

## **Fundamentals of Terramechanics and Off-road Vehicle Dynamics**

The course "Fundamentals of Terramechanics and Off-road Vehicle Dynamics" will introduce engineering students to the study of ground vehicles operating in off-road environments, and of their interaction with the unprepared terrain.

The course will cover topics related to fundamental aspects of soil mechanics, vehicle-terrain interaction (terramechanics), performance characteristics of off-road wheeled vehicles, mechanics of pneumatics tires, and performance characteristics of tracked vehicles. Specific modeling aspects will also be included. During the semester, a number of laboratory sessions will be held to illustrate fundamental concepts taught, and to perform experiments relevant to the course material.

Prerequisites will be the undergraduate courses in dynamics, vibrations, and control.