

COURSE GUIDE – short form

Academic year 2014 – 2015

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|--------------------------|-----------------------------------------------------------------------|-----------------------|----|---------------|----|-------------|-------------------|-------------------------|---|
| Course name ¹ | Environmental impact propulsion systems, chemical and noise pollution | | | | | Course code | ISPA.412.DO. DS.2 | | |
| Course type ² | DS | Category ³ | DO | Year of study | IV | Semester | 7 | Number of credit points | 6 |

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|----------------|----------------------------------------------------|----------------------------------------------------|---|---|----|---|----|--|
| Faculty | of Mechanical Engineering | Number of teaching and learning hours ⁴ | | | | | | |
| Field | Automotive Engineering | Total | L | T | LB | P | IS | |
| Specialization | Automotive Vehicles Propulsion Systems Engineering | | | | | | | |

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| Pre-requisites from the curriculum ⁵ | Compulsory | Chemistry, Physics and Heat Engineering Heat Transfer |
| | Recommended | Processes in internal combustion engines, Calculation and design of internal combustion engines |

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| General objective ⁶ | The course "Environmental impact propulsion systems, chemical pollution and noise" aims to familiarize students with how vehicle propulsion systems interact with the environment. Main pollutants are present owe thruster produced by burning gas, plus the noise pollution, pollution microparticles derived from the bodywork and tires. In the second part of the course are presented unconventional methods to reduce chemical pollution and future trends in "green" propulsion systems. It emphasizes the importance of recycling automotive systems. |
| Specific objectives ⁷ | The knowledge gained by students in the course "environmental impact propulsion systems, chemical pollution and noise" are in close accordance with the objectives of the curriculum specialization ISPA (propulsion systems), the differences between different types of propulsion is data that is different fuels currently used or will be imposed in the future. Rules very harsh chemicals or noise pollution will become the main factor of modernization and innovation in the car and especially propulsion systems. Graduate specialization in vehicle propulsion systems must necessarily know the problems of environmental pollution by mainframe systems propulsion and most effective methods to reduce them. The graduate will acquire theoretical and practical knowledge regarding the construction and operation of remediation systems testing auto propellers |
| Course description ⁸ | The course includes the following major sections: -Polluted products due to internal combustion engines -Methods for reducing the pollutant effect of Otto engine type -Reduce pollutant diesel engines -Pollutant products with the use of unconventional combustibili Otto and Diesel engines -Fuel cell -Study of noise pollution |

| Assessment | | | Schedule ⁹ | Percentage of the final grade (minimum grade) ¹⁰ |
|-----------------------|------------------------------------------------------------------------------------------------------------|----------|-----------------------|-------------------------------------------------------------|
| Continuous assessment | Class tests along the semester | | | % |
| | Activity during tutorials/laboratory works/projects/practical work | | Week 1 – week 14 | 20% |
| | Assignments | | Week 1 – week 14 | 30% |
| Final assessment | Final assessment form ¹¹ | colloquy | Week 14 | 50% |
| | Examination procedures and conditions: 1. ; tasks ; working conditions ; percent of the final grade 50% | | | |

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| | 2. ; tasks ; working conditions ; percent of the final grade 50 % | |
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| Course organizer | Professor, PhD. Eng. Edward RAKOSI | |
| Teaching assistants | Lecturer, PhD. Eng. Sorinel Gicu TALIF | |

¹ Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium