**COURSE GUIDE – short form**

Academic year 2014-2015

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| Course name[[1]](#endnote-2) | **Experimental Stress Analysis** | | | | | Course code | | | MDET.DI.DA.107 | |
| Course type[[2]](#endnote-3) | DA | Category[[3]](#endnote-4) | DI | Year of study | 1 | Semester | 1 | Number of credit points | | 8 |

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| Faculty | Mechanical Engineering | Number of teaching and learning hours[[4]](#endnote-5) | | | | | |
| Field | Mechanical Engineering | Total | L | T | LB | P | IS |
| Specialization | DETIM | 196 | 28 | - | 28 | - | 140 |

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| Pre-requisites from the curriculum[[5]](#endnote-6) | Compulsory | - |
| Recommended | Strength of Materials 1, 2 |

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| General objective [[6]](#endnote-7) | Learning the basic concepts of experimental stress analysis. Presentation of the basic methods, measurement errors and methods of mitigate them. |
| Specific objectives[[7]](#endnote-8) | * Skills in the use of techniques: electrical strain gauges, PhotoStress etc. * Notions of experimental data processing; * Error mitigation techniques. |
| Course description[[8]](#endnote-9) | Elasticity, measurement, measurement errors in experimental stress analysis, error mitigation techniques, photoelasticity, moire method, electrical strain gauges; Sensors: load cells, displacement sensors, accelerometers etc. |

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| Assessment | | | Schedule[[9]](#endnote-10) | Percentage of the final grade (minimum grade)[[10]](#endnote-11) |
| Continuous assessment | Class tests along the semester | | - | - |
| Activity during tutorials/laboratory works/projects/practical work | | Week 1-14 | 20% |
| Assignments | | Week 1-14 | 30% |
| Final assessment | Final assessment form[[11]](#endnote-12) | Exam | Exam session | 50% |
| Examination procedures and conditions:  1. Oral presentation of a case; 2 Tasks: development of topic, followed by questions; 3. Working conditions: duration of approx. 20 min., access to the work developed during the semester; percent of the final grade 100% | | |

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| Course organizer | Prof.dr.ing. Barsanescu Paul |  |
| Teaching assistants | S.l.dr.ing. Leitoiu Bogdan |  |

1. Course name from the curriculum [↑](#endnote-ref-2)
2. DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum) [↑](#endnote-ref-3)
3. DI – imposed, DO –optional, DL – facultative (from the curriculum) [↑](#endnote-ref-4)
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) [↑](#endnote-ref-5)
5. According to 4.1 – Pre-requisites - from the Course guide – extended form [↑](#endnote-ref-6)
6. According to 7.1 from the Course guide – extended form [↑](#endnote-ref-7)
7. According to 7.2 from the Course guide – extended form [↑](#endnote-ref-8)
8. Short description of the course, according to point 8 from the Course guide – extended form [↑](#endnote-ref-9)
9. For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period [↑](#endnote-ref-10)
10. A minimum grade might be imposed for some assessment stages [↑](#endnote-ref-11)
11. Exam or colloquium [↑](#endnote-ref-12)