Loyola-ICAM College of Engineering and Technology (LICET)
Department of Electrical and Electronics Engineering
Electrical Engineers League (EEL)
Under
AICTE – Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES)

Event Report

Category: **Guest Lecture**

Title of the Event: **Journey from Foundation Courses to satisfying industrial needs**

Date: 29-06-2022   Venue: G01 (Auditorium)

Details of Participants

● Total No. of Participants: 119   ● I EEE (Batch: 2021 – 2025) : 60
                                         ● I ECE (Batch: 2021 – 2025): 59

Technological/ Academic/ Other benefits generated by conducting the event with respect to:

(a) the institution	● Networking & building brand recognition - promote the institution and help people connect with our brand ● Showcase the facilities at the institution by bringing the faculty from premium institutions
(b) the faculty	● Strengthen faculty community and build relationships with each other ● Meet like-minded individuals in person and encourage active engagement
(c) Students	● To stay on the top of current trends, especially with technology, causing rapid change across many different industries. ● Academic engagement/ engagement in scholarly activities
(d) Industry/ Society	● Clarifying the image of the avenues of development in the near future ● Contributing to make the literacy rate rise higher thereby helping build a more educated, empowered and aware society

Proceedings of the event

Category: Guest Lecture

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Report on Journey from Foundation Courses to satisfying industrial needs

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Date: 29-06-2022   Time: 02:00 pm to 03:30 pm   Venue: G01

Resource Person: Dr. S. Ramasamy, Professor, Department of Electrical and Computer Science, Addsi Abada Science and Technology University, Addsi Ababa, Ethiopia

Audience: I EEE (Batch: 2021 – 2025) & I ECE (Batch: 2021 – 2025)

A brief introduction on the ongoing industrial revolution with the intervention of Artificial Intelligence (AI) and Machine Learning (ML) was given by the guest speaker. He then explained the changes this revolution is creating and the birth of several related sectors in the industry. To stay abreast, the speaker recommended the participants to take up a few courses offered by premium institutions and industries. The guest speaker recommended NVIDIA skill development platform that could help the students in developing their skills in the fields of Machine Learning and Artificial Intelligence. He then gradually introduced the concept of Tiny ML to the participants. He quoted that Embedded systems and AI are indispensable for electrical engineers and they form the basis of TinyML. He also used simple analogies from daily life to explain technical concepts. Thus, he curated interest among the participants to improve their skillset. He also highlighted the technological advancements in the industry with the advent of ML and AI. Thereby he emphasized on the features and advantages of industry 4.0. He later explained the role of Internet of Things (IoT) in implementing industry 4.0 and encouraged the students to master themselves in these technologies. He also stimulated interest among participants to develop projects related to programming IoT devices.

After introducing the concepts – ML, AI, TinyML and IoT, he presented Smart Ecosystem Consumption. It is where he briefed the participants about a few successful companies (Valeo, Hanon Systems, Wabco, etc.) that have implemented Industry 4.0 in practice. He also stated that chip design is the driver of AI and it could be a sustainable field of professional growth for both students of EEE and ECE. In line with this, the speaker encouraged the participants to make maximum use of NPTEL platform and learn the technologies causing industrial revolution. The speaker elucidated the participants with the designing chips in size of Micro and Nano, and the circuitry boards. Then he discussed about the Smart Eco System Consumption. In continuation with this, he spoke about Efabless which is a cloud-based chip designing and driver that is used to design AI & ML devices. He exhibited a few programmable micro-controller boards to the students and showed the participants how well the ports are defined. Thus, he inculcated interest among the participants to learn programming microcontrollers. He encouraged the participants to choose their domain regardless of the field of study by mentioning the domains – Smart healthcare, Big data, Cybersecurity, Augmented and Virtual reality, Smart tools, Smart logistics, Smart Agriculture, Cyber-Physical systems, etc.

Finally, he concluded the session by quoting the Seventeen Sustainable goals given by UNESCO – No Poverty, Zero Hunger, Good Health and Well-being, Quality Education, Gender Equality, Clean water and sanitation, Affordable and clean energy, Descent Work and Economic growth, Industry Innovation and Infrastructure, Reduced Inequalities, Sustainable cities and communities, Responsible Consumption and Production, Climate action, Life below water, Life on land, Peace, Justice and strong institutions and partnership for the goals.

Relevant Courses in the current semester

GE3151 Python Programming
Basics of algorithmic problem solving

EE3251 Electric Circuit Analysis
Applications of Electric circuits

GE3171 Python Laboratory
Implementing real-time/technical applications
Implementing programs using written modules

Relevant Program Outcomes

- PO5 – 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.
- PO6 – 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.
- PO7 – Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and the need for sustainable development.
- PO8 – Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO12 – Life-long learning: Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Feedback

Guest Lecture Feedback
Topic: Journey from Foundation Courses to satisfying industrial needs
Date : 29th June 2022   Time: 02:00 pm to 03:30 pm

Category	Excellent	Good	Satisfactory	Not Satisfactory
Interest in program	71	22	11	
Content Delivery	54	30	20	
Presentation	81	23		
Response to Queries	92	12		
Overall usefulness	73	21	10	