



MTech

AI in Signal Processing

Department of Electronics & Telecommunication Engineering, COEP Technological University

Why AI in Signal Processing

- Master AI, machine learning, and advanced signal processing to solve complex problems in audio, image, biomedical, IoT, and communication domains
- Gain practical experience through dedicated labs, research-oriented projects, and electives in edge computing, biosensors, and intelligent systems
- High-demand roles in AI R&D, embedded AI, and data-driven signal analytics across healthcare, automotive, and tech sectors

Placement Partners

- Audio/Signal Tech: Dolby, Qualcomm, Reverie
- Vision & Imaging: Tata Elxsi, Valeo, KPIT
- AI & Healthcare: GE, SigTuple, Philips, Persistent Systems
- IoT & Edge AI: Bosch, Intel, eInfochips
- AI Security & Blockchain: IBM, Tech Mahindra, Accenture

Key Highlights

- Core subjects: ML for Signals, Audio/Image Processing, NLP, AI Applications
- Electives: Blockchain in AI, Cloud & Edge Computing, Smart Biosensors
- Industry-aligned labs & seminars
- Research & IP orientation
- Ethical AI & technical communication training

Internship Opportunity at:

- Ampere
- AMD
- i-Tek RFID
- TCS

Curriculum Structure:

Semester I	
Sr. No.	Course Name
1	Applied Mathematics
2	DSP Algorithms
3	Machine Learning for Signal Processing
4	Audio Signal Processing
5	Digital Image & Video Processing
6	Program Elective – I a. Embedded Systems b. Signal Security c. Optimization Techniques)
7	Research Methodology

Semester III	
Sr. No.	Course Name
1	Dissertation Phase – I
2	Massive Open Online Course – I
3	Massive Open Online Course – II
4	Internship

Semester II	
Sr. No.	Course Name
1	Open Elective (Networked Embedded Systems)
2	AI for Signal Processing
3	Natural Language Processing
4	Biomedical Signal Processing
5	Program Elective – II a. Computational Intelligence b. Cloud Computing c. Edge Computing
6	Program Elective – III a. AI in Connected Devices b. Smart Biosensors c. Blockchain in AI)
7	Technical Communication Skills
8	Liberal Learning Course

Semester IV	
Sr. No.	Course Name
1	Dissertation Phase – II

Eligibility:

- BE/BTech in relevant branches with GATE score or equivalent exam conducted by COEP Tech.

Apply Now

**Online Application Date:
14th April to 15th May, 2026**

For more details, visit:

<https://mtech2026.coeptech.ac.in/StaticPages/HomePage>

Industrial Collaboration

- Collaboration with Schaeffler Technology Solutions, Tata Elxsi, i-Tek, TCS Research, Bosch, Philips, Intel, Jabil, and research startups
- Mentorship from AI scientists, embedded system experts, and signal processing professionals across telecom, automotive, and healthcare domains
- Internships & research projects aligned with real-world challenges in audio analytics, biomedical signals, image/video processing, and IoT signal intelligence