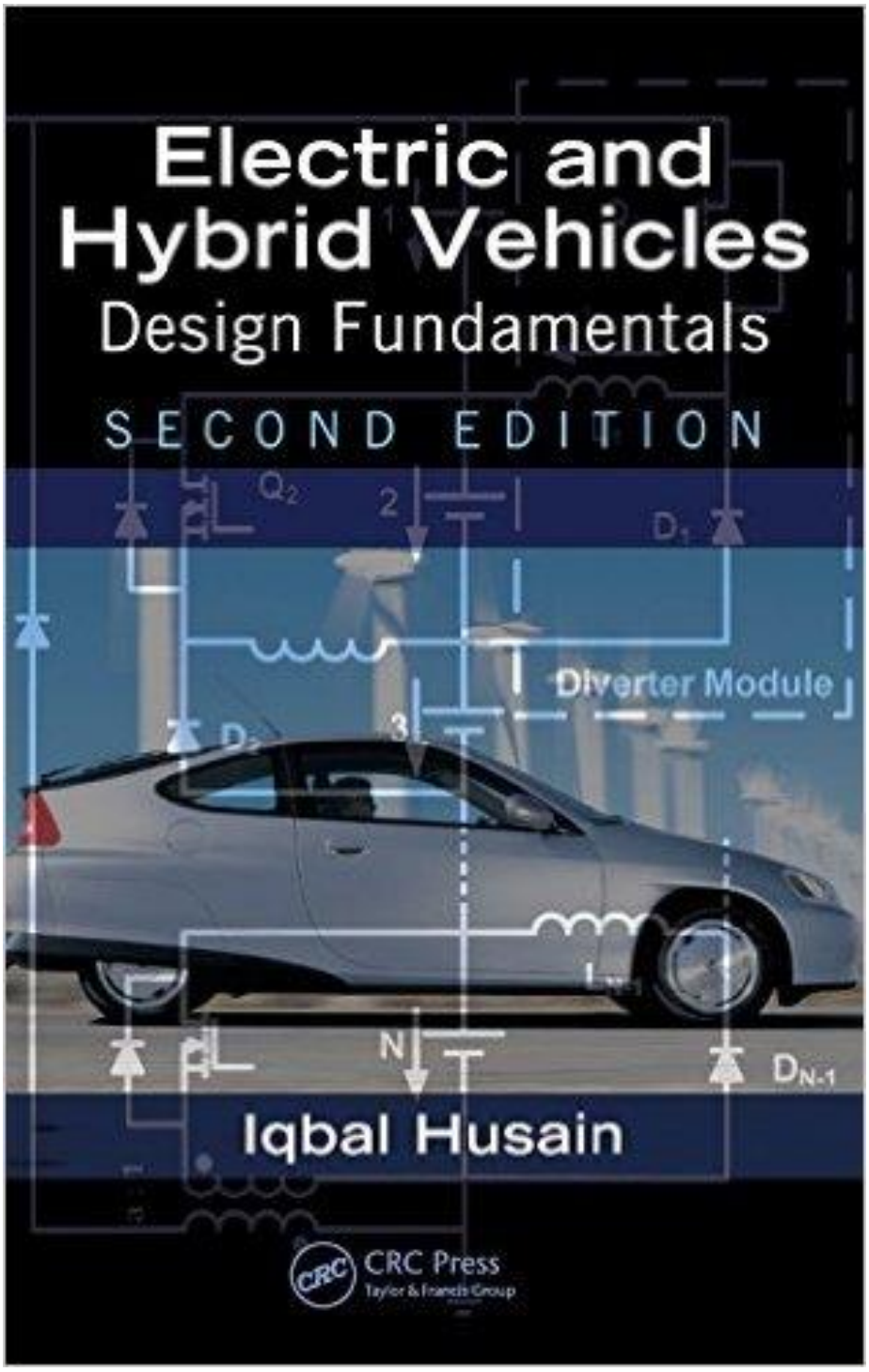
ELECTRIC AND HYBRID VEHICLES DESIGN FUNDAMENTAL

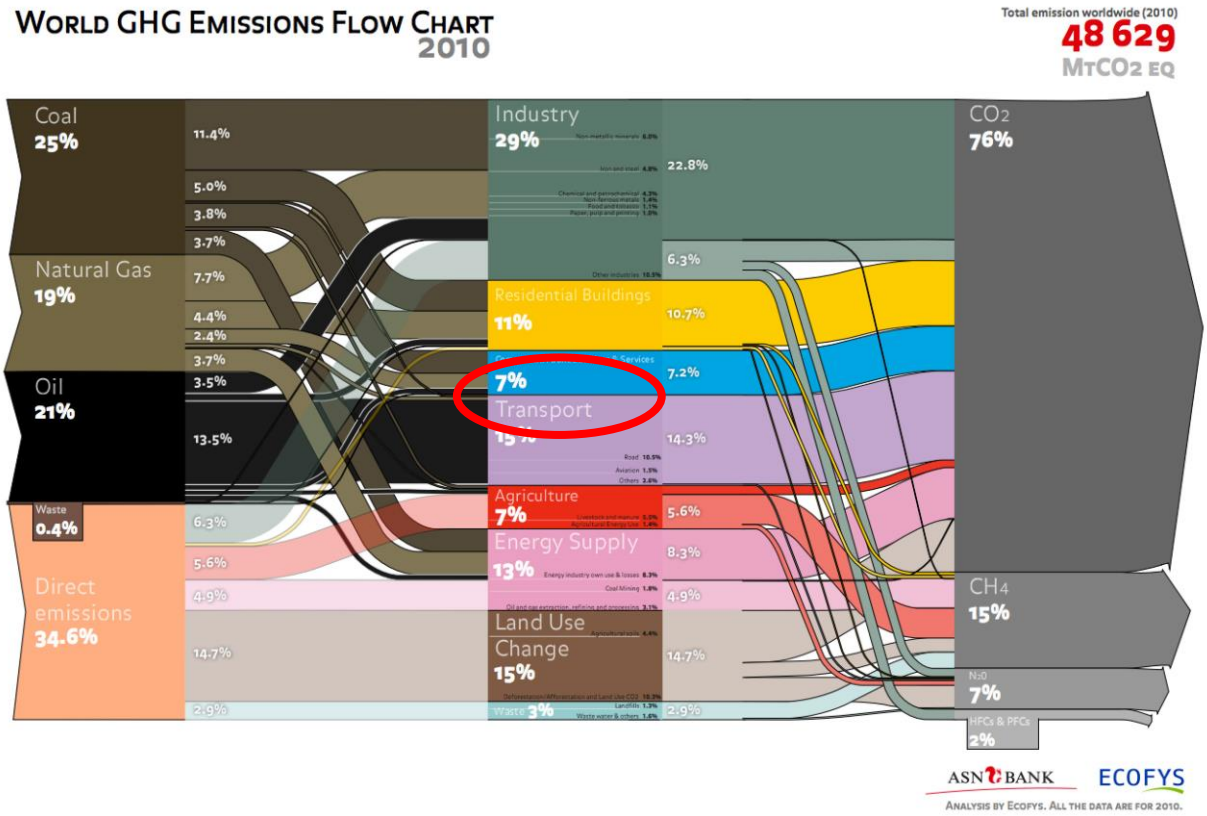
Text book: Iqbal Husain (2010), Electric and Hybrid Vehicles: Design Fundamentals, Second Edition, CRC Press

Note: 4 copies of the textbook will be available at the Hashemite university library explicitly for the students taking the course.

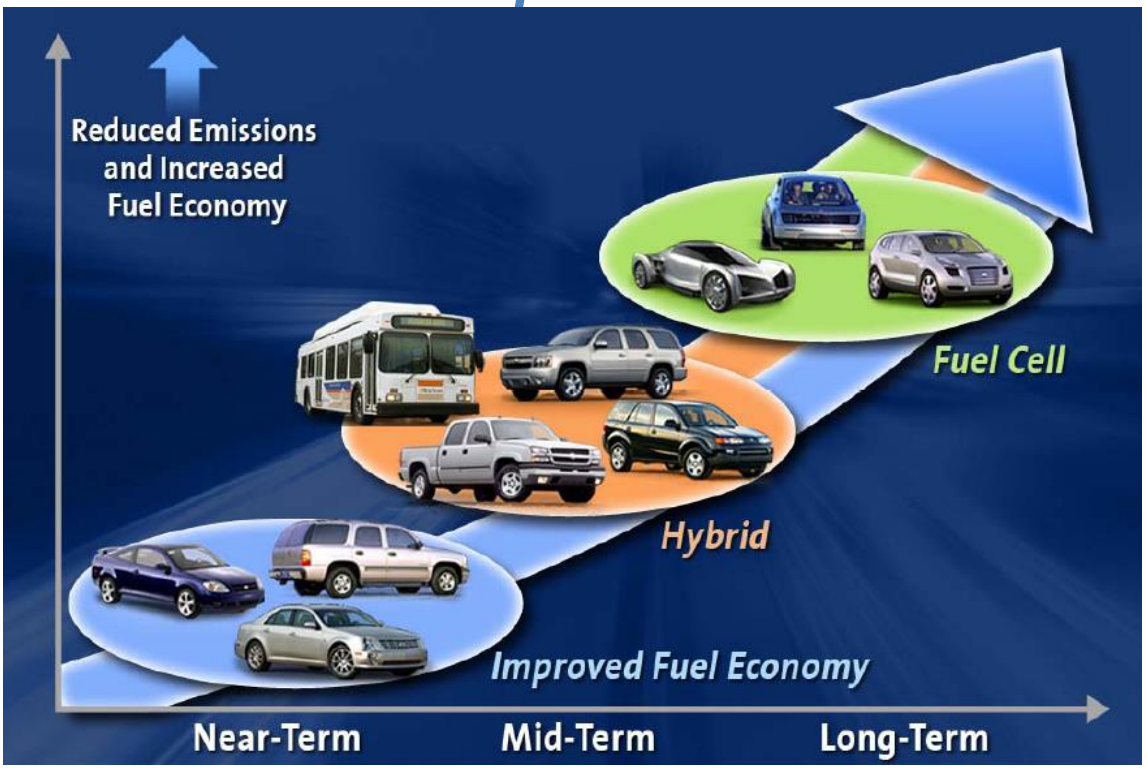


Why hybrid vehicle??????

- *Reduce green house gas (GHG)*



- *Because it is the future car!!*



IN THE COURSE:

You will learn about the Hashemite university Hybrid FC/battery test bench

Figure 36: Hashemite University hybrid FC/battery vehicle test bench [31].

The Hashemite University
Faculty of Engineering
Course Syllabus

Course Title:	Fundamentals of hybrid vehicles	**Course Number:**	110405548
Department:	Mechatronics Engineering	**Designation:**	Elective
Prerequisite(s):	110405323 + 110406329		
Instructor:	Dr. Mohammed Abu mallouh	**Instructor's Office:**	E3131
Instructor's e-mail:	mmallouh@hu.edu.jo		
Office Hours:	Announced on the office door		
Time:		**Class Room:**	
Course Objectives:	The student shall be able to : 1. Understands fundamental design of electric and hybrid vehicles 2. Describes alternative vehicle architectures 3. Explores the choices of powertrain components and accessories 4. Discusses alternative vehicle control strategies and communications		
Textbook(s):	Iqbal Husain (2010), Electric and Hybrid Vehicles: Design Fundamentals, Second Edition, CRC Press		
Other required material:	Mehrdad Ehsani, Yimin Gao, Ali Emadi (2009), Modern Electric, Hybrid Electric, and Fuel Cell Vehicles: Fundamentals, Theory, and Design, Second Edition, CRC Press		
Topics covered:	Introduction to Alternative Vehicles Vehicle Mechanics Alternative Vehicle Architectures Battery Energy Storage Alternative Energy Storage Internal Combustion Engines Powertrain Components and Brakes Hybrid Vehicle Control Strategy		
Class/laboratory schedule:	2 class sessions each week; 70 minutes each		
Grading Plan:	To be determined later		

Prepared by:	Dr. Mohammed Abu mallouh	**Date:**	20/9/2015