**Course Syllabus**

Academic year: 2020-2021

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

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| Course | **Sensors and Instrumentation for Electromechanical Systems** |
| Code | 2MSEOD03 |
| Year of study (semester) | I (I) |
| Number of hours | 70 |
| Number of credits | 6 |
| Professor | Ph.D., Associate Professor **ILIE UTU** |

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| **No.** | **Topic** |
|  | Input, information, signal, interface, working tools, data acquisition, virtual instrumentation. |
|  | Definitions, information flow, SAD components, system configuration. |
|  | Physical effects, analog signal. Digital signal, static performance of sensory elements. |
|  | Dynamic characteristic, sensory elements and measuring circuits. |
|  | Signal sources, signal amplifiers, circuits and methods for characteristic linearization. |
|  | Signal attenuation circuits, amplifier circuits, protection circuits, filters. |
|  | Sampling, quantization, classes of conditioning circuits, acquisition board. |
|  | Measuring equipment. Harmonic analyzers. |
|  | Analyzers for transient phenomena |