

COURSE TITLE: ANALYSIS, MODELLING AND DESIGN OF ENERGY SYSTEMS

Institute/Division: Institute of Process and Power Engineering / Division of Power Engineering

Erasmus subject code: 06.1

Number of contact hours: 60

Course duration: 1 semestr

ECTS credits: 6

Course description: Head-loss representation. Piping networks. Series piping systems. Parallel systems. Hardy Cross method. Generalized Hardy Cross method. Heat exchangers – method of analysis. Shell-and tube heat exchangers. Number of transfer units method. Pumps in series and parallel. Pump system operation. Pump placement to avoid cavitation. Additional system considerations.

Literature: B.K. Hodge, Robert P. Taylor, *Analysis and design of energy systems*, Prentice-Hall, Inc., Simon & Schuster / A Viacom Company 1999.

Course type: Lectures, classes and computer laboratory

Assessment method: Final test

Prerequisites:

Primary target group: 2nd year postgraduate Mechanical Engineering students

Lecturer: Zima Wiesław, PhD

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Deadline for application: May 31