

DESCRIPTION OF THE COURSE

Name of the course: Vibration&Dynamics	Code: BIE56-2	Semester: 6
Type of teaching: Lectures and tutorials	Lessons per week: L – 1.5 hours; T – 1 hour	Number of credits: 4

COURSE STATUS IN THE CURRICULUM: Optional for the students of year 3 of the English Language Faculty of Engineering.

AIMS AND OBJECTIVES OF THE COURSE: The course is introduction to the theory of vibrations of mechanical systems with one and more degree of freedom. The main stress is focused onto applying this theoretical knowledge to the real engineering problems. In detail are discussed two topics, rotor dynamics and dynamics of mechanical systems with one degree of freedom.

DESCRIPTION OF THE COURSE: The course is oriented toward the vibration's theory. It describes the theoretical basis for the modelling of the mechanical systems.

PREREQUISITES: Mathematics, Mechanics.

TEACHING METHODS: Lectures and tutorials.

METHOD OF ASSESSMENT: Two hours test at end of semester (100%).

INSTRUCTIONAL LANGUAGE: English.

BIBLIOGRAPHY:

1. Meirovitch, L., Elements of vibration analysis, McGraw-Hill Book Co., 1986;
2. Hutton, A., Applied Mechanical Vibrations, McGraw-Hill Book Co., 1982;
3. Martin, G., Kinematics and Dynamics of Machines, McGraw-Hill Book C., 1986;
4. Shigley, J., & Uicker, J., Theory of Machines & Mechanisms, McGraw-Hill Book Co., 1981.