Department of Information Technology

NewsLetter

Academic Year (2022- 2023)

Department of Information Technology

News Letters Academic Year 2022-23

VISION OF THE INSTITUTE

KCG College of Technology aspires to become a globally recognized center of excellence for science, technology & engineering education, committed to quality teaching, learning and research while ensuring for every student a unique educational experience which will promote leadership, job creation, social commitment and service to nation building.

MISSION OF THE INSTITUTE

- Disseminate knowledge in a rigorous and intellectually stimulating environment.
- Facilitate socially responsive research, innovation and entrepreneurship.
- Foster holistic development and professional competency.
- Nurture the virtue of service and an ethical value system in the young minds

VISION OF THE DEPARTMENT

The department of Information Technology aspires to become a globally acclaimed center of excellence offering quality education and enabling innovative research in Information Technology department by producing competent Information Technology graduates to contribute towards nation building.

MISSION OF THE DEPARTMENT

- Impart knowledge of fundamentals as well as emerging trends in Information Technology
- Inculcate innovative and entrepreneurial abilities as well as ethical values among the students
- Establish computing facilities and research activities to enhance the knowledge
- Enhancing competency of faculty with the advanced technologies in Information Technology

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

The graduates of B.Tech. (Information Technology) will

PEO 1	Outstand as technically skilled professionals in Information Technology and relevant sector.
PEO 2	Devise, Implement and Deploy software solutions for computational problems.
PEO 3	Build software solutions for the challenging problems in industry and research.
PEO 4	Manifest the ethical values and exhibit social responsibility.

PROGRAMME OUTCOMES (POs)

The graduates of B.Tech. (Information Technology) will be able to

PO 1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	**Problem Analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	**Design/ Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4	**Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO 5	**Modern Tool Usage:** Create, select, and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO 6	**The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO 7	**Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	**Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO 11	**Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO 12	**Lifelong Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

The graduates of B.Tech. (Information Technology) will be able to

PSO 1	Design system to solve complex IT related problems using algorithm analysis, database technology, multimedia, web design, networking and principles of Software Engineering, to face the challenges in corporate and industries.
PSO 2	Communicate and function efficiently as an individual and as a member or leader in multidisciplinary teams in software development process.
PSO 3	Identify the need for sustainable development in software industries and follow the professional code of ethics.

COMPENDIUM

KCG College of Technology - An Overview

KCG College of Technology was founded in 1998 to fulfil the Founder – Chairman Dr. K. C. G. Verghese's vision – "To Make Every Man a Success and No Man a Failure". It is affiliated to Anna University, Chennai and Approved by AICTE, New Delhi. KCG is an ISO 9001:2015Certified Institution and is accredited by NBA.

Life is full of its ups and downs. One day, you may feel like you have it all figured out. Then, in a moment's notice, you've been thrown a curve ball. You're not alone in these feelings. Everyone has to face their own set of challenges. Learning how to overcome challenges will help you stay centred and remain calm under pressure.

Centre of Transformational Leadership conducted a session on OVERCOMING CHALLENGES: HUMAN&TECHNICAL) which was facilitated by Mr. Ram Srinivasan, Co-Founder- Zasti, on Friday, 26th August 2022, which proved to be highly inspirational.

Ms. Muskan P, member of CTL welcomed the gathering. With the introduction of the resource person by Dr. Anita, Dean of Student Affairs, the workshop commenced.

Our Chief Guest shared his past experiences on how to overcome from the challenges faced by the Youths. He shared his personal life experiences, on how he overcame multiple challenges like dyslexia and penury. In spite of many hurdles and failures he persisted and never gave up. He also shared how many companies grew tenfold by understanding what the user wanted, or perceived the product. One example was how in the initial stages, the software companies were trying to compete with each other, till they realised that when 80% of the people still preferred writing on paper, their competitor was paper and pen. He also shared product anecdotes to show that it was important for a product to be user friendly.

A few CTL members expressed the takeaways they received from the workshop. Vote of thanks was given by one of the CTL members Ms. Honnashree. It was a tremendous learning

opportunity for all the participants.

EMPOWERING THE YOUTH SERIES:2 @ MIRZA HALL

KCG College of Technology in collaboration with Aspire for Her (AFH), conducted a session for our students on the topic "Forging Leadership in Technology" on 26th August, 2022. Ms Priya Mohan Dass, Networks& Operations Manager, AFH represented the AFH team.

Dr Krishna Murthy, HOD – CSE, KCG College of Technology gave the Welcome Address and Dr Frank Vijay, HOD – IT, KCG College of Technology introduced the speaker.

Ms Ashima Purohit, Director of Engineering Fresh Works, addressed our students on the topic. It was a great interactive session for our students to know more about Leadership Management. She touched upon communication skills and listening abilities. She also said that a leader is the person who steers the whole team and the leader has to take the responsibility of the result of the team work and at times it is OK to fail, as failures also teaches lesson.

Our students had questions as how to handle criticism, lay-off, gaining trust of the team members and many more. Ms Ashima very patiently handled the questions and answered them out, from her own real-life experiences and work place experience, which made the students to connect themselves better with the speaker. The session was more informative and livelier.

The session came to an end with Vote of Thanks proposed by Ms D Revathy, Student Counsellor, KCG College of Technology.

WORKSHOP ON SELENIUM – INTRODUCTION TO TESTING TOOL

Women's Coding Club conducted a Workshop on Selenium –Introduction to Testing Tools on 27th August 2022 at Steve Jobs Laboratory. Ms R Adline Freeda, AP/IT, KCG College of Technology gave the Welcome Address. Around 25 students attended the session. First, speaker started with what is testing and introduction about the software testing with its types, advantage and disadvantages. She gave a detailed description about Selenium-automation tool.

Then started with hands-on session where students used selenium automation tool for testing web browser. During the practical session, speaker helped the students to download the required tools for the session and implemented the selenium tool in eclipse using java. Finally, speaker concluded with a few tips for the students to get knowledge about the role of a Software tester. The session came to an end with Vote of Thanks proposed by Ms. Anju A, AP/IT, KCG College of Technology. The session was more informative and useful.

WORLD SUICIDE PREVENTION DAY MARATHON

"Life is priceless; KCG Tech values it".

Every year the World Suicide Prevention Day is observed on 10th September. Suicide is becoming a social problem. Each year 800,000 people take their own lives. According to a latest report, in 2021 roughly 93, 580 died by committing suicide in India. After COVID the suicidal rates are on the higher side. By raising awareness, reducing the stigma around suicide and encouraging well-informed action, we can reduce instances of suicide around us.

Indian Association for Suicide Prevention and World Health Organisation has announced the theme for the year 2022 as "Creating Hope through Action". To create hope through action, KCG College of Technology along with Y's Service Club of Chennai Karapakkam, organised a 15 kms Marathon from KCG College of Technology, Karapakkam to Edward Elliot's Beach, Besant Nagar. The KCG Tech students, staff and general public ran for the cause. The entire registration amount is given to SNEHA Suicide Prevention Centre.

Mr Anand MC, Director, SNEHA Suicide Prevention centre addressed the audience at the Elliot's Beach on Suicide Prevention. He said that, "Suicide is a cry for help and the person do not really want to commit suicide. At the moment when the suicidal person is heard, given due care and support a life can be saved". Prizes were distributed to encourage the Marathon participants and pamphlets on suicide prevention were distributed to the public.

WORKSHOP ON WEB DEVELOPMENT @ STEVE JOBS LABORATORY

Women's Coding Club conducted a Workshop on Web Development on 24th September 2022 at Steve Jobs Laboratory. Dr. J Frank Vijay HoD / IT, KCG College of Technology gave the Welcome Address. Students from AIDS, CSE and IT had attended the session. First, speaker started with the scope of Web Developer in industry. Then started with hands-on session where students used basic HTML tags and SQL query to connect with Database. During the practical session, speaker helped the students to download the required tools for the Web Development.

Finally, speaker concluded with importance of skill development and Job opportunities in industry. The session came to an end with Vote of Thanks proposed by Ms. Anju A, AP/IT, KCG College of Technology. The session was more informative and useful.

WORLD MENTAL HEALTH DAY 2022

The World Mental Health Day (WMHD) is observed on 10th October. The overall objective of the WMHD is to raise awareness of Mental Health around the world and to mobilize the efforts in support of Mental Health. WHO announced the theme for the year 2022 as **"Make Mental Health and well-being for all a Global priority"**.

KCG Tech is a part of Rotary, NCC, NSS, Y's Men Club and other Social Organizations and do many CSR activities for the social cause.

COVID has created a great impact on people's life. Many lost their jobs and are financially affected. This has created great stress in people's life and are mentally affected. In view of the World Mental Health Day on 10th October, 2022 KCG Tech conducted a Cyclothonon 8th October, 2022 between 6.30 am – 7.30 am from KCG College of Technology – Sholinganallur Junction – KCG College of Technology, to raise an awareness on Mental Health. KCG Tech students rode on their cycles and created an awareness. They had placards on their cycles which had slogans on Mental Health, which helped people to understand better about Mental Health and to seek help at the earliest to live a happy life.

"Mental Health and Physical Health are interlinked. Mental health is to be taken care to live a happy and healthy life".

TECHNICAL CONTEST- #INC CRACK THE CODE

Women's Coding Club had organized a Technical Contest "#inc Crack the Code" on 29th October 2022 at Watts Humphrey Laboratory. Students from AIDS, CSE, EEE and IT had registered for the event. Around 30 students had participated for the contest. First place was bagged by Shyamily R and Sangeetha D of 3rd Year CSE, Second place was bagged by Hemapriya A and Jeffry S of 2nd year IT, Thanusri R and Sobia R of 3rd Year CSE got 3rd place in this contest. Winners were felicitated with cash prizes by Ms.Adline Freeda, AP/IT. The event ended up with a vote of thanks by Ms Anju A, AP/IT, Women's Coding Club Coordinator, KCG College of Technology.

Industry-led 5-day FDP on 5G Wireless Communication and Beyond

Faculty Development Programme is an effort to enrich engineers, architects and people involved in research and development activities including planners, decision makers, academicians and research scholars with research literacy in general and recent trends in scientific and technical communication in particular. The FDP aims to impart skills to handle different tools and technologies useful during entire process of research and scholarly communications.

This faculty development programme was organized from 21'st to 25th February, 2023 at KCG College of Technology on the above-mentioned topic. This was a five days Faculty Development Programme where various related subtopics were discussed in detail by eminent experts from Industry and academia guided the participants on various aspects of research in

Wireless communication.

The faculty development programme was inaugurated on 21'st Feb 2023 at 09:30 am.

There were 36 external participants from different colleges and institutes and around 25 participants from KCG College of Technology. The dignitaries on the stage were Mrs. Jalaja Madan Mohan – Head TCPAS IGCAR, Dr. Kavitha Balamurugan – HoD/ECE, Dr. Jose Anand, Professor, Dept of ECE, KCG College of technology.

Women's Day Celebration 2023

KCG College of Technology celebrated International Women's Day on the campus from 1st to 8th March 2023. The week-long comprehensive programme aimed at sensitising women students and faculty on keeping good health, knowing self-defence techniques, understanding Prevention of Sexual Harassment (POSH) Act, excelling in technological entrepreneurial careers, and achieving financial stability. The celebration was inclusive and not limited to women, emphasising the need for men to reflect and reshape their positive masculine qualities to build a more egalitarian world.

The events included a Master Health Check-up for women staff of the college arranged by the Management of KCG Tech in collaboration with Chettinad Hospital, Karapakkam; Self-Defence workshop for girls by Ms Sharadha Padmanabhan, Tai Chi Practioner and Self Defence Instructor on self-defence techniques; legal awareness session by Mrs Gigi Pramod, Advocate, on POSH Act that boosted further the morale and improve the campus culture,

session on "Women Entrepreneurship" by Ms Rajashri Sai, Founder- Impactree Data Technologies and Zuppa Geo navigation that emphasized on women's participation in technological advancements through technology entrepreneurship to narrow down digital skill divide and create more job opportunities, educational session on " Financial Literacy" by Ms Vidhya Shivakumar, Co-Founder, Money Marvels to make wise investments and safe loan applications and also a session for men on "Positive Masculinity" by Mr Arun and Mr Arvind, Celebrity Facilitators and Casting Directors- Vijay TV, that galvanised the participants to adopt positive masculinity approaches to prevent and eliminate violence against women.

The grand finale of the International Women's Day Celebration was held on 8th March 2023 with Tmt. N. Kamini, IPS, Additional Commissioner of Police, HQR & Traffic, Tambaram City as the Chief Guest in presence of Dr Elizabeth Verghese, Founder Chairperson, Hindustan Group of Institutions and Dr. Annie Jacob, Director, KCG College of Technology. Speaking on the occasion to the girls and women faculty the IPS said, "Create an identity, develop a sense of self-esteem, set smart career goals, use technology with prudence, attain financial independence and work for building a sustainable and inclusive world". She also distributed prizes to winners of literary competitions themed on role of women.

Dr Elizabeth Verghese, Founder Chairperson, Hindustan Group of Institutions presided over the function. In her presidential address Dr Verghese highlighted the International

Women's Day theme for the year "Innovation and Technology for Gender Equality" and said, "With digital skills, girls and women will be better able to identify and build digital solutions to solve problems that confront them and others, including gender-based problems". "Beyond merely preventing bias, empowering women to become digital creators will add value to the digital space by making it more accommodating for both genders", She reiterated.

Ms. Virusha Balu, Vijay TV Super Singer, gave an electrifying performance and the huge auditorium resounded with her mesmerizing voice. Students sang along and danced as she melodiously rendered hit songs.

TECHNICAL EXPERT LECTURE ON DATA ANALYTICS & TECHNICAL STACK

The technical expert lecture on the most trending and promising area of Data Science took place in KCG College of Technology in association with CSI Kancheepuram Chapter on 04/03/2023. The event named "Data Analytics & Technical Stack" was organized by the Department of Information Technology in association with CSI Kancheepuram Chapter and was conducted at 10.45-11.45 am in KMC auditorium.

About the Speaker

The speaker of the event was Mr.Gurusivaraman, Principal Consultant-Consultant Analytics, Infosys, Chennai. He has around 21+ years of progressive IT experience as a Principal Analytics Consultant/Program Manager with rich expertise in Retail, CPG, Supply Chain Logistics, Brazil Finance & Taxation, Pricing and Promotion domain. Currently he is managing large advanced analytics global program for top CPG client BAT. He provides predictive analytics in pricing and promotions for their revenue growth management team by implementing advanced analytics solutions. He has deep expertise in Retail Supply Chain Logistics as has worked with top clients like Walmart, JCP, Macy's and BNSF. He has received multiple certifications from IIT Roorkee on "Data Analytics with Python" and from IIT Madras on "Data Science for Engineers". He is also well versed in Cloud, DevOps, No-code and Low-code technologies.

Content of the Lecture

The lecture on the area of Data Science and its industry approach insisted more on its architecture, components, life cycle, platforms and tools used in the industry. The speaker gave a deep knowledge on the industry tech stack and various opportunities. The major factor which influences data science from other disciplines is value discovery and future prediction. There are various platforms available for performing Data Science. Mahout is a major machine

learning library which can be directly integrated with Map Reduce to implement algorithms on huge data. The speaker listed out the industries where data science is implemented. He concluded his speech quoting that "Data Science opens new streams of opportunities, enhance the productivity, increases efficiency and delivers value".

WOMEN CODEATHON 5.0 @ KMC AUDITORIUM

KCG Women's Coding Club has organized a Hackathon- Women Codeathon 5.O for girl students on 4.3.22 (Saturday). The event started with a formal inauguration by Ms. Anju A, KCG Women's Club Coordinator. The contest started at 11.00 am, the girl students from various department had registered and participated in the event. Around 60 students had registered and 20 teams (50 students) had participated for the Hackathon-. Students were asked to solve different problem statements in different domains. Students were asked to do a presentation and to show working application of their idea. The invited panel members Ms Aishwarya and Mr Sundarapandian (CSE 2020 alumni) from ZOHO corporation evaluated the teams for creativity, novelty and presentation of their idea. Judges appreciated the students involvement and creativity and asked them to extend their imagination to next level. Students had shared their experiences about the Codeathon, they were very enthusiastic and excited to solve each challenge. The event ended at 3.15 PM with vote of thanks.

MAP, EXPLORE, CHOOSE & HONE

KCG College of technology along with Aspire For Her (AFH) organised a seminar on "Career guidance" the Resource Person being Mr. R Srivatsan – Head Supply Chain Management, Zaimus Group, on 18 March 2023 between 10.00 am to 12.00 noon. The seminar focused on the challenges faced by mechanical engineers and the possible career paths available to explore and choose from. The program started with the welcome address by Ashwin Venugopal, Final year Mechanical department and the introduction of the speaker by Mr. Jesudass, Thomas, Head of Mechanical department. Mr. Srivatsan introduced himself once again before speaking about the challenges faced and the current opportunities that we can look forward to.

He spoke a little on the emerging trends and how IT services have shaped the GDP of our country and the difference between today's GDP and that a few decades ago. The speaker disclosed how life is not a linear path and health and wealth compound over time given one explores themselves, finds what they are good at and elevate the way they think about work. Finding one's sweet spot requires being great at it, loving it, making sure you are paid for it and that the world needs it. He mentioned how thinking about salary as a first step is a poor

way of thinking and choosing a domain that you understand or one that excites you is much more sustainable in the long run.

The guest went on to talk about several examples, some from first hand experience and others from friends about the harsh realities and opportunities that the industries provide, mainly giving insight on what almost every employer looks for in candidates and the fundamental truths of a job as a fresher. He mentioned how developing hard and soft skills to be ready for work is highly relevant to almost all employers. On that note, Mr Srivatsan suggested that we know our subject, know the world around us, know ourself, visit industries, get a mentor, and most importantly, start today and keep going! He finally suggested we read a few books of his choice to understand and define our expectations more clearly.

EMPOWERING THE YOUTH BIG DATA @ MIRZA HALL

Empowering the Youth Series 7 on the topic "Big Data" was conducted on 20th April, 2023 between 2.00 pm – 4.00 pm @ Mirza Auditorium the resource person being Ms Manohari Jayachandran, Software Engineer II, Blue Yonder and the program was organised by KCG Tech in collaboration with Aspire for Her. The "Big Data" course was being offered by IBM, and on completion our students were offered with a course completion badge which the students can add it on to their resume and LinkedIn profile.

Ms Manohari Jayachandran educated our students about the history of big data, how and from where the data is collected, and its uses, how the companies use it as a resource, etc… the program educated our students with an idea about big data, its future and how students can venture into it and to take it as their career.

AFH EMPOWERING YOUTH SERIES 8 – PROJECT MANAGEMENT FUNDAMENTAL @ KMC & MIRZA AUDITORIUM

Empowering the Youth Series 8 on the topic **"Project Management Fundamental"** was conducted on 20th May, 2023 between 11:00 am – 12:30 pm at KMC Hall and Mirza Auditorium. The resource persons from Aspire for Her were Ms. Manohari Jayachandran, Software Engineer II – Blue Yonder and Ms K Bindhu, Analyst – Healthcare Technology.

The event aimed to provide students with essential knowledge and skills in project management. The event attracted first-year students from various streams who were interested in enhancing their project management capabilities. Around 550 number of I year

students from all the departments attended the session to learn and acquire fundamental project management skills.

FOUNDER'S 83RD BIRTHDAY CELEBRATION

The **83rd Birthday celebration** of our **Founder Chairman late Dr. K.C.G.Verghese** was held on **20th June 2023** at the **University campus at Padur**.

Mr. M.M. Rajendran, Former Governor of Odisha & Former Chief Secretary of Tamil Nadu was the Chief Guest and gave the special message in the presence of Dr. Mrs. Elizabeth Verghese, Founder Chairperson, Dr. Anand Jacob Verghese, Chairman, Members of the Management, Principals, Faculty & staff of Hindustan Group of Institutions. Dr. Anand Jacob Verghese, Chairman of HGI delivered the Presidential address.

The students of KCG College of Technology and Hindustan International School gave excellent performances on this occasion.

As a part of the celebration and to make this day more special, the Chief Guest and the other dignitaries planted tree saplings in the University Campus. On this occasion, 2000 underprivileged were also fed in various places to celebrate the life of our Founder Chairman.

TEACHER'S DAY CELEBRATION @ KMC AUDITORIUM

Department Highlights

- Women's Coding Club conducted a Workshop on Selenium –Introduction to Testing Tools on 27th August 2022 at Steve Jobs Laboratory. Ms R Adline Freeda, AP/IT, KCG College of Technology gave the Welcome Address.

- Women's Coding Club conducted a Workshop on Web Development on 24th September 2022 at Steve Jobs Laboratory. Dr. J Frank Vijay HoD / IT, KCG College of Technology gave the Welcome Address. Students from AIDS, CSE and IT had attended the session. First, speaker started with the scope of Web Developer in industry

- Fencing Championship Tarunesh of second year IT won the third place in Chennai Fencing Championship and qualified for State Championship.

- Mobile App Club Introduction session on Android Studio was conducted. Students learned to create screen view tools, height and width of the app screen with react and developed codes using react libraries.

- In association with CSI Kancheepuram Chapter, the department organized a Technical Expert Lecture on Data Analytics & Technical Stack led by expert speaker Mr. Gurusivaraman B, Principal Consultant - Analytics Consulting, Infosys, Chennai on 4 March 2023. Mr.Gurusivaraman explained the Cyber points of core elemental analytics and modeling and guided the audience on understanding the best practices for developing robust analytical models using the process data.

- Workshop on Build to Learn was conducted on 18 March 2023. Our Alumni Mr. Dhanush S, Associate Software Engineer, Virtusa (Class of 2022) and Ms. Ellora Jeya Suji. J, Associate Software Engineer, Virtusa (Class of 2022) were the resource persons.

- In association with CSI Kancheepuram Chapter, the department organized Springboard Briefing & Curriculum Mapping on 7 March 2023. Mr. Kannusamy Sudarsanan, Senior Analyst, Infosys and Mr. Vinay Vasanth, Specialist Education, Training & Assessment, Infosys are the resource persons.

- Pre-Hackathon Workshop on Cybercratz 1.0 - Brainstorming Session was organized on 18 March 2023. Our Alumnus Mr. Muzammil Zait A, Associate Engineer, Virtusa was the resource person.

- The National Level Cyber Hackathon- Cybercratz 1.0 was organized on 24 & 25 of March 2023. Talented teams from colleges across the country participated in this premier event which aimed to provide students with a platform to solve problems we face in our daily lives and foster a culture of product innovation and out-of-the-box thinking in young minds.

- Reegan R, Madhan Kumar S & Sanjana CS of 2 Year, Department of Information Technolgy won First Place in Techowar,

- Shriram S S & Divya Prakash of 2 Year, Department of Information Technology won First Place in Code GPT

- Reegan R & MadhanKumar S of 2 Year, Department of Information Technology won Second Place in Techzzle

ACADEMIC ACHIEVEMENTS

The Information Technology department of the KCG College of Technology has grown leaps and bounds in terms of the technical collaboration and technological up gradations. This is evident in the humungous increase in the number of activities attended and co-ordinated by both the students and staff members of the department. Students have indeed made their presence felt in different arenas of Information Technology in various competitions.

With the vision to become a globally acclaimed centre of excellence offering quality education and enabling innovative research, the department of Information Technology, KCG college of Technology under the leadership of Dr. J. Frank Vijay and with the cooperation of the dedicated team of well-qualified faculty members are constantly striving to improve the academic standards. The Department which is a home for 138 students has excellent infrastructure in terms of laboratories, classrooms, seminar hall etc.The department had a tremendous achievement of filing five patents in the last academic year. **The department was ranked one among the Nation‟s TOP 65 in AICTE – CII Survey.**

The department has equipped itself with indigenous mentoring programme which keeps a tab on the performance and improvement of students in various tests and addresses other curricular and extra-curricular needs of the students through 24x7 faculty-student interaction even using the WhatsApp platform. This is in addition to the institute promoted counselling programme where the teachers act as vital support mechanism for the students. Over the years such small group interaction has proved effective and is the kingpin factor which underscores the excellent performance of the department. The department always stays in touch with the parents. The messaging service is utilized for immediate communication regarding late arrival of students, fee default, etc. The teachers with the adequate help from IT secretary make it a point to communicate to the parents about the performance of their wards on a regular basis.

To cope up with the emerging challenges, various add on courses and other activities are offered to students apart from the curriculum syllabus specified by the Anna University. ―Campus Connect‖ – an INFOSYS Industry – Academia partnership program was conducted for students by the department faculty members.

Examinations were conducted on a regular basis to evaluate the knowledge level of students. Remedial programs were categorically designed to bridge the gap between what a student knows and what he‘s expected to know. The department organized specific library
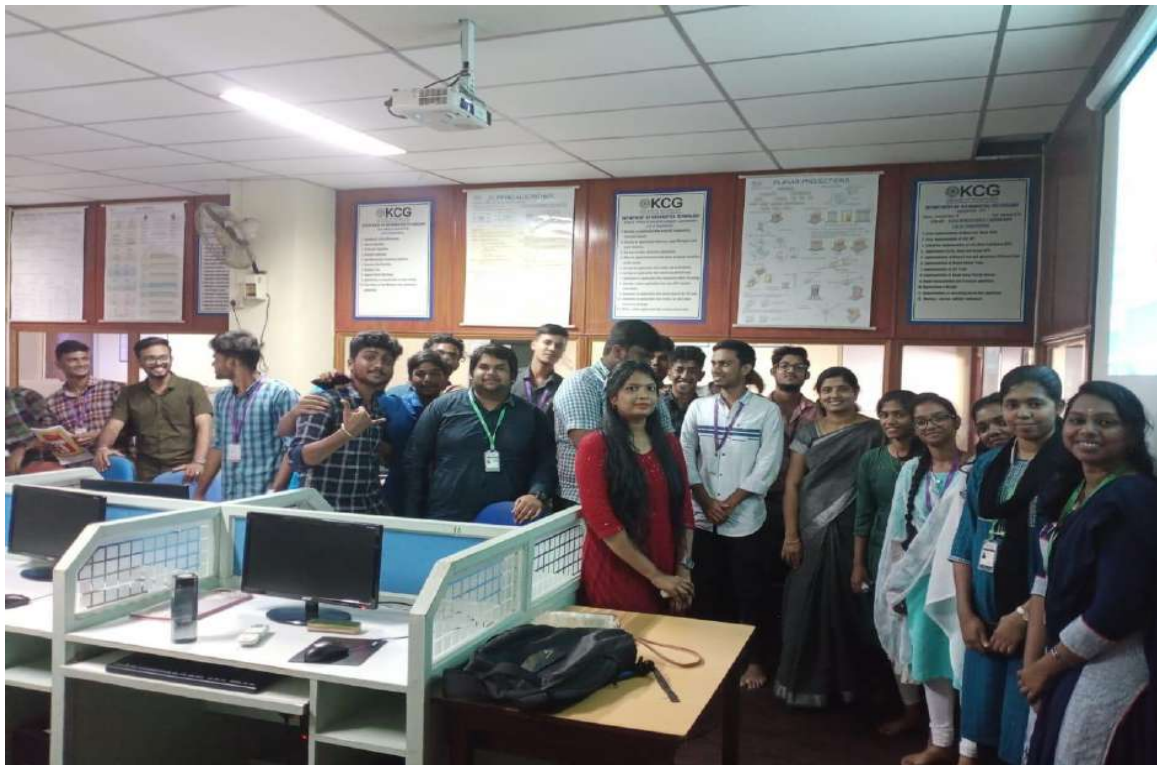
hours to facilitate the reading habits of the students. Such a measure had evidently improved the analytical skills of the students' manifold.

Placement training was another cynosure of the department. The department was specifically keen in handholding the students to successful placement processes. The effort did not stop there. Continuous training was given even after the successful placements with the intention to make them excel in their respective organizations in future. Special hour was allocated for final year students and training on core subjects was given. As a result of all these activities and initiatives, the Department of Information Technology was able to pull out success both in academic and allied activities. The students of the department secured university rank consistently in all the previous years

Department Activities

The Department is devoted to foster the fundamental principles and understanding of technology to enhance the students 'basic knowledge of Engineering. Its objective was to provide value-based education to the budding scientists and engineers. Both the students and faculty members had great opportunities for participating and conducting various technical events. A nutshell of all those initiatives and activities are categorized and listed below:

WORKSHOP ON SELENIUM – INTRODUCTION TO TESTING TOOL

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Tarunesh of second year IT won the third place in Chennai Fencing Championship and qualified for State Championship.

- Reegan R, Madhan Kumar S & Sanjana CS of 2 Year, Department of Information Technolgy won First Place in Techowar
- Shriram S S & Divya nd nd Prakash of 2 Year, Department of Information Technology won First Place in Code GPT.
- Reegan R & MadhanKumar S of 2 Year, Department of th Information Technolgy won Second Place in Techzzle.
- Kaushik S & Balaji M S of of 4 year, Department of ECE won Second Place in the Paper Presentation under the topic Opti Predict Eye Solution at INTECHNO 2K23 conducted by MIT, Madras Campus, Anna University on 8 & 9 April 2023.
- Shriram S S, Sriram G J, Tarunes K of 2 year, Department of Information Technology won First Place in Hackatoge conducted under Texas th th 2023 on 15 &16 April 2023 at IITM Research park organised by SRM Institute of Technology, Ramapuram Campus.
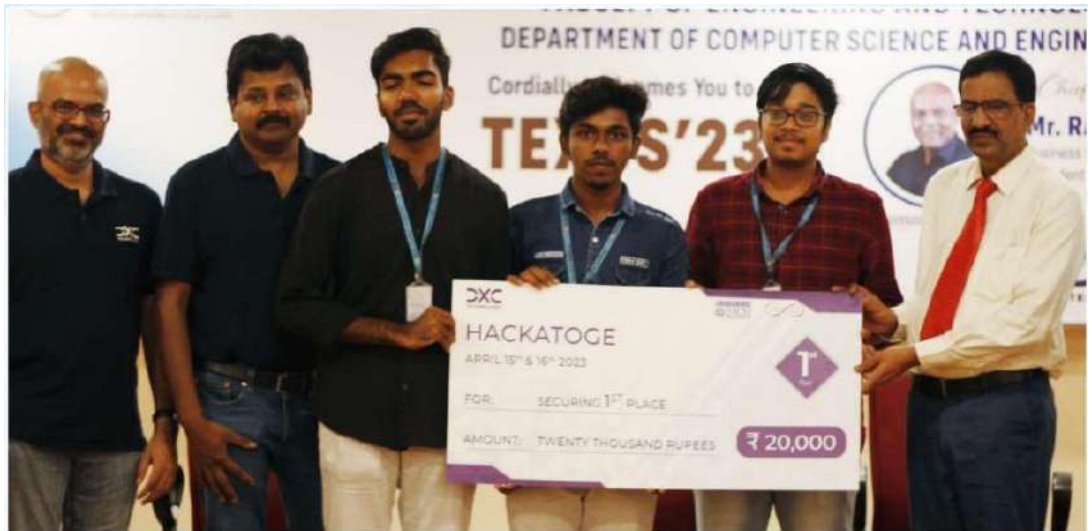
Knowledge Augmentation Programmes

Faculty members:

Online Certification Programmes:

ICT Academy:

ICT Academy is an initiative of the Government of India in collaboration with the state Governments and Industries. ICT Academy is a not-for-profit society, the first of its kind pioneer venture under the Public-Private-Partnership (PPP) model that endeavours to train the higher education teachers and students thereby exercises on developing the next generation teachers and industry ready students.

Skill Tester provides a Training – Assessment – Certification model for ICT Academy Member Institutions to be a Skill tester partner and develop their own expert faculty for training and delivering Skill tester training programs to students in their respective colleges. This provides an opportunity for colleges to develop their own skill development capabilities.

NPTEL:

National Programme for Technology Enhanced Learning is a joint initiative from IITs and IISc to offer online courses and certification in various topics. Many of the faculty members of the department completed the courses which are equivalent to FDP programmes.

- Ms.Tina Susan Thomas completed the course on "Knowledge Management" in Elite category
- Mr. V.P. Sreekantha kumar completed the course "Programming in C" successfully.
- Ms. R. Adline Freeda completed the course "Software Testing" successfully.
- Ms. Krithikaa Venket completed the course "Introduction to Machine Learning" successfully.
- Mr.N.Baskar completed the course "Data Mining" successfully.
- Ms. A. Anju completed the course "Cryptography & Network Security" successfully.

Oracle Certified Java Associate:

1. Mr. Bharath Kishore.B,. Nishanth.K.R. and Venkata Lakshmi.D.completed the course on oracle java certification course successfully.

Students:

To cope up with the emerging challenges, various add on courses and other activities are offered to students apart from the curriculum syllabus specified by the Anna University. It was planned to conduct the value added programmes as four verticals to the 2017 -2021 batch in association with the CSE department.

Vertical 1 - Full Stack Developer

SPOC: - Dr. R. Anand, Associate Professor, IT Department

Resource Persons:-   1. Dr. R. Anand, Associate Professor, IT Department

2. Dr.S. Sankar, Associate Professor, CSE Department

3. Ms. R. Adline Freeda, Assistant Professor, IT Department

4. Ms. S. U. Shiny, Assistant Professor, CSE Department

Vertical 2:-CISCO CERTIFIED NETWORK ENGINEER

SPOC:- Dr. R. Dhanalaksmi, Professor, CSE Department

Resource Person :

1. Dr R Dhanalakshmi, Professor, CSE Department.

2. Dr Emilin Shini, Professor, CSE Department

3. Ms. A. Anju, Assistant Professor, IT Department

4. Mr T Deendayalan, Assistant Professor, CSE Department

Vertical 3:-Big Data Analytics & Machine Learning.

SPOC: - Ms.Soumya S

Resource Persons:-

1. Mr. V.P. Sreekantha Kumar, Associate Professor, IT Department

2. Mr. Prabhakaran, Assistant Professor, CSE Department

3. Ms.S. Soumya, Assistant Professor, CSE Department

4. Ms. Minju P George, Assistant Professor, CSE Department

5. Ms. Sudha, Assistant Professor, CSE Department

Vertical 4: - Animation & Web Designing

SPOC: - Dr. M. Baskar

Resource Person:-

1. Dr. M. Baskar, Assistant Professor, IT Department

2. Mr. S. Bairavel, Assistant Professor, CSE Department

3. Ms. Tina Susan Thomas, Assistant Professor, IT Department

4. Mr. Radhakrishnan, Assistant Professor, CSE Department
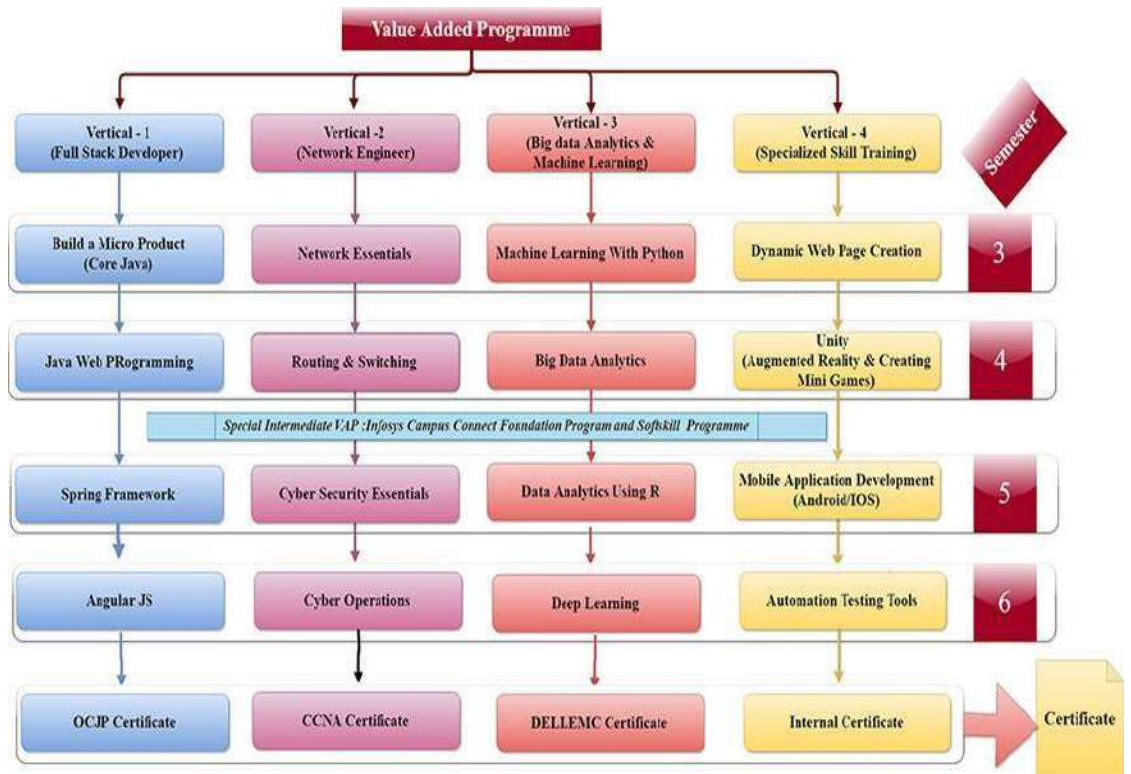
Software Testing Fundaments, AWS, Angular JS - Value Added Course:-

Software Testing Fundamentals (STF) is a platform to gain (or refresh) basic knowledge in the field of Software Testing. Ms. R. Adline Freeda and Ms. Divya M conducted a Value Added Programme on Software testing for the pre – final year students. Since it being a fundamental course, all the students of the III yr were involved in the value-added program. The students were split into two batches. The Course was scheduled for 3 hours per week for each batch in both the labs of IT Department. It was a 45 hrs value added course in which the basic concepts were covered. A manual was given to each individual student covering all the topics taught.

Technical Clubs

Engaging students in their first year of college is critical to student retention, as their first-year experiences can set the tone for the remainder of their educational careers. Today, millennials make up a large part of the student community, and the way in which these students communicate has changed. For millennials, it's all about mobile technology, including smart devices and apps, challenging higher education to find new ways to engage with our students. To make the students industry- ready by enlightening their technical skills, various clubs are initiated by the department like mobile app club, women coding club and women in technology forum.

WOMEN CODEATHON 5.0 @ KMC AUDITORIUM

KCG Women's Coding Club has organized a Hackathon- Women Codeathon 5.O for girl students on 4.3.22 (Saturday). The event started with a formal inauguration by Ms. Anju A, KCG Women's Club Coordinator. The contest started at 11.00 am, the girl students from various department had registered and participated in the event. Around 60 students had registered and 20 teams (50 students) had participated for the Hackathon-. Students were asked to solve different problem statements in different domains. Students were asked to do a presentation and to show working application of their idea. The invited panel members Ms Aishwarya and Mr Sundarapandian (CSE 2020 alumni) from ZOHO corporation evaluated the teams for creativity, novelty and presentation of their idea. Judges appreciated the students involvement and creativity and asked them to extend their imagination to next level. Students had shared their experiences about the Codeathon, they were very enthusiastic and excited to solve each challenge. The event ended at 3.15 PM with vote of thanks.

MAP, EXPLORE, CHOOSE & HONE

KCG College of technology along with Aspire For Her (AFH) organised a seminar on "Career guidance" the Resource Person being Mr. R Srivatsan – Head Supply Chain Management, Zaimus Group, on 18 March 2023 between 10.00 am to 12.00 noon. The seminar focused on the challenges faced by mechanical engineers and the possible career paths available to explore and choose from. The program started with the welcome address by Ashwin Venugopal, Final year Mechanical department and the introduction of the speaker by Mr. Jesudass, Thomas, Head of Mechanical department. Mr. Srivatsan introduced himself once again before speaking about the challenges faced and the current opportunities that we can look forward to.

He spoke a little on the emerging trends and how IT services have shaped the GDP of our country and the difference between today's GDP and that a few decades ago. The speaker disclosed how life is not a linear path and health and wealth compound over time given one explores themselves, finds what they are good at and elevate the way they think about work. Finding one's sweet spot requires being great at it, loving it, making sure you are paid for it and that the world needs it. He mentioned how thinking about salary as a first step is a poor

way of thinking and choosing a domain that you understand or one that excites you is much more sustainable in the long run.

The guest went on to talk about several examples, some from first hand experience and others from friends about the harsh realities and opportunities that the industries provide, mainly giving insight on what almost every employer looks for in candidates and the fundamental truths of a job as a fresher. He mentioned how developing hard and soft skills to be ready for work is highly relevant to almost all employers. On that note, Mr Srivatsan suggested that we know our subject, know the world around us, know ourself, visit industries, get a mentor, and most importantly, start today and keep going! He finally suggested we read a few books of his choice to understand and define our expectations more clearly.

EMPOWERING THE YOUTH BIG DATA @ MIRZA HALL

Empowering the Youth Series 7 on the topic "Big Data" was conducted on 20th April, 2023 between 2.00 pm – 4.00 pm @ Mirza Auditorium the resource person being Ms Manohari Jayachandran, Software Engineer II, Blue Yonder and the program was organised by KCG Tech in collaboration with Aspire for Her. The "Big Data" course was being offered by IBM, and on completion our students were offered with a course completion badge which the students can add it on to their resume and LinkedIn profile.

Ms Manohari Jayachandran educated our students about the history of big data, how and from where the data is collected, and its uses, how the companies use it as a resource, etc… the program educated our students with an idea about big data, its future and how students can venture into it and to take it as their career.

<div align="center">**Professional Bodies**</div>

TECHNICAL EXPERT LECTURE ON DATA ANALYTICS & TECHNICAL STACK

The technical expert lecture on the most trending and promising area of Data Science took place in KCG College of Technology in association with CSI Kancheepuram Chapter on 04/03/2023. The event named "Data Analytics & Technical Stack" was organized by the Department of Information Technology in association with CSI Kancheepuram Chapter and was conducted at 10.45-11.45 am in KMC auditorium.

About the Speaker

The speaker of the event was Mr.Gurusivaraman, Principal Consultant-Consultant Analytics, Infosys, Chennai. He has around 21+ years of progressive IT experience as a Principal Analytics Consultant/Program Manager with rich expertise in Retail, CPG, Supply Chain Logistics, Brazil Finance & Taxation, Pricing and Promotion domain. Currently he is managing large advanced analytics global program for top CPG client BAT. He provides predictive analytics in pricing and promotions for their revenue growth management team by implementing advanced analytics solutions. He has deep expertise in Retail Supply Chain Logistics as has worked with top clients like Walmart, JCP, Macy's and BNSF. He has received multiple certifications from IIT Roorkee on "Data Analytics with Python" and from IIT Madras on "Data Science for Engineers". He is also well versed in Cloud, DevOps, No-code and Low-code technologies.

Content of the Lecture

The lecture on the area of Data Science and its industry approach insisted more on its architecture, components, life cycle, platforms and tools used in the industry. The speaker gave a deep knowledge on the industry tech stack and various opportunities. The major factor which influences data science from other disciplines is value discovery and future prediction. There are various platforms available for performing Data Science. Mahout is a major machine learning library which can be directly integrated with Map Reduce to implement algorithms on huge data. The speaker listed out the industries where data science is implemented. He concluded his speech quoting that "Data Science opens new streams of opportunities, enhance the productivity, increases efficiency and delivers value".

Research Activities

Publications By Faculty Members

1. Anju, A., Krishnamurthy, M., Nithakalyani, M., Shalini, K., & Haritha, R. (2022, October). A Review to Analyze Insider Threats Using Machine Learning Techniques. In *International Conference on Information and Communication Technology for Competitive Strategies* (pp. 499-509). Singapore: Springer Nature Singapore.

2. Malathi, K., Anandan, R., & Vijay, J. F. (2023). Cloud Environment Task Scheduling Optimization of Modified Genetic Algorithm. *J. Internet Serv. Inf. Secur.*, *13*(1), 34-43.

3. Sambandam, P., Yuvaraj, D., Padmakumari, P., & Swaminathan, S. (2023). Deep attention based optimized Bi-LSTM for improving geospatial data ontology. Data & Knowledge Engineering, 144, 102123.

4. Anand, R., Kovarsan, R. K., & Palaniappan, S. (2022, December). Energy Based Streaming Consumption in Virtual Environment. In *2022 International Conference o*

5. Abarna, A., Jahnavi, K., & Lavanya, P. (2022, August). Electronic Medical Record Management System Using Recommendation Algorithm. In *2022 Third International Conference on Intelligent Computing Instrumentation and Control Technologies (ICICICT)* (pp. 193-199). IEEE.*n Power, Energy, Control and Transmission Systems (ICPECTS)* (pp. 1-3). IEEE.

6. Thomas, T. S. (2022). Space constrained fast association rule mining with optimal support and confidence threshold using grammatical evolution: an effective nudge in policymaking.

7. Anju, A., Barath, M., Maheshwaran, R., Vignesh, K., & SR, K. K. (2022, April). Sentimental Analysis for E-Commerce Website. In *2022 10th International Conference on Emerging Trends in Engineering and Technology-Signal and Information Processing (ICETET-SIP-22)* (pp. 1-4). IEEE.

8. Anju, A., et al. " "Detection of Insider Threats Using Deep Learning" ; 2023 3rd International Conference on Pervasive Computing and Social Networking (ICPCSN). IEEE, 2023.

Publications By Students

9. A. CS, D. M, H. V. R and A. Anju, "Currency Recognition For The Visually Impaired People," 2022 IEEE Delhi Section Conference (DELCON), New Delhi, India, 2022, pp. 1-3, doi: 10.1109/DELCON54057.2022.9753373.

10. A. Anju, M. R. Abilash, V. Balaji and J. K. Sayee Darshan, "Third Vision for Safeguarding Women with A Live Surrounding Update using Deep-Learning for Computer Vision," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 288-292, doi: 10.1109/ISPCC53510.2021.9609496.

11. S. Hari Krishnan., G. Sathish., V. Arish Narayanan. and R. A. Freeda, "Web Application For Rto Vertification System," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 690-693, doi: 10.1109/ISPCC53510.2021.9609460.

12. P. L. Arunachalam, P. Krishna, M. Vignesh and T. S. Thomas, "Ambulance Booking Application," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 146-149, doi: 10.1109/ISPCC53510.2021.9609423.

13. S. Gowri Manohar, A. Mohana Krishna Kumar, K. Visweswaran and R. A. Freeda, "A Protected Cloud Information Sharing Convention for Big Business Supporting Various Leveled Catchphrase Search," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 715-718, doi: 10.1109/ISPCC53510.2021.9609465.

14. N. Ananthi et al., "Detecting six different types of Thyroid Diseases using Deep Learning approaches," 2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2022, pp. 1-8, doi: 10.1109/ACCAI53970.2022.9752581.

Industry Institute Interaction

Report on Train The Trainer (TTT) program on 'Creating a Microsite'

Organized by: Infosys

Workshop Conducted on :   **August 23 and August 27, 2022**

Mode: Virtual (through Webex) Attended

by: A.Anju Asst. Professor /IT

Title of this Workshop: **"Creating a microsite". Objective:**

A microsite is a one-stop destination that educational institutions can use to their benefit to host internal content with access exclusively for their faculty and students. The objective of the workshop is to guide the faculty members on creating and publishing a microsite for our institution.

Trainers:

Ms Sahana Kumaraswamy, Mr Harikrishnan and Jeevana from Infosys trained us for creating microsite for our college.

Outcomes:

1. Creation of Microsite: We created a microsite for our college and published in the below-mentioned link.
   Microsite Link:
   https://infyspringboard.onwingspan.com/en/page/lex_auth_013365636960976896230 Use this link to go to our college channel (microsite) page.

2. The department has planned to make II Year students to learn two online courses under this website. The course details are given below:-

   - Data Structures & Algorithms : The complete Masterclass
   - Programming Using Java – Special Batches

   Information regarding to take this course was disseminated to the students.

Finally, we thank the Management, Principal, HoD for given opportunity to attend this programme.

Report on Virtusa - Train the Trainer Program

Date: 27th Feb to 3rd March'23

Mode: Virtual mode

Topic: Java React

Attended By: Ms. R. Adline Freeda & Ms. Tina Susan Thomas, Assistant Professor – IT

Ms.Tina Susan Thomas

This report details on the training programme conducted by Virtusa on Java React. Across the industry, Java React is used extensively in all novel applications for developing UI framework. Therefore, the focussed training of Java React is quintessential. Though the programme was scheduled from 27th Feb to 3rd March '23. The training programme was scheduled as follows:

Date	Topic	Desc	Timings
27th Feb – 28th Feb, 2023	React	UI Framework	10:00 AM – 1:00 PM
01st March - 02rd March, 2023	Spring Boot, Maven, Hibernate	Backend Dev with Java Stack	10:00 AM – 1:00 PM
03rd March 2023	Case Study development	Lab assignments	Full day

The participants were given a username and password in the examly platform where the participants were asked to complete 1988 questions, 24 practice tests and 18 assessments. The submission of assignments was given a deadline extension till 15th April 2023. The course was rich in Java React modules like Building tools, Design Patterns, Spring Core, Spring MVC, Spring REST, Database Persistence, Data pattern, Use case execution and Java Full Stack application.

Overall, the training programme, though bit faster and hectic was useful to learn the basics of Java React. The course was more self-learning in nature. Hence required undivided attention. Nevertheless, I thank the management for giving this opportunity.

R.Adline Freeda have attended the three weeks Train the Trainer programme of Virtusa CoE in Java –Full stack, organised by Virtusa, Chennai on 27th Feb to 3rd March '23.. The sessions of the three weeks were:

Week1:

The above Train of the Trainer Course was inaugurated by Mr. Keerthi, HR, Virusa.The keynote address was delivered on "Core Java Basics" by Mr. S.Rajkumar, Associate Director of Technology, Virtusa,Chennai. In his presentation he has explained about the core java concepts, different paradigm used in java, JRE, and java keywords.

The session were handled by Mr. S.Rajkumar, Associate Director of Technology,

Dates	Topic	Desc	Trainer	Timings
27th Feb – 28th Feb, 2023	Angular	UI Framework	Rajkumar	2PM - 5PM
27th Feb – 28th Feb, 2023	React	UI Framework	Priya	10AM - 1PM
01st March - 02rd March, 2023	Spring Boot, Maven, Hibernate	Backend Dev with Java Stack	Priya/ Raj	10AM - 1PM
03rd March 2023	Case Study development	Lab assignments		

Virtusa,Chennai and the title is "UI Framework". he has explained about the Characteristics of Collection Framework interfaces

Week 2:

The session was handled by Mr. S.Rajkumar, Associate Director of Technology, Virtusa, Chennai on "Maven,Spring MVC,Angular and Node Js". In his morning session he has explained about the maven and spring MVC development as following,

1. Maven File creation with pom.xml

2. Dependency injection

3. Spring MVC Directory services

Trainer asked to do self-study on some of programming languages with the help of internet,

1.Angular(https://angular.io)

2.Spring MVC(https://www.mkyong.com/)

Some casse study problems were given in examly portal and asked to work out in the following areas,

1.Lamda Expression

2.Multi-threading

3.Angular

S.No	Module	Action to be taken
1.	Core java	Collection Framework
2.	Core java	Executor Framework
3.	Core java	Streams
4.	Core java	Lamda Expression
5.	Core java	User Defined Exception
6.	Core Java	Apache Commons & Google Guava +Cache+4. Coding style best practices
7.	Unit Testing	Junit
8.	Unit Testing	Mockito with Junit
9.	SPA	Bootstrap,JQuery
10.	SPA	Angular,Node JS
11.	SPA	TypeScript - Data Types, OOP, Genrics, Casting
12.	JEE Framework	Spring MVC,Maven
13.	Application Security	Application Security - Spring Security

Placement Achievements