

# EE 102 Week 6, Lecture 1 (Fall 2025)

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## 1 Goals

The main goal of this lecture is to write the Fourier series representation of periodic signals. To motivate this, we will show how sinusoidal signals are eigenfunctions of LTI systems (that is, when a sinusoid is input to an LTI system, the output is also a sinusoid of the same frequency). This will lead us to the Fourier series representation of periodic signals.