

# COURSE DETAIL

## DYNAMICS AND COMPLIANT DESIGN OF ROAD VEHICLES

**Country**

Italy

**Host Institution**

University of Bologna

**Program(s)**

University of Bologna

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Mechanical Engineering Engineering

**UCEAP Course Number**

185

**UCEAP Course Suffix****UCEAP Official Title**

DYNAMICS AND COMPLIANT DESIGN OF ROAD VEHICLES

**UCEAP Transcript Title**

DYNMCS&DESGN VHCLES

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course is part of the Laurea Magistrale program. The course is intended for advanced level students only. Enrollment is by consent of the instructor. The course is divided in two modules. The aim of the first module is to provide knowledge about vehicle dynamics. Theoretical and numerical approaches are discussed to this end, as tools that allow students to predict the performance of cars in terms of longitudinal dynamics, lateral dynamics, handling, comfort, and stability. The aim of the second module is to provide the theoretical basis and the practical skills required to design embedded hardware and firmware compliant with industrial standards (safety, interoperability, maintainability). In addition, model-based design and automatic code generation using Matlab/Simulink is considered.

## Language(s) of Instruction

English

## Host Institution Course Number

B0222

## Host Institution Course Title

DYNAMICS AND COMPLIANT DESIGN OF ROAD VEHICLES M

## Host Institution Course Details

<https://www.unibo.it/en/teaching/course-unit-catalogue/course-unit/2022/484404>

## Host Institution Campus

BOLOGNA

## Host Institution Faculty

## Host Institution Degree

LM in ELECTRONIC ENGINEERING FOR INTELLIGENT VEHICLES

## Host Institution Department

Electrical, Electronic, and Information Engineering

**Course Last Reviewed**

2022-2023

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