Course description

Code: 2Y007	**Abbr:** AR I_E	**Title:** Automotive Engines I

Bc. degree programme in: for all
For specialisation in: without specialisation

Lecturer:	Assoc. prof. Dalibor Barta, PhD., Department of Transport and Handling Machines	
Semester: summer **Recommended:**	**Number of hours:** *Lectures - Seminars - Laboratory work* **Per week:** 2-0-2 **Total per semester:** 26-0-26	**ECTS Credits:** 7

Prerequisites: Mathematics, Physics, Mechanics

Assessment: recognition of course work - 50%
written and oral examinations - 50%

Aims and objectives:

To obtain elementary knowledge in automotive engines and their basis.

Course content:
The course defines, divides and describes a basis of:

- an automotive classical and unconventional internal combustion engines operation,
- parameters that characterize the operation of combustion engines,
- a preparation of fuel mixture,
- an exchange of a piston displacement,
- an engine mechanics,
- auxiliary circuits,
- an engine regulation and starting.

Recommended texts:
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: http://katalog.utc.sk/e-books/books/index.php

Note:	**Date of the last revision:** 05.12.2022