Institution of Electronics and Telecommunication Engineers (IETE) Approved One Week Online Short Term Training Program (STTP) on

NeXus 2K25: The Evolution of Networking





March 8, 2025 - March 13, 2025

CONVENOR : Dr. Kevin Noronha Head, Dept of EXTC

COORDINATOR: Ms. Shilpa Chaman Assistant Prof, Dept of EXTC

ORGANIZED BY:

Dept. of Electronics & Telecommunication St. Francis Institute of <u>Technology</u>

(Autonomous Institute, affiliated to the University of Mumbai) (NAAC Accredited with A+ Grade for 5 years) Mount Poinsur, Borivali (W), Mumbai-400103 Phone: 9167370622, 9167370632

http://www.sfit.ac.in

About SFIT:

St. Francis Institute of Technology (SFIT) was established in 1999 with a view to create an Engineering Degree Institute to fulfill the long felt public need of an Institute of Excellence in Borivali. SFIT has 7 UG Programs and two PG Programs in the most coveted disciplines considering both industrial need and public preference. These courses would lead to award of the Degree of Bachelor of Engineering (B.E.) in Computer Engineering, Electronics & Telecommunication Engineering, Information Technology, Electrical Engineering and Mechanical Engineering, Artificial Intelligence and Machine Learning and Electronics and Computer Science as well as Master of Engineering (M.E.) as well as Ph.D. (Technology) in Computer Engineering and Electronics & Telecommunication Engineering. SFIT is approved by AICTE and is permanently affiliated to the University of Mumbai. National Board of Accreditation (NBA) has granted accreditation to the three U.G. programs i.e. Computer Engineering, **Electronics & Telecommunication Engineering and** Information Technology offered by our Institute. The institute is also NAAC A+ and ISO: 2001 certified for meeting with the Quality Management System Standards ISO 9001:2015, for providing undergraduate courses in Engineering.



About Department:

The department was established in 1999, with a sanctioned intake of 60. Over the years, the sanctioned intake was increased to 120 in 2010. We have grown by introducing the postgraduate Masters programme in 2012 and Doctoral programme in 2015.

Our vision is to establish ourselves as a centre of excellence globally in the field of Electronics and Telecommunication where teamwork, innovation, and research are encouraged to nurture and develop graduates and post graduates with strong academic foundation and an all-round personality with ethical values.

Our mission is to impart quality technical education, expose students to state-of-the-art technologies in the field of Electronics and Telecommunication Engineering, imbibe ethical and professional values, inculcate the quest for higher learning and an aptitude for research and global competency. Faculty members have delivered invited talks in conferences and other institutes, presented and published presenting and publishing our research work in national/international conferences/journals.

The department has a national-level student chapter, the Institution of Electronics and Telecommunication Engineers SFIT. IETE SFIT is dedicated to enhancing students' technical expertise and professional growth by organizing workshops, expert lectures, seminars and field trips on emerging technologies in every industrial field. Through these initiatives, the chapter provides valuable industry insights and hands-on learning opportunities, bridging the gap between academics and real-world applications. By fostering innovation and knowledge sharing, IETE SFIT helps students stay updated with the latest advancements in the field, preparing them for future challenges in the industry. Recent events conducted by IETE SFIT include hands-on workshops on Power BI and 3D printing & prototyping, equipping students with practical skills in data visualization and rapid prototyping. Additionally, a project competition encouraged innovation and problem-solving among students. A session on career opportunities in the VLSI domain provided insights into industry demands, highlighting the key skills required to secure a job in the field, such as circuit design, FPGA programming, and semiconductor fabrication.

Significance of Course:

NeXus 2K25 is a **Short-Term Training Program** (STTP) designed to equip participants with cutting-edge knowledge in networking technologies. The course covers **5G**, **6G**, **IoT**, **cloud networking**, **ML**, **cyber security**, and wireless evolution, providing insights into industry trends and advancements.

Course Objectives:

- To provide a comprehensive understanding of next generation networking technologies, including 6G, IoT, and wireless networks.
- To explore the various domains of computer networks, covering certifications, career paths, and professional growth opportunities.
- To analyze the very evolution of wireless communication, from 4G to 5G and beyond, and its role in industrial transformation.
- To introduce cloud networking and virtualization, emphasizing its role in modern network architectures.
- To develop awareness of cybersecurity challenges in cloud-based networks, including threat mitigation strategies and ML-based optimizations.
- To equip participants with the technical expertise and practical knowledge required to be industry ready in field of networking & telecommunication.

Course Outcomes:

- Participants will gain a strong understanding of emerging networking technologies, including 6G, IoT, and the future of wireless networks.
- Participants will be able to identify the career opportunities in computer networks, understand industry-recognized certifications, and strategize their professional growth.
- Participants will develop insights into wireless network evolution, analyzing the transition from 4G to 5G and the upcoming advancements.
- Participants will be able to evaluate the role of cloud networking and virtualization in modern network infrastructure.
- Participants will learn to assess cybersecurity threats in cloud-based networks and explore ML-based defense mechanisms to enhance security.

Topics to be covered:

- Roadmap to Computer Networking: Trends, Technologies, and Future Directions
- Industrial evolution of Wireless Networks: From 4g to 5g & beyond.
- Future trends in Networking: Rise of 6g and IOT Innovation.
- Fortifying the Digital Frontier: Principles and Practices of Computer Security
- Cloud Networking & Virtualization: Transforming modern architechture.
- Securing networks in Cloud Era: Cyber threats, defense strategies & ML-based optimization.

Resource Persons:

- Dr. Vimal Bhatia
- Professor, IIT Indore
- Dr. Deepak Kshirsagar
 - Ph.D, IIT Roorkee
 - Secretary, IETE Pune
- Mr. Kalind Karia
 - Research Scholar, IIT Bombay
- Dr. Suvarna R Bhise
 - Secretary, IETE Mumbai
- Dr. Shubhangi P Kharche
 - HOD, SIES Graduate School of Technology
- Ms. Dhanashree Hadsul
 - Assistant Professor, FCRIT Vashi

Who Should Attend the Course?

The STTP is open to students, faculty members and professionals from Government and Private organizations who wish to enhance their knowledge in 6G, IoT, cloud networking, & cybersecurity and look to stay updated with industry trends, develop relevant skills, and gain insights from expert-led sessions.

Patrons:

- Bro. Shantilal Kujur (Director, SFIT)
- Bro. Joy Kurien (Deputy Director, SFIT)
- Dr. Sincy George (Principal, SFIT)

Convener:

Dr. Kevin Noronha
 - HOD, Dept of Electronics & Telecommunication Engineering

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- Mr. Shem Christian, IETE SFIT Treasurer
 Mobile Number: +91 96190 21354

Registration Details:

Registration Link: <u>REGISTER HERE</u> Registration Fees: IETE members: Free of cost !! Non-IETE students: Rs. 200/-Non-IETE faculty and others: Rs. 350,



Note: For any queries related to registration kindly contact the organizing committee.

IETE approved certificates will be issued to all the participants.