep understanding of theoretical foundations and practical applications in computer applications. They will be proficient in designing, implementing, and managing software solutions that address complex real-world problems, demonstrating competence in various programming languages and development methodologies.

PEO 2 : MCA graduates will exhibit leadership skills and innovative thinking, enabling them to lead teams and contribute to the development of cutting-edge IT solutions. They will be adept at identifying opportunities for technological advancement, applying creative problem-solving approaches, and adapting to evolving industry trends to address the dynamic needs of the information technology sector.

PEO 3: Graduates will be socially responsible and ethically conscious professionals, recognizing the societal impact of technology. They will incorporate ethical considerations in decision-making processes, demonstrating a commitment to responsible computing practices. Additionally, they will engage in projects that contribute positively to the community and align with the principles of sustainable development.



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# HINDUSTHAN

## NOUVELLE VOLUME:XII



**Dr A R JayaSudha**  
**Chief Editor,**  
**Nouvelle**

### **Words from Chief Editor:**

Welcome to the latest edition of Nouvelle, the official newsletter of our MCA department. We're excited to share the impressive achievements and milestones our students and faculty have reached as we continue our journey of academic excellence and innovation.

In this issue, you'll find articles that highlight our department's progress in both technical and non-technical fields, showcasing various projects, research efforts, certifications, and publications.

I sincerely thank all the contributors and the editorial team for their relentless dedication and hard

work. Together, we maintain the spirit of curiosity, collaboration, and excellence that defines our department.

**"Don't watch the clock; do what it does. Keep going."**

– Samuel Levenson



DEPARTMENT OF COMPUTER APPLICATIONS  
Organizes

## ALUMNI TALK

### ALUMNI SPEAKER



Mr. AJITH .M  
Full Stack Engineer  
Cognizant Technology  
Solutions Pvt Ltd  
Bangalore

Date : 05.12.2022  
Time : 12.00 to 12.45 PM

Coordinator  
Mrs. M.Nirmala  
AP / MCA

Convener  
Dr.A.R.Jayasudha  
Prof & Head

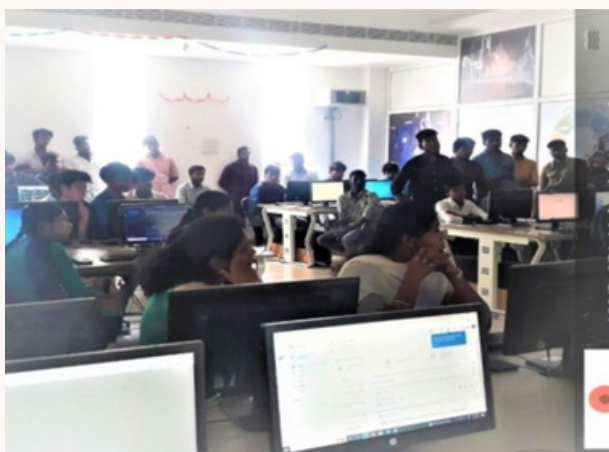
Principal  
Dr.J.Jaya

CEO  
Dr.K.Karunakaran

## Alumni Talk on Career Counselling

A guest session was held for students by Mr. Ajith M On 05.12.2022, who is a Full Stack Engineer at Cognizant Technology Solutions Pvt Ltd, Bangalore. The event discussed opportunities and challenges of the corporate training and development process and the need to pay attention to career management and upskilling courses for students.

Mr. Ajith M elaborated the placement process and gave tips on how to improve the chances of writing a good placement document. Also, many types of activities were presented during the session and many of them included the students in the discussions and the problems that were presented. It was a successful event and highly effective





## Alumni Talk on UI & UX Designing

We had an educative session on UI and UX Designing facilitated by Mr. Karthikeyan G

On 16.09.2022, a Senior UX/UI Designer from Gaipp Private Limited. The event allowed for learning about the industry of UI/UX design, as well as the importance of its presence in modern society. Mr. Karthikeyan explained how the modern, well-designed UI/UX can attract more potential clients, lead to higher conversion rates and bigger sales. He explained the general aspects and approaches to design, which gave students vast knowledge of how systems with friendly interfaces can be developed. It was truly an engaging session, and students were able to participate in various discussions that enhanced their understanding of design principles. All in all, this event proved to be highly effective at promoting the importance of UI/UX design within today's business world and provided students with vital knowledge and skills in this field for their careers in design and technology.



## Introduction to Drones – History , Evolution & Application

A seminar conducted by C. S. Swaminathan of Planet-X Aerospace Services Pvt Ltd, who works as the Manager of the company. The name of the seminar was "Introduction to Drones – History, Evolution & Application". This was conducted on 11/11/2022 (10:30 AM to 12:00 PM). The seminar provided the students with knowledge in the history and development of the drone currently used in society. These, according to Mr. Swaminathan, are the types of courses that exist in the domain of drones and the educational choices available to the students. He also spoke about the techniques used in different categories of UAVs, and how such innovative devices operate. Further, the seminar also



discussed various job openings in the drone market available for the candidates and courses and qualifications needed for the job in this flourishing industry. Hence, the success of this event allowed students to acquire knowledge about the potential and potential uses of drones to get ready for the Aerospace technology and other comparable job areas for their career.





### **Outreach Program to Then Tirupathi Temple**

The outreach program at Then Tirupathi Temple, Coimbatore, was organized with a view to creating an awareness drive among the student community and devotees regarding cleanliness and the benefits accrued from it. The program was held on

13.10.2022, in which a varied group of participants came forward to propagate a cleaner and healthier setting within the temple premises. The participants, therefore, attended several interactive sessions and informative talks on the essence of cleanliness to health. Several strategies and practices were shared, many of which placed personalized responsibility on individuals in their cleanliness and hospitality of public spaces. Practical demonstrations and workshops elaborated further on practical and effective cleaning techniques and invited active participation from the audience. Further, the event instigated community participation and civic situational responsibility among the participants to contribute to keeping the surroundings clean. In essence, the Outreach Program at Then Tirupathi Temple was the educative platform that empowered participants to make a difference in ensuring good hygiene and cleanliness practices within their immediate community.



### **Outreach Program to Velliangiri Temple**

An outreach program at Velliangiri Andavar Temple in Coimbatore was organized to bring awareness to students and devotees regarding cleanliness and its benefits. It was held on [event date] with the prime motive of creating a sense of responsibility among the students or devotees for keeping the temple clean and hygienic.

The sessions of interactive programs and informative discussions in which the participants, including students and devotees, participated actively, emphasized cleanliness for its significance toward health and spiritual well-being. That is, it comprised informative talks explaining the contribution of cleanliness toward a healthy environment and, therefore, persuading the participating lot to engage themselves in sustainable practices concerning the same. Practical demonstrations and workshops on effective cleaning techniques/strategies were carried out to disseminate knowledge and skills that could be harnessed positively in ensuring the upkeep of the temple. Through shared efforts and mutual commitment, cleanliness and civic responsibility spread through the Outreach Program of Velliangiri Andavar Temple, influencing those in the community to take proactive responsibility to keep the environment clean and congenial to all visitors and devotees coming there.



## Soft skills for Professional Effectiveness

A seminar on "Soft Skills for Professional Effectiveness" was conducted, and Mrs. M. Narmatha, Assistant Professor of English, Hindusthan College of Engineering and Technology, Coimbatore, was the resource person. This program was conducted on 30.08.2022 with the objective of enhancing participants' soft skills, which are important in their professional lives. Mrs. Narmatha focused on communication skills and laying emphasis on correct English usage, without it, proper communication at a professional level cannot be

executed. It enabled the participants to understand how to build self-confidence and adjustability, to establish a better relationship among colleagues, and to enjoy better job satisfaction. The seminar was interactive, with interesting discussions and many exercises by which the participants could realize the application of newly acquired skills in their real life situations. In the feedback form, the participants expressed that the session was very useful and appreciated the expertise of Mrs. Narmatha, who delivered the speech so inspirationally. In general, the soft skills seminar was very well received, with responses providing an excellent rating of its impact on enhancing professional effectiveness and personal growth for all participants.





## Seminar on "Have you planned your career? (Career Counselling)"



A Seminar on "Have you planned your career? - Career Counselling" was conducted and Mrs. J Christy Lavanya, Branch Manager of Veranda Race, Coimbatore, was the resource person. The programme on 26.10.2023 was to help the students grasp the emerging trend in careers and the best ways to set their own career goals. Mrs. Lavanya delivered a very comprehensive session. She covered all the vast fields, ranging from Banking Opportunities to Government Jobs, and beyond, with invaluable guidance on how to prepare for these competitive fields. Participants acquired insight into the real importance of

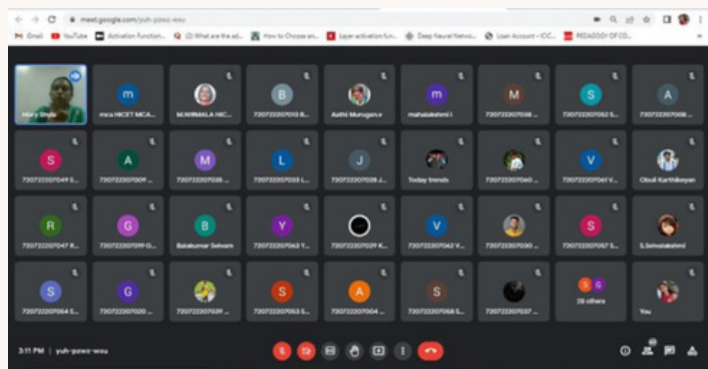
planning and development of a career in the job market. Mrs. Lavanya's professional knowledge, combined with her brilliant presentation skills, made this session informative and interesting. The participants felt highly satisfied, which was reflected in their positive feedback. Students loved the practical ideas shared, by means of which they were enlightened a lot and which definitely would prove useful for them in their careers in the future. Overall, the rating given to this seminar by its participants is excellent, testifying that it has maximally impacted the students with knowledge and tools on how to plan and go after their career goals.

## Webinar on Exploring Creativity Through Design Tools And Its Scope

A webinar on "Exploring Creativity through Design Tools and its Scope" was organized, and the resource person for the same was Dr. Mary Shyla E, Assistant Professor in Computer Science, Nirmala College for Women, Coimbatore. It was conducted on 02.12.2022 (3:00 to 4:00 PM). This Webinar provided a platform for students to enhance their knowledge about design techniques and tools used in this current era of creative expression. Dr. Mary Shyla E took the participants through some of these design tools, commercial and free, which can be accessed for designing. Through the session, the constituents were explained in detail on the scope of design in various industries, its role in innovation and problem-solving. Many practical examples were given to show how these tools can execute them in practice to improve creativity and results. Participants gained valuable insight into the dynamic changing landscape of design and how to harness technology to bring ideas to life through visualization and engage in contemporary design practices.



The environment that the webinar provided served as a platform for students to explore their creative abilities with a view toward future opportunities in the design fields. The feedback from all the participants was good; everyone liked the information content and practical knowledge shared by Dr. Mary Shyla E. regarding design tools and their enormous uses associated in the current world of digitization.



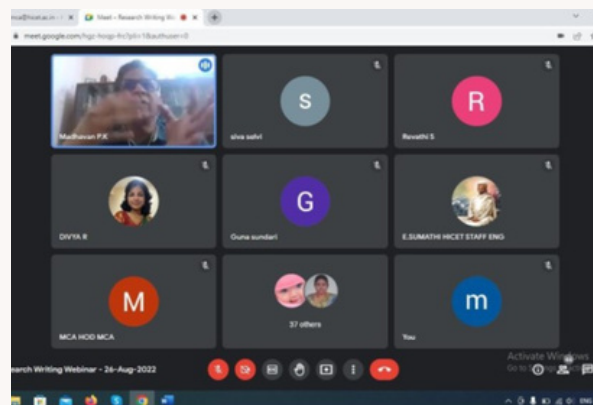
## Webinar on : RESEARCH WRITING, PLAGIARISM MISCONCEPTIONS & AUTHORSHIP ISSUES-(IIC SELF DRIVEN)



A webinar on "Research Writing, Plagiarism Misconceptions & Authorship Issues" was conducted with Dr. P.K. Madhavan, Publisher at Newgen Vijay Nicole Imprints, as the resource person on 26.08.2022. This recent webinar was attempting to educate participants, more so those entering into the field of research and journal publishing, on important aspects of scholarly writing and publication ethics. According to Dr. Madhavan, the values that reputable journals and the new emerging trend of open access publications as well, were streaming orderly. The workshop benefited participants with knowledge regarding the different

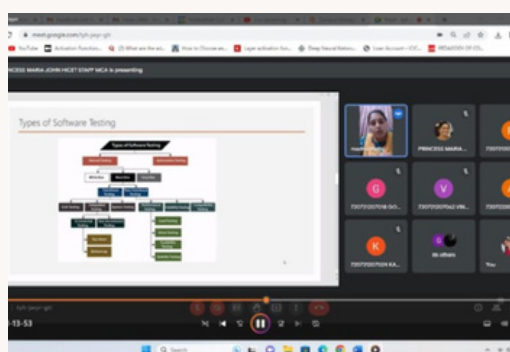
kinds of plagiarism and some pragmatic strategies to avoid such unintentional academic misconduct. All the metrics covered in the session were certainly very interesting for any author who wants to establish his credibility and impact in the academic publishing domain. Dr. Madhavan's rich expertise and engaging presentation made it possible to get deep into these critical subjects, and attendees walked out enriched with knowledge and clarity regarding the intricacies of research writing and publication ethics. Feedback from many participants was that this webinar had been an eye-opener. Quite a few thanked for practical guidance received and an opportunity to impress on the minutiae of ethical considerations in publishing scholarly journals. Overall, the reception was quite positive regarding the informative substance and relevance to the preparation that aspiring researchers undergo in making ethical yet high-impact contributions to their respective fields.





## Webinar on SDLC and Basics of Software Testing

A webinar on "SDLC and Basics of Software Testing" was conducted with Ms. S. Madhumathi, Senior Associate, Cognizant Technology Solutions Pvt Ltd, Coimbatore, as the resource person. This informative session was conducted recently to enable participants with full knowledge on the Software Development Life Cycle and, at the same time, the very basics of software testing. Ms. Madhumathi invited all of them on board and covered key topics centred on the phases and models of SDLC, emphasizing structured approaches necessary in every software development project. The participants were exposed to the different stages involved in SDLC and how each of the phases contributes to the development process as a whole. The different types and levels of software testing, from unit testing to system testing, were also dealt with, detailing what each level of testing did towards ensuring the quality and reliability of software. Ms. Madhumathi expounded further on the bug life cycle and the importance of test documentation in capturing detailed records for traceability of the testing activities done. Through interactive discussions and practical examples, participants were empowered regarding knowledge and best practices in SDLC and software testing, so each among them could put it in-practice in their professional undertakings. The feeling expressed by the attendees was very highly rated with lots of satisfaction; many appreciated Madhumathi's expertise and the relevance of the webinar toward enhancing their understanding regarding SDLC processes and testing methodologies. It provided an excellent learning experience since it equipped the participants with basic skills on how to navigate through and contribute to software development projects.



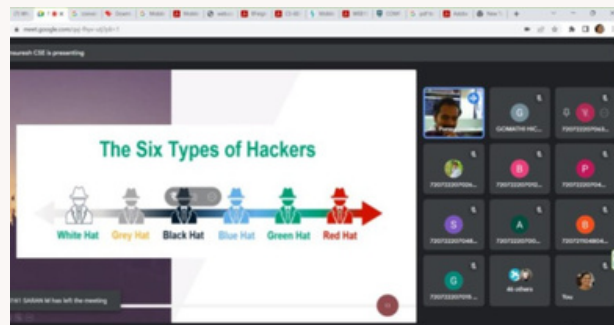
## Seminar and Workshop on IPR – Protection of Invention before Patent

It organized a workshop on the topic "IPR– Protection of Invention before Patent" with Mr. Sivaraja S, an Advocate specializing in intellectual property rights. During the workshop held recently, the participants were oriented with important steps in protecting an invention before a patent. According to him, the ambiguities of intellectual property law were clarified; rights over innovative ideas, creations have to be protected. Participants learnt the process through which an invention is patented and, more importantly, how one's intellectual property is protected from unauthorized use or exploitation by others.



Examples of previously filed patents and their impacts on production in markets enriched both sessions. Through detailed examples of previously filed patents and their impact on market production, attendees appreciated practical reality created by patent protection in various industries. Thereafter, it highlighted how efficiently handling any legal obstacles would really deliver maximum commercial value of intellectual property assets. It was further followed up with much interaction in the form of questions and doubts related to intellectual property rights with the additional technical knowledge and presentation style of Mr. Sivaraja. The feedback received from the participants of this workshop was very positive, with most of them giving appreciation notes on clarity and relevance of the information given. The workshop alone on IPR has provided an excellent platform to update participants' knowledge and understanding on strategies for the protection of inventions and innovations while empowering them on how to make appropriate decisions for protecting their inventions and innovations in a competitive marketplace.

## Seminar and Workshop on IPR – Protection of Invention before Patent



A one-day workshop on "Cybersecurity Career Master Plan" was conducted, and Mr. Ponsuresh Manoharan, Assistant Professor in CSE of Kalasalingam Academy of Research and Education, Srivilliputhur, Tamil Nadu, was the resource person. The workshop, held recently, delimited an insight into cybersecurity, prevalent threats, and strategies that hackers adopt presently in the cyber world. Mr. Manoharan deftly covered all important topics and gave an in-depth insight into new technologies enhancing cyber security strategies. Participants acquired hands-on knowledge regarding offensive and defensive cybersecurity strategies and ways of analysis and mitigation against cyber-



attacks. This workshop provided a platform for interactive discussions on various real-world case studies of cyber threats, hence empowering the audience to understand that cybersecurity is a constantly changing threat, and to defend the same is preventive. The technical know-how and interactive mannerisms of Mr. Manoharan pre-empted an active and practical learning environment for the participants. During the practice sessions, exercises, and demonstrations modeled from a concept of cybersecurity, it is enthusiastic responses from the workshop participants that gave credence to the relevance and practicality of what had been passed. The Cybersecurity workshop was therefore such an invaluable platform that participants were given a chance to strategize their career plans in cybersecurity and the knowledge and skill base necessary to help deal effectively with challenges in cybersecurity in professional pursuits.

### **Workshop on Intellectual Property Rights (IPR) & Patents and Design filing**

A seminar on "Intellectual Property Rights and Patents and Design Filing" was conducted with Himanshu Chandrakar, Examiner of Patents & Designs at RGNIPM, Nagpur, as the resource person. The broad objective of the recently held seminar was to impart proper understanding about intellectual property rights to participants, with major emphasis on filing processes for patents and designs. He guided the participants in detail about IPR and the need for securing innovations through patents and designs. It clearly elicited the procedures for online filing for patents and submitting hardcopy documents,

with step-by-step viewpoints concerning the mentioning rules in a patent application. Practical illustrations through case studies demonstrated that proper documentation and following of legal procedures is the real key to securing intellectual property rights. The seminar had plenty of opportunities for interactive discussions, which allowed the participants to uncover their doubts and seek practical advice from his experience in examination and filing procedures of patents. Feedback given by participants on the seminar has been very lucid; many people who responded appreciated the practical knowledge shared and the action points exhibited to safeguard intellectual assets. The IPR and Patents seminar thus proved to be a great resource in understanding and successfully dealing with the complexities involved in protecting intellectual property, therefore better positioning participants toward making informed decisions on securing their innovations in the competitive global marketplace.



## Workshop on NATIONAL LEVEL WORKSHOP ON MACHINE LEARNING & TRANSFER

A National Level Workshop on " Machine Learning & Transfer Learning " was conducted with the resource person Dr. Subalalitha C N, Founder Director - First Language Technologies Pvt Ltd, Associate Professor - Dept. of Computing Technologies, SRM Institute of Science and Technology, Chennai. This recent workshop aimed at providing the participants an in-depth understanding of Machine Learning and exposure to one of its advanced applications using Transfer Learning. Dr. Subalalitha delivered very informative sessions on the fundamentals of machine learning with illustrative examples of

applications in real-world industries. The participants learned unsupervised learning techniques and mainly focused on the KMeans algorithm related to clustering and image segmentation. Also, the workshop had a hands-on demonstration of image segmentation by clustering, in which participants could apply some theoretical concepts into practice. Dr. Subalalitha explained further in regard to transfer learning in transformers, stating its importance in using a pre-trained model to solve a new task effectively. There was some interactive discussion and room for collaborative learning present, which allowed the participants to freely share and improve on their thoughts for better understanding about methods used in machine learning. The feedback from the participants was quite good, with most of them appreciating the depth of the content that this workshop exposed them to. Dr. Subalalitha, they felt, had done a marvelous job in presenting such complex ideas in so lucid and easy-to-grasp a fashion. On the whole, the machine learning and transfer learning workshop proved to be a great learning experience, full of key skills and insights to equip the participants toward furtherance of knowledge in these transformative technologies.



NATIONAL LEVEL WORKSHOP ON  
MACHINE LEARNING AND TRANSFER  
LEARNING

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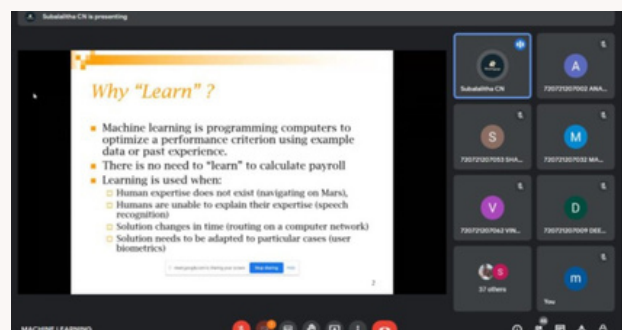
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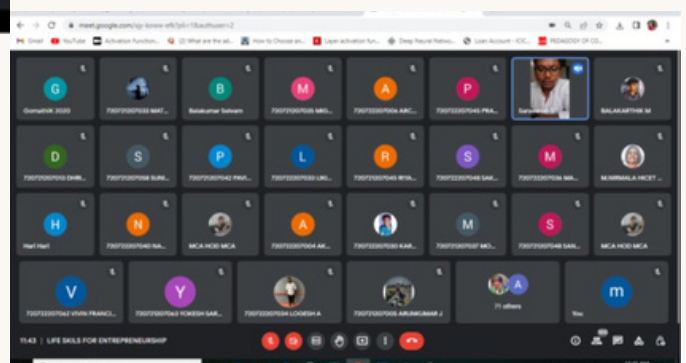
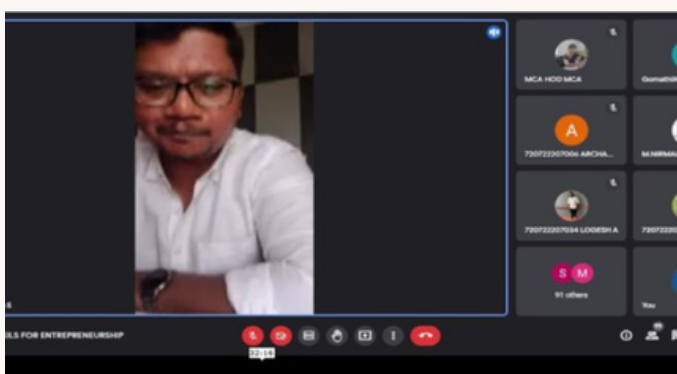




## Workshop on Life Skills for Entrepreneurship

A workshop titled "Life Skills for Entrepreneurship" was conducted with Mr. Saravanan Subramanian, Managing Partner at E-Cursaders, Chennai, serving as the resource person. This workshop, held recently, aimed to equip participants with essential skills and insights necessary for entrepreneurial success. Mr. Saravanan shared valuable knowledge about the opportunities and challenges of starting a business, providing a balanced perspective on the positive aspects and limitations that entrepreneurs often encounter. Attendees gained practical insights into developing

effective daily routines conducive to entrepreneurial productivity and success, learning strategies for managing time and maintaining focus in their endeavors. The workshop also included guidance on recommended reading materials, emphasizing books that foster life skills development and entrepreneurship acumen. Participants engaged in interactive discussions, where they exchanged ideas and received personalized advice from Mr. Saravanan based on his extensive experience in business management and entrepreneurship. Feedback from attendees highlighted the workshop's practicality and relevance, with many expressing appreciation for the actionable advice and insights gained. Overall, the workshop on life skills for entrepreneurship served as a valuable platform for participants to acquire essential skills, knowledge, and motivation to embark on their entrepreneurial journey with confidence and clarity.





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<b>Mission of the Department</b>	DM1	To excel in computer applications education by implementing innovative teaching methods, striving for academic excellence.
	DM2	To empower students with creative skills and leadership qualities, fostering an environment that encourages innovation and readies them for successful professional careers.
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PEO 3	Graduates will be socially responsible and ethically conscious professionals, recognizing the societal impact of technology. They will incorporate ethical considerations in decision-making processes, demonstrating a commitment to responsible computing practices. Additionally, they will engage in projects that contribute positively to the community and align with the principles of sustainable development.



PO	GRADUATE ATTRIBUTES	PROGRAM OUTCOME
1	<b>Computational Knowledge</b>	Apply computer fundamentals, computing specialization, mathematics, and domain knowledge relevant to the computing specialization. Employ this knowledge to formulate abstract and conceptual computing models, addressing defined problems and requirements.
2	<b>Problem Analysis</b>	Examine and address complex computing problems by identifying, formulating, and researching relevant information. Suggest solutions based on well-supported conclusions drawn from fundamental principles of math, computer science, and related fields.
3	<b>Design / Development of Solutions</b>	Create and assess solutions for intricate computing challenges. Develop and appraise systems, components, or processes that fulfill specific requirements, giving careful thought to public health and safety, as well as cultural, societal, and environmental considerations.
4	<b>Conduct Investigations of Complex Computing problems</b>	Apply research-based knowledge and methods, such as designing experiments, analysing and interpreting data, and synthesizing information, to generate valid conclusions.
5	<b>Modern Tool Usage</b>	In complex computing tasks, utilize, choose, modify, and employ suitable techniques, resources, and modern computing tools while recognizing their limitations.
6	<b>Professional Ethics</b>	Embrace and adhere to professional ethics, cyber regulations, and the responsibilities and norms associated with professional computing practice.
7	<b>Life-Long Learning</b>	Demonstrate the capability to pursue self-directed learning for ongoing growth as a computing professional.

PO	GRADUATE ATTRIBUTES	PROGRAM OUTCOME
8	<b>Project Management and Finance</b>	Apply computing and management principles effectively in individual work, team participation, and leadership roles. Manage projects and navigate multidisciplinary environments as a proficient team member and leader.
9	<b>Communication Efficacy</b>	Convey complex computing activities clearly to the computing community and society. Demonstrate the ability to create informative reports, design documentation, deliver effective presentations, and give and comprehend clear instructions.
10	<b>Societal and Environmental Concern</b>	Create and assess solutions for intricate computing challenges. Develop and appraise systems, components, or processes that fulfill specific requirements, giving careful thought to public health and safety, as well as cultural, societal, and environmental considerations.
11	<b>Individual and Team Work</b>	Apply research-based knowledge and methods, such as designing experiments, analysing and interpreting data, and synthesizing information, to generate valid conclusions.
12	<b>Innovation and Entrepreneurship</b>	In complex computing tasks, utilize, choose, modify, and employ suitable techniques, resources, and modern computing tools while recognizing their limitations.