**Course Syllabus**

Academic year: 2020-2021

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| Institution | University of Petroşani |
| Faculty | Mechanical and Electrical Engineering |
| Field of study | Electrical Engineering |
| Level | Master |
| Program of study | Electromechanical Systems |

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| Course | **Modern Solutions in Designing and Constructing the Electromechanical Systems** |
| Code | 2MSEOS06 |
| Year of study (semester) | I (II) |
| Number of hours | 70 |
| Number of credits | 6 |
| Professor | Assoc. Prof., Ph.D. SAMOILA Liliana |

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| **No.** | **Topic** |
|  | General aspects and development of industrial design and aesthetics |
|  | Affirming design as a platform for creativity and product innovation |
|  | Brief history of the evolution of adaptive materials |
|  | Smart materials. Definitions. Properties. Types |
|  | High-performance electrical insulating materials used in electrical devices |
|  | Piezoelectric, electro- and magneto strictive, electrorheological, superconducting materials |
|  | Self-repair materials |