COURSE DETAIL

INTRODUCTION TO INTELLIGENT VEHICLES
Country Taiwan
Host Institution National Taiwan University
Program(s) National Taiwan University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 106
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO INTELLIGENT VEHICLES
UCEAP Transcript Title INTRO INTEL VEHICLE
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

Intelligent vehicles can communicate with other vehicles or roadside units and behave autonomously. They are believed to significantly change the way that people move from one place to another. This class introduces fundamental knowledge in intelligent vehicles and then focuses on some specific advanced topics (e.g., security). The knowledge and topics bring state-of-the-art technology to students and develop their skills in system modeling, design, and analysis.

There are mainly four parts in this class:
(1) Background: This part introduces traditional (i.e., without connectivity and autonomy) system architecture, vehicular networks, and basic design and analysis approaches.
(2) Applications: This part introduces applications of intelligent vehicles, including advanced driver-assistance systems, cooperative adaptive cruise control, and intersection management.
(3) Technology: This part introduces the technology which is needed to realize the applications of intelligent vehicles.
(4) Advanced Topics: This part introduces advanced topics such as over-the-air update, security, and certification.

Depending on students' interests, final projects can be survey, implementation, or research.

Language(s) of Instruction
English

Host Institution Course Number
CSIE5452

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INTRODUCTION TO INTELLIGENT VEHICLES

Host Institution Campus

Host Institution Faculty

Electrical Engineering and Computer Science
Host Institution Degree
Host Institution Department

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