



UNITED

Engineering Knowledge Transfer Units to Increase Student's Employability and Regional Development

Work Package 2 – [Title, e.g. Dissemination & Visibility]
2.1 UNITED Trainings Plan

TRAININGS PLAN

WP 2.1

Trainings plan for the human capacity building trainings in Southeast Asia

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V2

UNITED – WP2 Human Capacity Building Trainings

2.1 TRAINING PLAN

Title	Main topics	Trainers	Date	Venue
Electric Powertrain	<p>Electric/Electrified powertrain concepts and system layout:</p> <ul style="list-style-type: none"> ○ Components and design criteria ○ Energy management, supply and storage systems ○ EV design (standard and ways to test their performance) for small-medium vehicles for agricultural/logistic activities ○ Operational strategy <p>Electric/Electrified powertrain embedded software systems:</p> <ul style="list-style-type: none"> ○ Electronic systems and requirements engineering ○ Process models and development processes in the automotive industry ○ Simulation model and software development and their fields of application ○ ADAS (Advanced Driver Assistance Systems) 	<p>Politecnico di Torino</p> <p>FH Aachen</p>	17.09 – 20.09.2019	UNUD – Denpasar, Bali (IND)



	<p>Overall IT connectivity:</p> <ul style="list-style-type: none"> ○ Automation in modern automobile ○ Regulation ○ Communication ○ Standard Protocol (PTT) 	Politecnico di Torino		
From ICE to Alternative Powertrain	<p>Sustainable urban mobility planning (SUMP)</p> <ul style="list-style-type: none"> ○ Traditional transport planning vs. SUMP ○ Objectives, Scope, main characteristics, benefits ○ “Planning Cycle” ○ Workshop session, how to make my city sustainable <p>Low CO2 ICE efficiency:</p> <ul style="list-style-type: none"> ○ Low fuel consumption ○ Combustion simulation ○ Simulation tools (CAE) <p>Hybrid and alternative fuels:</p> <ul style="list-style-type: none"> ○ Alternative fuels (biodiesel, hydrogen energy / hydrogen powered vehicle) ○ Hybrid powertrain <p>Project management meeting</p>	<p>FH Aachen</p> <p>FH Aachen + Politecnico di Torino</p> <p>FH JOANNEUM</p> <p>FH JOANNEUM</p>	04.11. – 8.11.2019	UTeM – Melaka (MYS)
Vehicle Design + Dynamics	<p>Vehicle Dynamics:</p> <ul style="list-style-type: none"> ○ Longitudinal dynamics (Karl Reisinger) 	Politecnico di Torino +	09.12 – 12.12.2019	USU – Medan (IND)



	<ul style="list-style-type: none"> ○ Lateral dynamics (single track model) (Karl Reisinger) ○ Vehicle dynamics simulation (PTT) ○ Control systems (PTT) ○ Vertical dynamics (PTT) <p>Future Mobility / Vehicle concepts / Body Design / Safety:</p> <ul style="list-style-type: none"> ○ Future mobility ○ Vehicle conceptions ○ Automotive body engineering (structures & trim) ○ Body-practical session – section book and CAD ○ Vehicle safety & crashworthiness 	<p>FH JOANNEUM</p> <p>FH Aachen</p>		
<p>Mechatronic Systems in Automotive Engineering + Testing Bays</p>	<p>Development process for mechatronic systems:</p> <ul style="list-style-type: none"> ○ V-Model ○ Model-in-the-loop ○ Hardware-in-the-loop ○ Application by XCP on CAN-BUS <p>Testing Bays:</p> <ul style="list-style-type: none"> ○ General Introduction ○ Chassis dynamometer ○ Exhaust gas measurements ○ Laboratory example: Accurate E-power measurement, efficiency map 	<p>FH JOANNEUM</p> <p>FH JOANNEUM</p>	<p>10.02. – 13.02.2020</p>	<p>MSU – Maharakham (THA)</p>