



**Knowledge Network of
Indian Institute of Technology, Gandhinagar
Under TEQIP-II Initiative**

Summer School on Signals and Systems

Signals & Systems is a core course for Electrical and Electronics engineering students. It is the preliminary course which provides a platform to learn advanced courses such as Communication Systems, Digital Signal Processing, Digital Image Processing, Wireless and Digital Communications, Computer Vision, Computational Photography, Adaptive Signal Processing, Speech Processing, and Wavelets. It is important to learn the subject through problems and projects. This summer school provides an opportunity for the faculty members and students to revisit the important fundamental concepts of Signals and Systems and to sharpen their teaching skills. Participation in this summer school is invited through registration.

Topics to be covered

Continuous and Discrete Time Signals and Systems; Linear Time Invariant (LTI) Systems; Time Domain Analysis; Differential and Difference Equations; Zero Input and Zero State Response of LTI Systems; Stability; Causality; Convolution; Frequency Domain Analysis; Continuous Time Fourier Series and Transform Laplace Transform; Sampling and Reconstruction; Discrete Time Fourier Series and Transform; Z Transform; Discrete Fourier Transform.

Tentative schedule for this summer school

- (a) Morning session: Lecture for 3 hours (10AM – 1:15PM)
- (b) Afternoon session: Tutorial session for 1.5 hours, Lab assignments for 1 hour (2:30PM – 5PM)

Presenters: (Instructors)

1. Prof. Shanmuganathan Raman (IIT Gandhinagar)
 2. Prof. Nithin V George (IIT Gandhinagar)
 3. Prof. S Rajendran (IIT Gandhinagar)
 4. Prof. KVV Murthy (IIT Gandhinagar)
-