

### Course Syllabus

<b>Course Code and Name</b>	<b>EE 26341 – Signal Analysis and Systems</b>
<b>Credit and contact hours</b>	<b>3 (2, 1, 1) (Lecture, Tutorial, Lab)</b>
<b>Required or Elective</b>	<b>Required</b>
<b>Level / Year</b>	<b>Level (5) / Year (3)</b>
<b>Course Prerequisite</b>	<b>EE 26222 Electric Circuits-1</b>
<b>Textbook</b>	C. Phillips, J. Parr and E. Riskin, Signals, Systems, and Transforms, Prentice Hall, (Last edition)
<b>Course Description</b>	This course covers the following topics: Classification of signals (continuous-time vs. discrete-time, periodic vs. non-periodic, energy signal vs. power signal, odd vs. even) - mathematical operations on signals. Classification systems - Properties of continuous-time LTI systems - convolution (convolution sum and convolution integral) - frequency domain analysis (Fourier series or Fourier transform) Properties of Fourier series or Fourier transform - sampling theorem - Nyquist rate Signal Processing using computer (Matlab and other software) - Introduction to digital signal processing DSP.
<b>Brief List of Topics to be Covered</b>	<ol style="list-style-type: none"><li>1- Classification of signals and systems</li><li>2- Properties of continuous-time LTI systems</li><li>3- Review of continuous-time Fourier analysis</li><li>4- Fourier Transform and its properties</li><li>5- Signal Spectrum</li><li>6- Convolution integral</li><li>7- Sampling Theory</li><li>8- Signal Processing using computer (MATLAB and other software)</li></ol>
<b>Course is prerequisite for</b>	<ul style="list-style-type: none"><li>• EE26426 Automatic Control Systems</li><li>• EE26443 Analog Communications</li><li>• EE26546 Digital Signal Processing</li></ul>