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Academisation of RECP in the Republic of Moldova

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Courses at University

The basics of RECP were explained in the **Energy Efficiency** course in three master groups EMD-22M, EM-22M and EE-22M with the total number of master students **45 people**.

These groups have different study plans. The EMD-22M group has the curriculum with 120 credit points, the other groups have plans with 90 credit points.

The master programs are: **Energy and Environment** (two programs 90 and 120 credits points) and the **Electroenergetics** program (90 credits points)

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The mission of this master programs

consists in the in-depth training of the specialists from the field of energy, scientific and creative in the field of engineering, economics and management in energy - provided by teaching fundamental and specialized disciplines as well as realizing an internship of practice and elaboration of the master's thesis.

The finalities of this master programs correspond to **level 7** of the European Qualifications Framework.

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Energy Efficiency course

The Energy Efficiency course is held in the second semester of Year 1 with the total number of hours 150 (**5 credits points**) in all master groups: 20 hours of lectures, direct contact, and 20 hours of seminars, direct contact.

For individual study at this course is allocated 110 hours. During the lesson period, two periodic knowledge checks (attestations) are carried out. The course ends with the exam.

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Curriculum

The course curriculum contains the following basic chapters (direct contact):

- General notions - 2 hours of lectures and 2 hours of seminars,
- Energy performance of buildings - 6 hours of lectures and 6 hours of seminars,
- **Energy efficiency in industry - 6 hours of lectures and 6 hours of seminars,**
- Energy efficiency in agriculture and transport - 2 hours of lectures,
- Energy efficiency in energy conversion and transmission systems - 4 hours of lectures and 6 hours of seminars.

The RECP principles and technologies were explained in practically all chapters, but some details, benchmarking indicators, tools of the computing technique – in the chapter marked in red.

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RECP: basic technologies, environmental impact and economic analysis

The **basic technologies** for increasing the efficiency of energy use and production are explained in all compartments of the **Energy Efficiency** course .

The methodology for estimating the **environmental impact** is presented in the first chapter, and in the details it is studied within the discipline **Environmental Impact Assessment** held in all groups.

The principles of the **economic analysis** of the projects are studied in the discipline of **The Economics of the Energy Complex** in the EMD-22M group with 120 credits. In the programs with 90 credits the principles of economic analysis are studied at the bachelor's degree and are part of the bachelor's thesis.

All the information is studied in more detail in the discipline of **Energy Audit** held in the groups at the Energy and Environment program.

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UNIDO project: RECP

The information provided within the UNIDO project was presented at lectures (1 h) and seminars (1 h) in the chapter Energy efficiency in industry. At the lessons and seminars were analyzed some acute problems of enterprises in the Republic of Moldova, ways of solving them by applying the RECP principles, as well as the RT-2 calculation tool of this project was explained.

In the next academic year of studies in the curriculum of the course Energy Efficiency will be introduced lectures (2 h) and seminars (2 h) dedicated to projects in the industrial sector implemented in the Republic of Moldova, among which the UNIDO project will be analyzed in more detail.

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Student work

For the individual activity of master students in this course, 110 hours are provided divided into different individual tasks. In the individual task no.5 students are offered the homework for self-study with the elaboration of papers. The books and articles offered by the experts of the RECP project will be used to carry out this individual study.

To ensure the quality of studies, the Energy Efficiency course is placed on the Moodle platform of the Technical University. This course is completed every year with different books, articles, calculation resources, variants of individual tasks, legislative and normative acts, project results in the fields studied, presentations and other useful information.

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The screenshot shows a Moodle course page for 'Eficiența energetică (TL)'. The browser address bar shows 'moodle.utm.md/course/view.php?id=633&lang=en'. The course title is displayed in large white text on a green background. Below the title is a navigation menu with options: Home, Dashboard, Events, My Courses, This course, Cerințe față de cursuri, Hide blocks, and Standard view. A breadcrumb trail shows 'My courses > Eficiența energetică (TL)'. On the left, there is a list of course elements: Anunțuri profesor, Forum studenți, Currucula cursului, Cărți și resurse, and Cerintele STAS. On the right, a 'Navigation' block lists: Dashboard, Site home, Site pages, My courses (with sub-items: Termodinamica Tehnica, Termotehnica (TL)), and a settings icon.

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Thank you for your attention!

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