

	Implementation schedule	Physically/remotely	Contact hours	Autonomous work for students (max hours)	Learning outcomes
Activity 1 Wednesday 16/9/2026 3 – 6 pm CET	Introduction to thermodynamics, fluids, mechanics and computer programming, with ML application to simple flow problems.	Remotely	3	12	Comprehend the fundamental equations for calculations of simple problem geometries and data analysis in MATLAB.
Activity 2 Wednesday 23/9/2026 3 – 6 pm CET	CAD methodology and 3D design principles and examples in SolidWorks (graphical user interface, sketch, feature for parts and assembly). Introduction to SolidWorks computer aided manufacturing (CAM) and illustration of AI tools for design optimization.	Remotely	3	14	Use CAD software for the design of engineering systems for further analysis, adopt CAM software for design, prototyping and manufacturing preparation.
Activity 3 Wednesday 30/9/2026 3 – 6 pm CET	CFD methodology and applications in MATLAB and CFD codes. Demonstration of automotive engineering applications and CFD simulations data visualization.	Remotely	3	14	Describe real examples for CFD simulation and data presentation and analysis. Address ML

					approaches for further calculations.
Activity 4 Wednesday 07/10/2026 3 – 6 pm CET	Introduction to Mechanics methodology, demonstration of applications using SolidWorks and other software (ANSYS, LS-DYNA and SimScale finite element method (FEM)). Use cases of safety quardrails data, design and simulations. AI tools for mechanics analysis.	Remotely	3	14	Summarise equations and design and modelling setup of mechanics problems for simulation and data analysis. Describe AI and ML tools for mechanics calculations and materials' data utilisation
Activity 5 Wednesday 14/10/2026 3 – 6 pm CET	Individual project outline, and modelling stages definition and accomplishment tasks. Listing and selection of related project susbjects. Template for project presentation. Demonstation of AI tools for supporting literature survey, generating project flowcharts and diagramming.	Remotely	3	14	Enhance design, modelling and research skills, along with technical writing skills for individual project preparation and presentation
Activity 6 Wednesday 21/10/2026	Presentation preparation and performing. Demonstration of completed SRH projects examples. Workshop with AI	Remotely	3	14	Develop and enhance presentation and

3 – 6 pm CET	application for presentation's slide design, technical diagrams and simulation data animation.				communications skills.
Total Hours			18	82	