**Course Syllabus**

Academic year: 2020-2021

|  |  |
| --- | --- |
| Institution | University of Petroşani |
| Faculty | Mechanical and Electrical Engineering |
| Field of study | Power Engineering |
| Level | Bachelor |
| Program of study | Industrial Power Engineering |

|  |  |
| --- | --- |
| Course | **Renewable Sources** |
| Code | 2II4OD29 |
| Year of study (semester) | II (II) |
| Number of hours | 42 |
| Number of credits | 3 |
| Professor | Prof., Ph.D. ARAD Susana |

|  |  |
| --- | --- |
| **No.** | **Topic** |
|  | Classification of energy sources. The effects of climate change. The energy potential of renewable energy sources |
|  | Solar energy conversion. Photovoltaic systems |
|  | Wind energy conversion systems. Wind turbines. |
|  | Hydroelectric power. Types of hydroelectric facilities. Study of a hydroelectric turbine. |
|  | Biomass energy. Biogas production |
|  | Geothermal power plants. Wave energy. |
|  | Electrochemical conversion of energy. Fuel cells. New energy conversion technologies. Magnetohydrodynamic conversion. Hydrogen as an energy carrier. |