

Free Minor Aerodynamics - Aerospace Engineering

Delft University of Technology | Formula Student Team Delft

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Introduction

The aerodynamic characteristics and performance of our Formula Student cars have become increasingly important for an overall good performance and competitive car. Students working on the design of aerodynamic components of our car will need proper project management and teamwork skills, because of the very limited timeframe available (we build a new car every year).

Minor students will get the responsibility for the design of a component of our aerodynamics package, for example the front wing. This will require a significant amount of time and effort, justifying the 14EC accredited to this project. The assessment will be done by a final presentation, where focus should be put on the process applied and lessons learned. A paper needs to be written which will get a fail or pass result.

The idea behind the set-up of this minor is that several students working on different disciplines have 2 courses in common to ensure a basic level of understanding of project- and process management and decision making. This should enable the students to work more independently, while still performing as desired. The remaining ECTS will be gathered by following courses relevant for the discipline the student is working on, in this case aerodynamics.

The courses suggested for an aerodynamics orientated minor are:

| Course | ECTS | Motivation | Period |
|---------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| SPM6102 Process Management and Decision Making | 5 | A well-structured process and good decision making are of vital importance in such a high-paced project as Formula Student. | Q2 |
| CT3101 Project Management Basics | 5 | Project management skills are a big plus in such a complex, multidisciplinary project. | Q1 |
| WB2540 Stroming en Warmte | 6 | This teaches the students the fundamental theories behind flow calculations and heat transfer. Although not 1 on 1 related to aerodynamic design it teaches the background theories behind much of the simulation work done. | Q2 |