**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 | **Electrical System Safety** |
| Code | 2MSEAS09 |
| Year of study (semester) | I (II) |
| Number of hours | 70 |
| Number of credits | 6 |
| Professor | Professor Ph.D. Ion FOTĂU |

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| **No.** | **Topic** |
|  | Definitions of quality and safety, availability and maintenance. The importance of safety studies in electrical systems. The relationship between cost and safety. The general way of achieving safety in operation. Presentation of the legislation that defines the operational safety of SEN. adequacy; security; Criterion (N + 1); Simple contingency. |
|  | Safety study using experimental data (laboratory tests, censored tests, truncated tests, accelerated tests: postulate of equal reliability; processing of experimental data: nonparametric method; parametric method). |
|  | Study of safety by the Markov chain method. Exponential method. Operational safety (in operation). |
|  | Equivalent statistical parameters for electrical diagrams with elements connected in series, in parallel or mixed. |
|  | The link between safety and economic efficiency. Calculation of safety indicators by binomial method. |
|  | Specific protection systems in electromechanical systems, used to increase operational safety. |