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| <b>Module Name</b>                                  | <b>Aircraft Engineering - Advanced</b>                                                                                                                                                                                                                                                                                         |
| <b>Module Number</b>                                | Eul-MT-E-A06V1                                                                                                                                                                                                                                                                                                                 |
| <b>Responsible Lecturer</b>                         | Prof. Dr. Johannes Markmiller<br>johannes.markmiller@tu-dresden.de                                                                                                                                                                                                                                                             |
| <b>Qualification Objectives</b>                     | Students are familiar with the most important systems of aircraft, understand their functional principles, and are capable of selecting components for a hydraulic system as well as designing components and basic systems. They can assess the impact of new technologies on systems for the future development of aircraft. |
| <b>Contents</b>                                     | The module covers the structure, function, and mode of operation of onboard systems necessary for the operation of modern aircraft. This includes, for example, electrical, pneumatic, and hydraulic systems, electronic flight control, as well as safety systems, their components, and design methods.                      |
| <b>Teaching and Learning Forms</b>                  | 3 hours per week of lectures, 2 hours per week of exercises, and self-study.                                                                                                                                                                                                                                                   |
| <b>Prerequisites for Participation</b>              | The competencies to be acquired in the module Fundamentals of Aerospace Engineering are required.                                                                                                                                                                                                                              |
| <b>Usability</b>                                    | The module is an elective module from the elective area "Methods and Applications" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO of the main study program in the diploma program Mechatronics. It creates the prerequisites for the modules that list this module in the field "Prerequisites for Participation."   |
| <b>Prerequisites for the Award of Credit Points</b> | Credit points are awarded when the module examination is passed. The module examination consists of a written exam lasting 180 minutes.                                                                                                                                                                                        |
| <b>Credit Points and Grades</b>                     | 7 credit points can be earned through the module. The module grade corresponds to the grade of the examination performance.                                                                                                                                                                                                    |
| <b>Frequency of the Module</b>                      | The module is offered every winter semester.                                                                                                                                                                                                                                                                                   |
| <b>Workload</b>                                     | The total workload is 210 hours.                                                                                                                                                                                                                                                                                               |
| <b>Duration of the Module</b>                       | The module lasts one semester.                                                                                                                                                                                                                                                                                                 |