



## MANUFACTURING TECHNOLOGY

This competence provides research into the technologies used in the production of machine-industry products, the solution of technological problems and the manufacturing of custom-made components, as well as the implementation of technological experiments.

### COMPETENCIES

- Application of precision technologies to produce components that meet operational requirements, hard machining, and combined processes.
- Life-extending and environmentally friendly production technology of machine parts, non-traditional machining.
- Fine machining and measurement of parts made with additive technologies.
- Application of special cutting technologies to machine products with prescribed surface quality (surface topography, hardness, residual stresses).



#### SERVICES

- Survey, planning and consulting of manufacturing processes
- Solving technological problems, process development, tooling
- Machining of components in individual production
- Implementation of technological experiments, technological research
- Finite element simulation of cutting processes



#### DEVICES

- EMAG VSC 400 DDS hard machining center
- OPTItturn L440 CNC and OPTItturn S600 CNC turning lathes
- MCV-M8 CNC machining center
- FSM 4080 CNC surface grinder
- Mastercam 2020 CAM software
- ThirdWave AdvantEdge FEM software for cutting technology
- AltiSurf 520 type 3D measuring device for surface topography



#### REFERENCES

- ZF Hungária Ltd. (Eger) Implementation of high-speed surface milling with 80 mm diameter soldered insert PCD tool for machining gearbox housings
- KIVA-TECH Ltd. (Miskolc) Manufacturing technology of various machine components, machining of parts
- Bay Zoltán Applied Research Nonprofit Ltd. (Miskolc) Measurement of wear and surface characteristics of worn parts