

ECSE 522. NONLINEAR PHENOMENA IN POWER SYSTEMS DYNAMICS.

Credits: 4

Offered by: Electrical & Computer Engr (Faculty of Engineering)

This course is not offered this catalogue year.

Description

Introduces nonlinear dynamics, with applications to generic engineering and power engineering. Topics include one- and two-dimensional systems; bifurcations; phase plane; nonlinear oscillators; Lorenz equations and chaos. Emphasizes power system dynamic modelling and stability. Topics include synchronous machine dynamic modelling; numerical integration methods for dynamic simulations; excitation system and turbine governor; transient stability; small signal stability; voltage stability; nonlinear dynamics and bifurcations in power system dynamic study.

- (3-0-9)
- Prerequisite(s): ECSE 361 or ECSE 362, MATH 263, ECSE 307

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