

Industry Expert Lecture Series - Network Theory and Control System

Under Industry Involvement in Regular Course Delivery

The Department of Electronics and Telecommunication Engineering organized an Industry Expert Lecture Series on “Stability Analysis of Control Systems” for SE (Semester III) students on 14 October 2026, as part of industry involvement in regular course delivery for the subject **Network Theory and Control System**.

Mr. Ashutosh Tambe, Deputy Engineer, Maharashtra State Electricity Transmission Co. Ltd. (MSETCL), was the resource person for the lecture. The lecture focused on stability analysis in the frequency domain, with particular emphasis on the Bode plot method. The session aimed to help students understand how frequency-response characteristics can be used to assess control-system stability and relative stability.

The lecture was aligned with the following course outcome: Understand the analysis of systems in the time and frequency domains and predict the stability of a given system using appropriate criteria.

During the session, the resource person explained the use of Bode plots for frequency-domain stability analysis. The discussion highlighted key concepts such as **gain crossover frequency, phase crossover frequency, gain margin, and phase margin, and how these parameters help evaluate the stability of a feedback control system.**

The lecture provided students with an opportunity to connect theoretical concepts from the curriculum with their practical relevance in electrical power and transmission systems. All students could successfully draw bode plots of a given system during the sessions.

A total of 60 students from SE EXTC have actively participated in this session. Faculty coordinator, Dr. Amol R. Sutar coordinated the event under the guidance of Dr. Sharada V. Chougule, HoD, EXTC.



Course in-charge Dr. Amol Sutar welcomes the guest Mr Asutosh Tambe



Resource person Mr. Ashutosh Tambe explaining the stability concept of control systems



Resource person Mr. Ashutosh Tambe explaining Bode plot concept

