

**Division:** *Institute of Engineering and Technology (Department of Combustion Engines)*

**Academic programme:** *13.04.03 Power Engineering*

**Mode of study:** *full-time*

**Programme length:** *2.0 years*

**Programme level:** *Master's degree*

**Language of instruction:** *Russian*

**Programme description:** *Students of the academic programme 13.04.03 «Power Engineering with major in Power- and Resource-efficient Reciprocating Engines obtain the skills of 3D modelling of parts and units of reciprocating internal combustion engines, calculating with the use of CAD/CAM/CAE systems, as well as the practical skills of engine testing. Already during Master's studies they participate in fulfilment of real research applied and engineering projects within contracts with enterprises (project-based learning).*

*Highly qualified teaching staff members use Russian and foreign modern equipment in the educational process.*

*Students learn about new design methods and the possibilities of using modern digital technologies to improve the operation process of power plants, master the methods of laboratory research, and also actively collaborate with and take internships at the leading motor-building enterprises and field-specific universities in Russia and abroad. Master's degree programme offers training in a project-based learning group, which allows to participate in the fulfilment of research and production projects within the orders from industrial enterprises.*

**Main programme-specific classes:**

- *Hybrid Propulsion Systems*
- *New Methods of Combustion Engine Designing*
- *New Methods of Calculating and Modelling the Processes in Reciprocating Engines*
- *Experiment Planning, Processing and Analyzing*
- *Improving the Operation Processes in Combustion Engines*
- *Supercomputer Modelling of Technical Equipment and Processes*
- *Thermal and Mechanical Stress of Reciprocating Engines*

**Programme manager:** *Aleksandr E. Popov, Candidate of Sciences  
(Engineering), Head of the Department*