

## Course description

<b>Code:</b> 2Y018	<b>Abbr:</b> AEII_E	<b>Title:</b> Automotive Engines 2	
<b>MSc. degree programme in:</b> for all <b>For specialisation in:</b> without specialisation			
<b>Lecturer:</b>	Assoc. prof. Dalibor Barta, PhD., Department of Transport and Handling Machines		
<b>Semester:</b> winter	<b>Number of hours:</b> <i>Lectures - Seminars - Laboratory work</i>		<b>ECTS Credits:</b> 5
<b>Recommended:</b>	<b>Per week:</b> 2-0-2	<b>Total per semester:</b> 26-0-26	
<b>Prerequisites:</b> Mathematics, Physics, Thermomechanics, Automotive Engines 1			
<b>Assessment:</b> recognition of course work - 50% written and oral examinations - 50%			
<b>Aims and objectives:</b>  To obtain advanced knowledge in automotive engine design and operation and to know theoretically give reasons for them.			
<b>Course content:</b> The course theoretically explains an operation basis of automotive classical and unconventional internal combustion engines and on the ground of principles of physics gives reasons for them. It deals with parameters that characterize the operation of combustion engines, the preparation of fuel mixture and the exchange of a piston displacement. It attends to enquiries of engine mechanics, auxiliary circuits, engine regulation, and starting too. It continuously mentions the operational problems of engines operation.			
<b>Recommended texts:</b> Engines: An Introduction by John L. Lumley, Cambridge University Press, 1999, ISBN-10: 0521644895; ISBN-13: 9780521644891 Introduction to Internal Combustion Engines by Richard Stone, SAE International, 1999; ISBN-10: 0768004950; ISBN-13: 9780768004953 Hlavňa, V. et al: Mean of transport – its engine, EDIS Žilina 2007 Hlavňa, V. et al: Mean of transport and environment, EDIS VŠDS Žilina 1996, Hlavňa, V. et al: Combustion engines – laboratory exercises, EDIS ŽU Žilina 1994 Isteník, R. et al: Combustion engines – solved examples, EDIS ŽU Žilina 2005 E-books: <a href="http://katalog.utc.sk/e-books/books/index.php">http://katalog.utc.sk/e-books/books/index.php</a>			
<b>Note:</b>		<b>Date of the last revision:</b> 05.12.2022	