



COURSES IN ENGLISH LANGUAGE

FALL SEMESTER 18-19

- **MME325 - Modeling and Analysis of Dynamic Systems**

Prerequisites: MAS027, MME225 - 6 ECTS

The course introduces a unified approach for modeling real dynamic systems. Modeling is done with appropriate graphical or state-space equation models, in order to meet the requirements during the use of the models in design and automatic control. Methods of system analysis are used for calculating behavioral characteristics and for evaluating the accuracy of modeling assumptions. Topics taught: lumped parameter models; rigid body models; models with electric, fluid and thermal elements; interfaces; state-space equations; block diagrams; analysis of linear systems; Laplace transformation and transfer functions; time- and frequency-domain response; stability. The students learn to use computational analysis tools via Matlab/Simulink.

- **MME317 - Numerical Methods**

Prerequisites: MME117, MAS027, MAS029 - 6 ECTS

This course is an introduction to numerical methods for the solution of real engineering problems in the areas of vibrations, statics and dynamics, heat transfer, wave propagation, etc. Topics covered include numerical integration and optimization, and solution of ordinary and partial differential equations with Taylor series, Euler, Runge-Kutta, finite differences, and Crank-Nicolson methods. The course also covers solutions to initial and boundary value problems. It includes a programming component for writing algorithms for the numerical solutions in FORTRAN and use of the commercial software platform Matlab.

For more information please follow the link below:

<http://www.ucy.ac.cy/mme/en/academicprogramms/undergraduate/description-of-undergraduate-courses>