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ENGR3399 - Special Topics in Mechanical Engineering

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Credits: Variable Credits ENGR

Required Requisites

Prerequisite(s): MTH2188, MTH2210

For information contact: Staff

Course Description

Special Topics in Mechanical Engineering classes (ENGR X399) typically cover a specific topic in Mechanical Engineering and are intended to enhance and expand the selection of offerings from semester to semester.

Additional Information

SP16: Bicycle Dynamics; 4 credits (Storey)

The first bicycles appeared nearly two centuries ago and there are about 1 billion bicycles in the world today. Since their appearance, bicycles have been studied by a number of well-known scientists and mathematicians. Despite their long history, the dynamics of the bicycle are still studied and the mechanisms for stability are continually debated. In this course we will begin to explore the complexity of vehicle dynamics through deep exploration of the bicycle. We will use a mixture of analysis, simulation and experimentation to attempt to understand bicycle dynamics. For the analysis component of the course we will study many original papers on the topic. The experimental aspect of the course will involve building and riding bicycles of different designs. Students in this course should have pre-requisites of Linearity I and either Dynamics or Physics: Mechanics.

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