

Programmes Taught in ENGLISH at NATIONAL POLYTECHNIC UNIVERSITY OF ARMENIA

Name: NATIONAL POLYTECHNIC UNIVERSITY OF ARMENIA	CONTACT
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BACHELOR Programmes

Name: SOFTWARE ENGINEERING**Acronym: SE****Short Description:**

The program is aimed at preparation of specialists in the field of creation and application of software for different types of computing (CS) and automated systems (AS), related to the needs of a wide range of human activity sphere.

On the basis of acquired knowledge and skills graduates are able to solve practical problems in:

- Selection and transformation of mathematical models of effective realization of software and CS facilities.
- Design of systems and applied software on the basis of modern methods, means and programming technologies.
- Development of supporting documents for the usage of programs and programming systems.etc.

Thus, the objects of professional career activates of CS graduates are programs, programming systems and complexes, their mathematical and algorithmic models, design methods and means of production, implementation and applications in different fields.

Name: TELECOMMUNICATION**Acronym: TC****Short Description:**

The program provides opportunities for the students to gain deeper knowledge in the multi channel telecommunication systems and is designed to give both a theoretical background and practical experience in the area of technologies, methods and resources of information transmission in the space.

The program includes:

Multi channel systems and networks of transmission,

Optical transmission systems and networks,

Technological systems and means of transmission of sound, pictures and any kind of signals by wire and optical channels,

Systems and resources of data transfer and computer networks, etc.

The graduates are expected to have job opportunities in the sphere of development, maintenance and services of telecommunication systems and products.

Name: INFORMATION SYTEM**Acronym: I-S**

Short Description:

The program of this major is related to the analysis, design, development and application of the following types of information systems:

Information Processing and Automated Control Systems

Computer Aided Systems

Software for Automated Systems

Management Systems (Organizational Control, Banking operations, etc.).

This program develops theoretical knowledge and practical skills that the graduates need to adapt to the rapid changes in their future professional life.

Name: BIOMEDICAL ENGINEERING**Acronym: BE****Short Description**

The program is aimed at preparation of specialists in the field of creation and application of biomedical devices. On the basis of received knowledge and skills the graduates will be able to solve practical problems related to the methods of investigation of human diseases, biophysical processes proceeding in the organism, designing of bio prosthesis and operation of corresponding devices.

The offered program includes:

- Biomedical electronic and microprocessor devices,
- Biomedical optoelectronic devices,
- Design of electronic system of bio prosthesis,
- Biomedical ultrasound devices.
- Biomedical laser devices, etc.

The graduates will have a job in clinics and hospitals equipped with modern medical devices and in other institutions where are making medical researchers.

Name: ELECTRONICS, MICROELECTRONICS**Acronym: E, ME****Short Description:**

The program is aimed to preparing specialists for applications or analogue and digital electronic devices in different fields of industry and economics, as well as in consumer products (devices).

The students involved will acquire knowledge in:

Computer aided design;

Analysis and modelling;

Testing and diagnosing;

Technical servicing and manufacturing technology processes.

The graduates of the program will acquire such theoretical knowledge and practical skills that will allow them to perform professional activities in the field of industry of microelectronic and electronic devices, as well as in researching-designing and service of such devices.

The professional activities include the complex of means and methods that are dedicated to the design, elaboration, investigation, maintenance and services of electronic devices and equipments of different types.

Name: ELECTRICAL ENGINEERING

Acronym: EE

Short Description:

The program aims to train specialists in electromechanical systems and electro technology, including their control and regulation .The acquired knowledge and skills will allow the graduates to start their professional activities in the fields of producing and maintenance of power generators and compressors, mobile electric power plants and electric machines, transformers, automated lines, power cables and communication cables, capacitors, articles of illuminating, electric and electronic apparatuses, etc.

The electrical engineering program offered has the following options/specializations:

- Electro-mechanics (Electrical machines)
- Electric Drive and Automation of Industrial Plants and Production Complexes;
- Electric and Electronic Apparatuses;
- Electro isolation, Cable and Capacitor Engineering;
- Illumination Engineering and Light Sources;
- Electrical transportation.

The graduates can successfully work at enterprises of electrical industry and the power complex, as well as to continue their education at the Master's Program level

Name: CHEMICAL TECHNOLOGIES AND ENVIROMENTAL ENGINEERING

Acronym: CHTAEE

Short Description:

Department aims at providing academically rigorous education in chemical technologies and environmental engineering and creating a learning environment, supportive for the development of practical skills.

Name: APPLIED MATHEMATICS AND PHYSICS

Acronym: AMAP

Short Description:

The curriculum is structured so that the students should gain substantial knowledge of theory combined with the skills to apply mathematics and computer systems in engineering and science and to develop software for different applications.

MASTER Programmes

Name: COMPUTER SCIENCE AND INFORMATICS

Acronym: CSAI

Short Description:

The Department offers one of the most advanced computer science an IT- related programs in the region, aimed at producing graduates with a high level of academic background and professional experience. The majors available encompass a variety of areas from software development to information systems, computer engineering and information security.

Name: INFORMATION TECHNOLOGIES

Acronym: IT

Short Description:

The program of this major (specialty) is related to the analysis, control, development and application of the following types of information systems:

- Management information systems;

- Management information technologies;
- Financial-banking computer system;

Modelling of organizational- technical systems and research of operations.

This program develops theoretical knowledge and practical skills that the graduates need to adapt to the rapid changes in their future professional life.

Graduates are prepared to work in research and development areas or industry together with engineers and scientists, as well as in management operations.

Name: INFORMATION SECURITY

Acronym: IS

Short Description:

The program provides ability to understand and practice in programming, firewalls as internet security, encrypted information

Name: TECHNOLOGIES AND EQUIPMENTS OF MACHINE BUILDING INDUSTRY

Acronym: TAEMBI

Short Description:

The graduates of this Department programs are involved in the development and design of production machinery, instrumentation, technologies of machine building, control, and regulation systems and automation means for machinery operation, and other activities that constitute the foundation of today's manufacturing industry.

Name: MACHINE BUILDING AND MATERIAL DRAFTING

Acronym: MBAMD

Short Description:

Graduates obtain competence in theoretical and applied mechanics, mathematics, material properties, system dynamics and the related areas. The emphasis on computer- aided design ensure that the future expert has the necessary skills in computer- aided machine design.

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Name: RADION ENGINEERING AND TELECOMMUNICATION

Acronym: RAEATC

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The program includes:

- Multi channel systems and networks of transmission;
- Optical transmission systems and means of transmission of sound, pictures and any kind of signals by wire and optical channels;
- Systems and resources of data transfer and computer networks, etc.

The graduates are expected to work in the sphere of development, maintenance and service of telecommunication systems and products.

Name: ELECTRICAL ENGINEERING, ELECTRO MECHANICS AND ELECTRICAL TECHNOLOGIES

Acronym: EE, EMAET

Short Description:

The program aims to train specialists in electromechanical systems and electro technology, including their control and regulation. The acquired knowledge and skills will allow the graduates to start their professional activities in the fields of producing and maintenance of power generators and compressors, mobile electric power plants and electric machines, transformers, automated lines, power cables and communication cables ,capacitors, articles of illuminating, electric and electronic apparatuses, etc.

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- Electric and Electronic Apparatuses;
- Electro isolation, Cable and Capacitor Engineering;
- Illumination Engineering and Light Sources;
- Electrical transportation.

The graduates can successfully work at enterprises of electrical industry and the power complex, as well as to continue their education at the Master's Program level.

Name: INFORMATICS AND APPLIED MATHEMATICS

Acronym: IAM

Short Description:

The program deals with mathematics and its application in engineering and science. Its solid theoretical core is a good base for our graduated to adapt to fast-paced developments in the professional market. The informatics component of the program makes the gained knowledge applicable to virtually every sphere in today's information society and innovative economy. The graduates have excellent records in obtaining challenging and fulfilling employment in a variety of

sectors including mathematical modelling, operating research, the computer industry and computational science, banking and financial services. They are able to work in research or industry along with engineers scientists.

PhD Programmes

In the fields of

- Mathematics
- Mechanics
- Applied geometry and an engineering graphics
- Machine building
- Transport mechanical engineering
- Electro technics
- Machinery engineering, computing science information measuring hardware
- Radio engineering and telecommunication
- Informatics, computing hardware and automatization
- Energy
- Metallurgy
- Chemical technologies
- Biological sciences
- Light industry materials and productional technologies
- Power engineering
- Economics
- Geology
- Earth interior use technologies
- Earth- ecology preservation
- Sociological sciences