



Federation of Scientific Engineering Unions in Bulgaria (FNTS)



Union of Electronics, Electrical Engineering and Telecommunications



Society of Power Engineers in Romania (SIER)



Technical University of Gabrovo, Bulgaria



University of Ruse "Angel Kanchev", Bulgaria



University of Niš
Faculty of Electronic Engineering, Serbia

organize



Ruse Scientific and Technical Unions (RSTN)

7th International Seminar

ENGINEERING EDUCATION AND PROFESSIONAL REALIZATION OF YOUNG ENGINEERS

July 13th, 2015
Technical University of Gabrovo



TECHNICAL UNIVERSITY GABROVO

Performance capabilities of the Technical University of Gabrovo in the training and development of young engineers





Technical University of Gabrovo provides high-quality training Bachelor, Master and Doctor Degrees in the field of:

- Engineering and technologies
 - Business
 - Social sciences

The idea of establishing a school of higher education in Gabrovo, a forerunner of the present Technical University, dates back to the 1840s...

- ➔ 30 July 1964 – Higher Technical Institute for Part-time Studies
- ➔ 1972 – Higher Mechanical and Electrical Engineering Institute
- ➔ 1995 – Technical University of Gabrovo
- ➔ Now - 5000 students, 240 academic staff

ACCREDITATION



The quality management system implemented for the training, research and academic staff of the university has been certified according to ISO 9001:2008 by DQS GmbH and IQNet

The Technical University of Gabrovo has been accredited by:



European Federation of
National Engineering Associations FEANI



European Society for
Engineering Education IGIP

STRUCTURE

- ➔ **Faculty of Electrical Engineering and Electronics**
(6 departments)
- ➔ **Faculty of Mechanical and Precision Engineering**
(7 departments)
- ➔ **Faculty of Economics**
(5 departments)
- ➔ **Technical College of Lovech**
(2 departments)



Bachelor Academic Degree

- Automation, Information and Control Systems
- Computer Systems and Technologies
- Power Engineering and Electrical equipment
- Electronics
- Mobile and Satellite Communications
- Environmental Protection Equipment and Technologies
- Renewable Energy Sources and Efficiency
- Heating, Ventilation, Air-Conditioning and Gas Equipment
- Mechatronics (Double Degree Courses with Schmalkalden, Germany)
- Materials Technology and Management
- Computer Technologies in Mechanical Engineering
- Textile Design, Equipment and Technologies
- Industrial Engineering
- Management of Economy
- Economics of Commerce
- Social Work
- Public Administration
- Industrial Management



Master Academic Degree

- Automation, Information and Control Systems
- Automotive Electronics
- Industrial Safety
- Ventilation and Air-Conditioning Engineering
- Power Engineering and Electrical equipment
- Electronics
- Industrial Management
- Industrial Engineering
- Computer Methods and Technologies in Mechanical Engineering
- Computer Systems and Technologies
- Communications Equipment and Technologies
- Mechatronics
- Environment Protection Equipment and Technologies
- Technologies and Equipment in Mechanical Engineering
- Materials Science and Technologies
- Hydraulic and Pneumatic Engineering
- Optoelectronics and Laser Technology
- Heating, Ventilation and Air-Conditioning of Industrial Objects
- Environment Protection and Sustainable Development
- Precision Engineering and Instrument Design
- Heating, Ventilation, Air-Conditioning and Gas Equipment
- Industrial Engineering
- Public Administration
- Social Work
- Management of Economy
- Industrial Management
- Design, engineering and textile technology



Doctoral (Ph.D) Academic Degree

- Applied Mechanics
- Materials Science and Technology of Mechanical Engineering Materials
- Machine Studies and Elements
- Theory of Mechanisms, Machines and Automatic Lines
- Hydraulic and Pneumatic Drives
- Mechanical Engineering Technologies
- Material Cutting and Cutting Tools
- Machine Tools and Systems
- Machines and Equipment for Light Industry
- Lighting Equipment and Light Sources
- Computer Aided Design in Engineering
- Computerized Systems for Information Processing and Control
- Electrical Mechanics
- Power Engineering and Electrical Equipment
- Metrology and Metrology Equipment
- Precision and Instrument Engineering
- Industrial Heat Technologies
- Communication Networks and Systems
- Design, engineering and textile technology
- Microelectronics
- Quantum Electronics and Optoelectronics
- Integration of Electronics
- Industrial Electronics
- Automation and Computer Science Elements
- Computer Systems and Networks

SUPPORTING UNITS

➔ Centre of Postgraduate Qualification

➔ Centre for Quality of Training

➔ Centre for Information Systems and Technologies

➔ Centre for Research and Technology

➔ Centre for International Projects and Programmes

➔ University Publishing House "Vassil Aprilov"

➔ Bulgarian-German Institute for Quality Management

➔ High Tech Centre

➔ Library

The university is actively involved in the European educational and research programmes and carries out fruitful and efficient cooperation with more than 150 universities and scientific organizations in Bulgaria and European community.

- United Kingdom
- Germany
- Austria
- Sweden
- Denmark
- Finland
- The Netherlands
- Italy
- Belgium
- Poland
- Slovenia
- Lithuania
- Czech Republic
- Romania
- Cyprus
- Turkey
- Russia
- Ukraine
- Kazakhstan

European Programmes

In the last years the University has been involved in many National and European Educational and Research Projects under the following programmes:

- Seventh Frame Programme
- UNESCO
- DAAD
- Lifelong Learning
- Programme
- Erasmus
- Intelligent EnergyEurope
- South East Europe
- European Social Fund
- Royal Society
- CEEPUS
- TEMPUS



Facilities and Equipment

Technical University of Gabrovo is situated on an area of 369474 m², the built-up area is 20040 m². The facilities include six school buildings, Technical College of Lovech, three laboratory halls, university library, sport complex, hotel, center for qualification, recreational facility in the village of "Potoka", and a rowing base on the lake "Alexander Stamboliiski".





Over the past five years at the Technical University of Gabrovo for reconstruction, modernization and renovation of buildings and facilities are utilized resources in excess of 5 million. leva



Training Laboratories

CISCO

AMK

FESTO

BECKHOFF

UNITRONICS

SIEMENS



BECKHOFF

FESTO



SIEMENS

Research Areas:

- Information Technologies and Communication Systems
- Precision Engineering and Mechatronics
- New Materials and Technologies
- Environmental Technologies
- Renewable Energy Sources



Research Activities:

- Scientific and Applied Research
- Production of Prototypes
- Technical Expertise and Measurement
- Implementation and Testing of Technologies
- Technology Transfer

RESULTS



Student Hostels and Canteens



The Technical University of Gabrovo offers accommodation for students in hostels with a total of 2 400 beds.



Students can take their meals in two canteens seating 656 people and five cafeterias seating more than 250 people.



STUDENTS LIFE



STUDENTS LIFE





The international cooperation activities of Technical University of Gabrovo are carried out in the following direction:

- Participation in International educational and research programmes;
- Bilateral cooperation;
- Participation in international forums, conferences and symposiums.



Teams from Technical University of Gabrovo are currently involved in the following projects

- Innovative fast inductive charging solution for electric vehicles – FastInCharge
- International network of educational and research institutions for cooperation in the field of automotive industry
- Future Education and Training in computing: How to Support Learning at Anytime Anywhere
- Development and Manufacturing of Innovative Energy Saving Industrial lightings with Built-in LEDs
- Student Placements



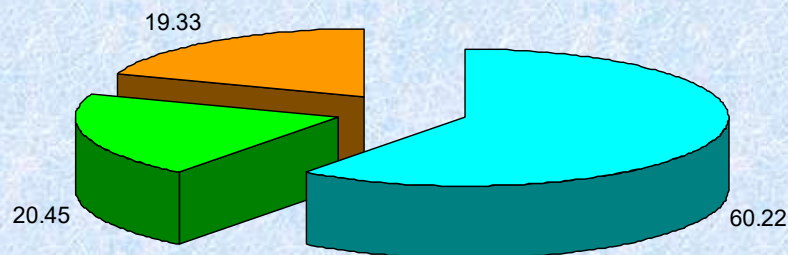
Technical University of Gabrovo maintains active contacts with partner universities from Germany, Austria, Czech Republic, Poland, Spain, Russia, Ukraine, Kazakhstan, Uzbekistan, Turkey and Namibia with which it has signed 68 agreements for cooperation.

The new Erasmus+ Programme of the European Commission, for the 2014-2020 period, provides students and lecturers with many mobility possibilities. The Technical University of Gabrovo also maintains active contacts with 38 partner universities with which it has signed Inter-institutional Erasmus+ Agreements.

Furthermore, the University financially supports lecturers and doctoral students to participate in different scientific forums abroad, which provides them with many publication opportunities as well as establishing new professional contacts.

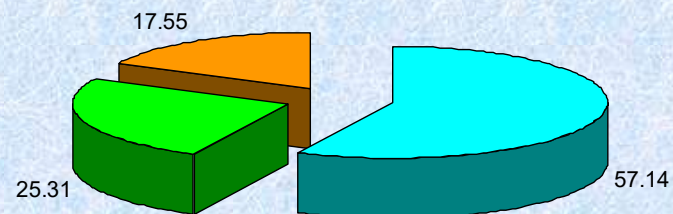
PROFESSIONAL REALIZATION OF YOUNG ENGINEERS FROM TU-GABROVO

PROFESSIONAL 5.1. MECHANICAL ENGINEERING



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction

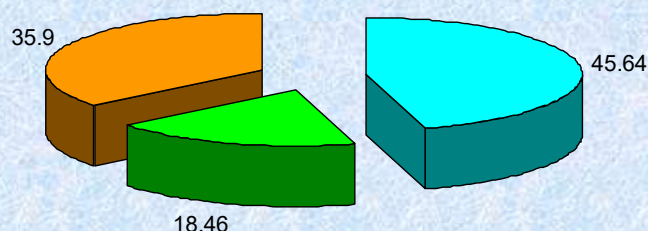
PROFESSIONAL 5.2. ELECTRICAL, ELECTRONICS AND AUTOMATION



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction

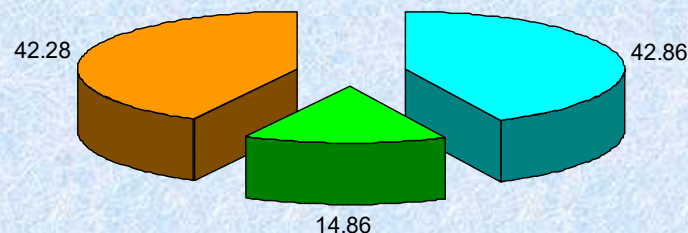
PROFESSIONAL REALIZATION OF YOUNG ENGINEERS FROM TU-GABROVO

PROFESSIONAL 5.3. COMMUNICATION AND COMPUTER EQUIPMENT



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction

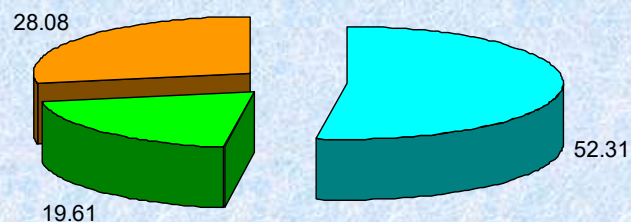
PROFESSIONAL 5.13. GENERAL ENGINEERING



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction

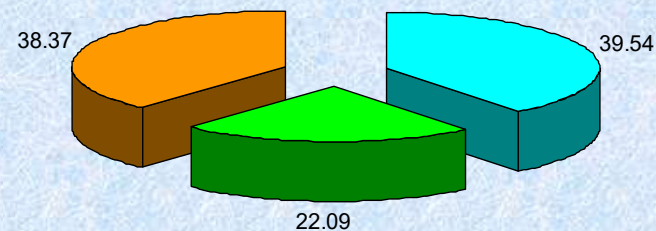
PROFESSIONAL REALIZATION OF YOUNG ENGINEERS FROM TU-GABROVO

PROFESSIONAL 3.4. SOCIAL ACTIVITIES



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction

PROFESSIONAL 3.8. ECONOMY



- Implementation in positions on the National Classification of Occupations
- Implementation Professional qualification
- Implementation in another direction



Thank you for your attention

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