Name of the course	**Engineering of boundary surfaces and tribology**
Number of instruction hours	20
Outline of course/module content	Systems with boundary surfaces and their application. Wetting and contact angle. Thermodynamics of interfaces. Characterization of solid surfaces and models for determining surface and interfacial energy. Adhesion, cohesion and spreading. Super-hydrophilic and super-hydrophobic surfaces. The basic elements of tribology. Friction, wear and lubrication. Topography of solid surfaces. The properties of solid and liquid surfaces. Design of the tribological system. Factors affecting friction. Mechanisms of friction and wear of materials. Tribological testing of surfaces, friction and wear. Friction at the macro, micro and nano-level. Wear of polymers, ceramics and metals. Models for material wear. Mechanisms and control of friction, wear and material lubrication. New trends in boundary surface engineering and coating technologies.
Description of instruction methods	Lectures and seminar
Description of course/module requirements	Seminar and oral exam