

	Implementation schedule	Physically/remotely	Contact hours	Autonomous work for students (max hours)	Learning outcomes
Activity 1 Wed. 15 July 2026, from 4 to 7 pm.	Introduction to thermodynamics, fluids, mechanics and computer programming.	Remotely	3	12	Comprehend the fundamental equations for calculations of simple problem geometries and data analysis in MATLAB.
Activity 2 Wed. 22 July 2026, from 4 to 7 pm.	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) including toolpath generation and G-code basics.	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 Wed. 29 July 2026, from 4 to 7 pm.	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.

Activity 4 Wed. 5 August 2026, from 4 to 7 pm	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.	Remotely	3	14	Summarise equations and design and modelling setup of mechanics problems for simulation and data analysis.
Activity 5 Wed. 19 August 2026, from 4 to 7 pm	Individual project outline, and modelling stages definition and accomplishment tasks. Listing and selection of related project subjects. Template for project presentation. Demonstation of DT and Artificial Intelligence (AI) AI-DT for literature survey, project flowcharts and diagramming.	Remotely	3	14	Enhance design, modelling and research skills, along with technical writing skills for individual project presentation
Activity 6 Wed. 26 August 2026, from 4 to 7 pm	Presentation preparation and performing. Demonstration of completed SRH projects examples. Workshop with DT and AI-DT for presentation's slide design, technical diagrams and simulation data animation.	Remotely	3	14	Develop and enhance presentation and communications skills.
Total Hours			18	82	