

FACULTY OF MECHANICAL AND ELECTRICAL ENGINEERING



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Faculty of Mechanical and Electrical Engineering is Faculty of Mining Electromechanics successor, established in 1957 within the Mining Institute of Petroșani.

Over the 56 years of electromechanical higher education within the University of Petroșani, this faculty had various names, such as: Faculty of Mining Electromechanics (1957-1974); Faculty of Technological Equipment (1974-1977); Faculty of Mining Machine and Installations (1977 - 1990); Faculty of Mining Electromechanical Machines and Installations (1990 - 1992); Faculty of Electromechanical Machines and Installations (1992 - 2004) and Faculty of Mechanical and Electrical Engineering in 2004.

In the faculty leadership have been remarkable personalities of higher education, with scientific and educational results recognized nationally and internationally, thereby deans and periods which have led the faculty are: Prof. Dr. Eng. Emil Stoica (1957 - 1965), Prof. Dr. Wilhelm Kecs (1965 - 1972), Prof. Dr. Eng. Nicolae Iliăș (1972 - 1980), Prof. Dr. Eng. Alexandru Florea (1980 - 1989), Prof. Dr. Eng. Ion Marian (1989 - 1990), Prof. Dr. Eng. Vasile Zamfir (1990 - 1996), Prof. Dr. Eng. Andrei Magyari (1996 - 2004), Prof. Dr. Eng. Aron Poanta (2008-2012).

Even if chronologically, Faculty of Mechanical and Electrical Engineering is the second faculty founded in the University of Petroșani, since its establishment in 1948 of the Mining Institute of Petroșani when it was in composition only one faculty but that included the specialization of Mining Electromechanics so that in 1953, the first 17 electromechanical mining engineers graduated the new specialization, being assigned in production, research - designing or higher education.

The increasing demand for electromechanical specialists both in the production as well of the research activities – designing, explains the motivation of establishing of a standalone faculty so that in the 56 years of existence, young people around the country and abroad have graduated the courses of the faculty and was then recognized as highly skilled specialists in all fields and sectors where they worked, their number being over 7500. Today, in the faculty are studying 1265 students, of which 960 undergraduate education, 207 master, 38 doctoral and 60 postgraduate continuous training, for their training dealing 58 permanent teachers, 7 doctoral supervisors teachers and 15 research assistants and teachers associates.



Both, the Mining Institute and *Faculty of Mining Electromechanics*, benefited from the beginning, paradoxically, by an outstanding teaching staff, made up of people with a university degree and doctorate made in the interwar period in the West, but, in the social conditions, have been marginalized by an exile in Petroșani. They were men of great scientific training but also exemplary probity, so that they have contributed to a valuable specialist schools in the field of mining and mining electromechanical. During the period 60-70, teachers of the faculty have doctorates or improved training through postgraduate education and research in institutions from prestigious East (USSR, Poland) and the West (Britain, Italy, Germany, USA) bringing in faculty new information and new methods in research and training .

If in 1957, the Faculty of Mining Electromechanics started with only one specialization, now in the Faculty of Mechanical and Electrical Engineering are trained specialists in 9 programs (specialization) in 7 areas of undergraduate study, six programs in 4 areas of master university studies as well as 4 doctoral domains, summarized in the following table:

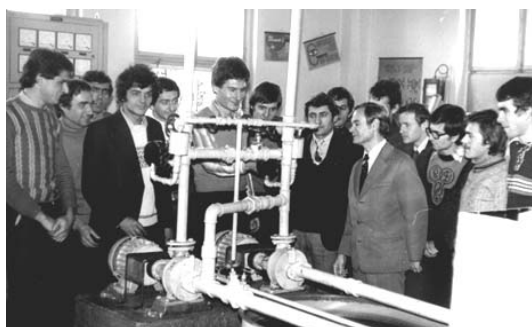
University studies domain	Undergraduate Program	Master study program	Ph.D domains
Computer Science and Information Technologies	Computer Science	Systems and Information Technologies	Electrical engineering
Electrical engineering	Electromechanics	Electromechanical Systems	
	Data acquisition and Instrumentation	Using Industrial Electrical Systems	
Power engineering	Power Engineering		Industrial engineering
Industrial engineering	Machine Building Technologies		
Mechanical engineering	Mining Machinery and Equipment	Installations and equipment for industrial processes	Systems engineering
	Industrial Process Equipment	Installations and equipment for Processes in Mining	Mining, Oil and Gas
Systems engineering	Control Engineering and Applied Informatics	Systems and Information Technologies	
Transportation engineering	Traffic and Transportation		

At undergraduate, master and doctoral programs are added also postgraduate programs for training and continuing professional development (Operation of Railway Transportation, Applied Informatics, Computer Aided Engineering Technology, Machines and Installations for Mining Industry, WEB Designing) as well postgraduate programs for professional conversion (Electronics and Automation, Computer Science, Electromechanics, Technological Education).

Administration of the study programs returns mostly of the two departments in the faculty structure, namely Department of Control Engineering, Computers, Electrical Engineering and Power Engineering, respectively Department of Mechanical Engineering, Industrial Engineering and Transportation, accounting for their tasks related to the development of curricula and tracking for deployment of academic process. It should be noted that all 9 undergraduate programs and all 6 master programs are accredited by ARACIS, each of these programs passing through at least one academic and scientific evaluation process.

The scientific research activity in the faculty is conducted within certain programs organized through grants won by competition but also under a contract directly with the operators concerned.

Topics of scientific research papers approached by the teaching staff of the faculty include a wide diversity of issues, of which the most important are: increasing mechanization in the coal faces and mining excavation in coal mines and minerals; development of new equipment and machinery; increase the reliability of machines and equipment; hydraulic and hydro-mechanical cutting of rocks and materials; constructively improvement of transportation facilities; extend drives of fluid at different machines and equipment; methods of diagnosing the technical condition of machinery; making stands, devices and apparatus for measuring mechanical quantities by tensometry; optimizing industrial electrical networks; upgrading control equipment and protection of power lines and engines; making measuring devices, control and remote for explosive atmospheres; mining electroenergetics; uses of industrial electronics; microcontrollers and PLCs; systems acquisition and data processing for automatic control of processes; robotic control systems; industrial automation; uses of computer technology in the control and command of installations and industrial equipment. Besides these domains mentioned, the research topics includes also, solving specific problems, in the depending on the request of economic agents.



Scientific research is conducted within department collectives or mixed, depending on the complexity and specificity of the topics approached, in this activity being involved also doctoral but also the students of faculty. The scientific research is valued by participation of members of research collectives to nationally and internationally scientific conferences and symposia. The teachers of the faculty, over the 56 years of existence, has published scientific papers in the proceedings of national or international conferences held in the country or abroad and participated in research contracts as grants won by competition or under a contract directly with economic agents. Also, were published over 500 didactic text books, treatises and monographs, actual curricula disciplines being covered almost entirely with didactic book, as product of the scientific research.

Faculty of *Mechanical and Electrical Engineering* has a long tradition concerning collaborations in the scope of teaching and scientific, with other higher education institutions, with research and projects on profile institutions, but also with economic agents. International cooperation has acquired new meanings after 1990, when to traditional partners, have added new collaborations, especially with universities in Western Europe. All of these educational and scientific co-working, attending of the Faculty academic staff and students to international symposia and conferences but also to Erasmus mobility program have a role in opening of new horizons for mutual understanding of the problems of higher education in Europe and equally to the international recognition of University of Petrosani and of course, the *Faculty of Mechanical and Electrical Engineering*.

