Project I Description

Project Name: **Optimal Design of Parallel Hybrid Electric Vehicles Using Dynamic Programming**

Team Size: **2 MEE Students**

Project Overview

This study explores different hybridization ratios of four types of parallel hybrid electric vehicles. The aim is to quantify the hybridization needs, i.e. the optimal dimensioning of the power train components, while excluding the influence of the control strategy on component sizing. The optimal fuel consumption is determined using dynamic programming for each of the different hybridization ratios.

Project Areas and Majors

- Powertrain Design (2 MEE student)

Project Deliverables

- Report including the methodology used to solve the design/control problem, the dynamic programming algorithm, the optimal hybridization of the parallel hybrid vehicle, and the results.
- Powertrain models developed for the project.

Design Constraints