

TYPE & FIELD OF STUDIES:	MSc in MECHANICS AND MACHINE DESIGN
PROGRAM TITLE:	ADVANCED COMPUTATIONAL MECHANICS (regular)
Faculty/Department:	Faculty of Mechanical Engineering, Institute of Applied Mechanics
Duration:	3 semesters, regular course
Erasmus subject code:	06.1
ECTS credits:	90
Program description:	Advanced Computational Mechanics (ACM) is addressed for students who want to increase their knowledge in mechanics and computer application in design of structures (CAD, FEM), material design (CAMD), material selection (CAMS), manufacturing (CAM) and monitoring of machines.
Program of studies:	<p>Regular: Advanced mathematics (4 ECTS), Engineering mathematics II (2 ECTS), Solid state physics (2 ECTS), Continuum mechanics (2 ECTS), Analytical mechanics (2 ECTS), Numerical methods II (2 ECTS), Object-oriented programming (1 ECTS), Material science II (4 ECTS), Modern structural materials (2 ECTS), Advanced modeling of materials and structures (5 ECTS), Modeling in machine design (4 ECTS), Integrated processing systems (3 ECTS), Advanced FEM modeling (4 ECTS), Advanced strength of materials (2 ECTS), Dynamics of mechanical systems (2 ECTS), Experimental mechanics of solids (2 ECTS), Individual project (5 ECTS), Seminar (3 ECTS), Final project (20 ECTS)</p> <p>Total: 675 h</p> <p>Electives: Computational fluid mechanics (2 ECTS), Computational thermodynamics and heat transfer (2 ECTS), Computational structural design (2 ECTS), Computational stability of structures (2 ECTS), Computational optimization of structures (2 ECTS), Computational vibro-acoustics (2 ECTS), Computational fluid mechanics (2 ECTS), Computational methods in automation control (2 ECTS), Computational mechatronics (2 ECTS), Continuum damage mechanics (1 ECTS), Advanced control of systems (1 ECTS), Intelligent structures (1 ECTS), Design of materials (1 ECTS), Optimal selection of materials (1 ECTS), Machine diagnostics (1 ECTS)</p> <p>Total: 255 h</p>
Eligibility/Admission:	Students who have finished BSc course in Mechanical Engineering with diploma
Fees:	Free for EU, 4000 EUR per year for others
Contact person:	Marek S.Kozień, PhD, DSc, phone no.: +48 12 628 33 70 e-mail: Marek.Kozien@pk.edu.pl
Application procedures:	Faculty recruitment in February and June/July