

Academic year 2021-2022
MECA0527 EV, HEV, and FUEL CELL VEHICLES
Prof. P. Duysinx
(13/09/2021)

Day			Title	Lecturer
Thursday	16/09	AM	Organization – Introduction and environmental challenges – Selection of a powertrain (1/2)	Duysinx
Thursday	23/09	AM	Selection of a powertrain (2/2)	Duysinx
Thursday	30/09	AM	Powertrain architectures and transmission technologies	Duysinx
Thursday	07/10	AM	Internal combustion engines and e-motors: technologies, performance, modelling	Duysinx
Thursday	14/10	AM	Performance: Equation of motion, tractive forces, road loads, performance criteria, energy consumption	Duysinx
Thursday	21/10	AM	EV performance and design	Duysinx
			Homework 1	
Thursday	28/10	AM	Batteries and energy storages for EV and HEV	Duysinx
Thursday	04/11	AM	BYE (Autumn break)	
Thursday	11/11	AM	BYE (Armistice)	Duysinx
Thursday	18/11	AM	Power storage systems: Supercapacitors and flywheel, hybrid systems	Duysinx
			Homework 2	
Thursday	25/11	AM	Hybrid electric vehicles: architecture, components, energy management strategies	Duysinx
Thursday	02/12	AM	Introduction to fuel cell technology and fuel cell vehicles	Duysinx
Thursday	09/12	AM	Design of series and parallel HEV	Duysinx
Thursday	16/12	AM	Industrial seminar: The Toyota Hybrid System explained	Raf Schuermans (TME)
Thursday	23/12		Homework : submission of reports	