Information Brochure
for Applying to the

TECHNICAL UNIVERSITY OF SOFIA

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Dear Prospective Students,

You are standing at the threshold of an exciting journey – choosing your university and field of study. This is an important step toward your future, and we are here to support you throughout the process. Become part of our large academic family, where ideas turn into innovations, and innovations lead to discoveries and progress.

Why choose the Technical University of Sofia?

Our University combines strong academic traditions with modern facilities, highly qualified faculty, and a wealth of theoretical knowledge and practical experience. We offer bachelor's and master's programs across engineering, economics, and applied sciences.

We are leaders in innovative fields such as:

- Information and Communication Technologies
- Electronics and Nanotechnologies
- Virtual Engineering
- Energy Efficiency and Renewable Energy Sources
- Environmental Engineering

and many more. We also uphold strong traditions in applying best practices and principles in engineering education and research.

How to apply?

This brochure is designed to help you choose the right programme and guide you through the main steps of the application process. Full details about admission procedures and deadlines can be found both in this brochure and on our website. If you have any questions or need consultation, please contact us at:

ucheben@tu-sofia.bg

Be part of the future with the Technical University of Sofia!

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Technical University of Sofia
8 Kliment Ohridski Blvd.
1797 Sofia, Bulgaria

GPS coordinates:
Latitude: 42.6566° N
Longitude: 23.3551° E

Website: www.tu-sofia.bg

https://www.facebook.com/technicaluniversitysofia/

Google maps

Presentation of the University

The Technical University of Sofia is the first and largest technical university in Bulgaria, and it has played a key role in the establishment of most other higher technical institutions in the country. The University traditionally holds one of the highest national accreditation ratings, sets educational standards, and introduces national priorities for the development of education and science.

TU-Sofia is a national leader in information and communication technologies, electronics, nanotechnologies, virtual engineering, energy efficiency, renewable energy sources, and environmental engineering, as well as in the application of best practices and principles in engineering education and activities. These strengths underpin our long-standing partnerships in education and research with all leading high-technology companies in Bulgaria.

The Technical University of Sofia unites 14 faculties, one college, and several departments, offering education and research opportunities to around 15,000 students. With 29 bachelor's, 40+ master's, and 50+ doctoral programs, TU-Sofia prepares future engineers, researchers, and innovators for global careers.

Every year, more than 70 Bulgarian and international companies and organizations participate in Career Days. Employers seek our students and graduates as interns, trainees, or fully qualified specialists for their research, development, management, and production activities. They offer a wide range of programs to support young talents, including specialized courses, scholarships, and awards. Graduates of TU-Sofia achieve competitive salaries and successful professional careers. It is no coincidence that in the past decade the leaders of all major employers' organizations in Bulgaria have been alumni of TU-Sofia.

The University also offers excellent opportunities for international academic exchange and mobility through Erasmus+ and other cooperation programmes, available to all students, lecturers, and staff.

Thanks to numerous successfully completed research and educational projects, the University possesses world-class facilities for training and research: high-performance computing systems and powerful servers; a Virtual Reality Laboratory;

a Rapid 3D Prototyping Laboratory; an Innovation Laboratory; workshops and production halls for product and service prototyping and testing; an Energy Analysis Center; a Center for Microclimate, Energy and Environmental Studies; a Center for Excellence in Research, Development and Technology Transfer; the most advanced Robotics and Automation Center in Bulgaria; and many others.

The University offers:

- The most modern academic infrastructure, with extensive digital connectivity and accessibility;
- The largest contemporary Library and Information Complex in the Balkans;
- An International University Guest Center – unique in the country;
- A Sports Complex with an Olympic-size indoor swimming pool, tennis courts, and sports halls;
- Recreation facilities at the seaside and in the mountains;
- Dormitory accommodation for every student.

If you want to join the community of the best and most accomplished professionals, to be at the forefront of technological progress, and to shape an intelligent and sustainable future – **this is the right place for you!**

Social and Living Environment at TU-Sofia

Library and Information Center

The Library and Information Center (LIC) of TU-Sofia is more than just a library – it is a vibrant academic hub where knowledge meets technology. Housed in a modern, purpose-built facility, the Center offers a welcoming atmosphere and state-of-the-art resources to inspire study, research, and innovation.

With over 130,000 volumes in engineering, economics, and related fields, as well as access to world-class electronic databases such as *ScienceDirect, SpringerLink, Emerald Engineering, EBSCOhost,* and *SCOPUS*, the LIC provides students and researchers with unlimited opportunities for intellectual growth.

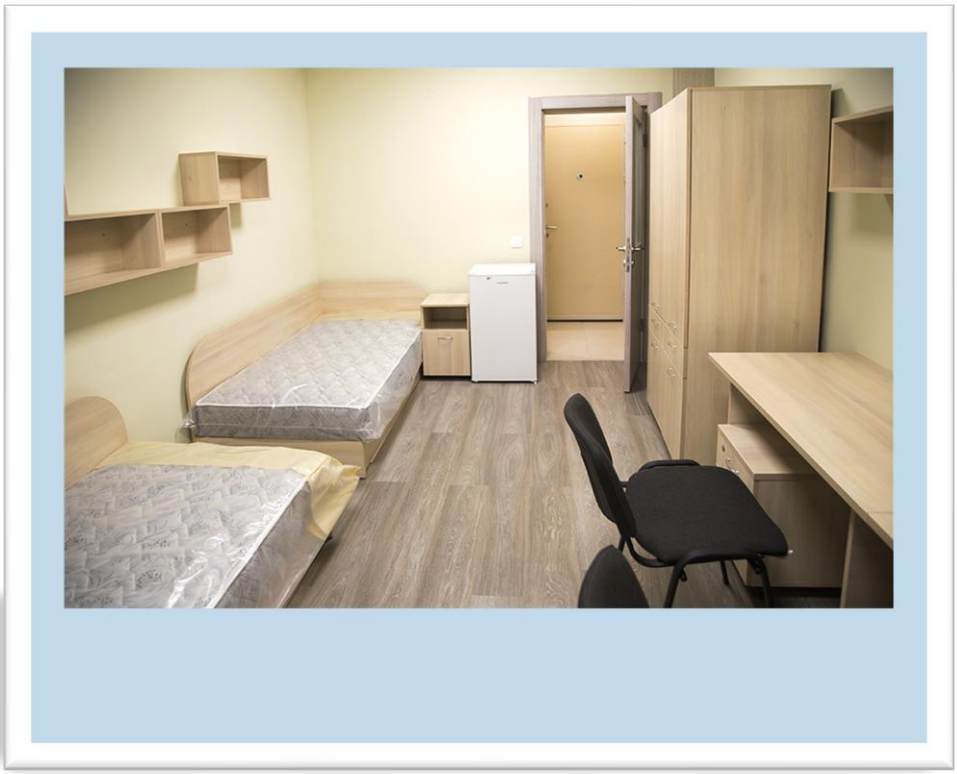
The Center is equipped with a large number of computer workstations – and advanced CAD/CAM/CAE systems for design, modeling, and simulation. Highly qualified staff support students and academics alike, ensuring that every visitor benefits from excellent services and professional guidance.

Student Residences

Life at TU-Sofia goes beyond the classroom. The University operates 10 residence halls, providing affordable, comfortable, and secure housing for students and doctoral candidates. Many dormitories are located close to the main campus, while others are in the lively Student City district – including two specially designed for families.

TU-Sofia is also proud to be the only university in Bulgaria with a dedicated doctoral dormitory, built according to modern standards of energy efficiency and comfort, offering ideal conditions for research and study.

Our residences feature fully furnished rooms with internet and television connections, controlled access and 24/7 video surveillance for safety, automatic heating regulation for year-round comfort, on-site maintenance teams for quick repairs and support.



Student Dining

Good living also means good food. TU-Sofia manages two student canteens, which serve a large number of students and staff daily. They offer a wide variety of freshly prepared, affordable, and nutritious meals, including both meat and vegetarian options. Open Monday to Friday, they are a favorite gathering place for students to relax, connect, and recharge.

Student Life and Opportunities

Life at TU-Sofia goes far beyond the classroom. Students join international organizations such as **AIESEC** and **ESTIEM**, participate in global competitions like the **Shell Eco-marathon** and **Formula Student**, and develop real-world projects through the **Roboclub** and **Student Innovation Hub**.

These activities build leadership, teamwork, and creativity, offering every student the chance to live a rich social life while shaping innovative ideas into real achievements.

Sports and Recreation

At TU-Sofia, students have excellent opportunities to stay active and enjoy a balanced lifestyle. The University’s modern Sports Complex offers an Olympic-size swimming pool, tennis courts, football and basketball fields, volleyball and handball halls, fitness and aerobics facilities. Regular training sessions, tournaments, and student leagues create an energetic and friendly atmosphere.

Beyond campus, TU-Sofia also provides access to recreation facilities at the seaside and in the mountains, giving students the chance to relax, recharge, and enjoy Bulgaria's natural beauty. Sport and leisure here are more than activities – they are part of the student experience.

English-taught programmes

Bachelor Degree

Duration of Study: 4 years (8 semesters)

Mode of Study: Full-time

INTELLIGENT SYSTEMS AND ARTIFICIAL INTELLIGENCE

Professional Field: 5.13 General Engineering
Professional Qualification: Intelligent Systems & AI Engineer

Programme Overview

The English-taught Bachelor's programme **Intelligent Systems and Artificial Intelligence** addresses the acute shortage of specialists in Bulgaria and the wider region who can steer the digital transformation demanded by the Fourth Industrial Revolution. Created within the EU-funded INNOTECH PRO project and benchmarked against leading universities in the UK, Germany, France and Italy, the curriculum fuses engineering fundamentals with the latest in AI, data science and cyber-physical systems.

Years 1-2 build a rigorous base in mathematics, discrete structures, programming, electronics and control, while project-based labs cultivate teamwork in multicultural settings. The final semesters immerse you in deep learning, big-data analytics, knowledge representation, robotics, computer vision and AI ethics, complemented by electives in industrial IoT, cyber-security, XR, additive manufacturing and technology entrepreneurship. Core modules emphasise solving high-dimensional, uncertain optimisation problems and modelling dynamic systems with modern ML frameworks.

Learning is experiential: smart labs host collaborative robots, GPU clusters and AR/VR kits; Bosch Engineering Centre Sofia and other partners supply real projects, hackathons and paid internships. Innovative pedagogy blends rigorous analytics with expert heuristics and cognitive-science insights, nurturing intuition alongside formal methods. Graduates emerge as adaptive engineer-informaticians ready to design, embed and maintain intelligent systems that power competitive, sustainable organisations worldwide.

Career Opportunities

Graduates become AI engineers, data scientists, intelligent-systems developers, automation specialists, IoT architects, robotics programmers, R&D consultants, project managers and tech entrepreneurs serving industry, transport, energy, healthcare, agriculture and smart-city sectors.

Faculty: Faculty of Industrial Technology, Technical University of Sofia

Website for Further Information: https://fit.tu-sofia.bg

INTELLIGENT SYSTEMS FOR INDUSTRY, CITY AND HOME

Professional Field: 5.2 Electrical Engineering, Electronics and Automation

Professional Qualification: Automation Engineer

Programme Overview

The Bachelor's programme in Intelligent Systems for Industry, City and Home is a pioneering English-taught degree that equips students to design, build and operate the smart technologies transforming factories, urban infrastructure and households. The curriculum fuses core engineering disciplines with artificial intelligence, Internet of Things, robotics, cloud computing and big-data analytics. From the first semester, courses are paired with hands-on projects in modern laboratories housing collaborative robots, digital-twin platforms and IoT sensor networks. Industry partners mentor students through guest lectures, hackathons and paid internships, providing authentic problems that become portfolio pieces and often lead to employment. Elective tracks let you specialise in autonomous manufacturing, smart energy, connected mobility or data-driven decision support, while Erasmus+ exchanges and joint capstone projects with leading European universities broaden your international outlook. Experienced professors encourage creativity, critical thinking and entrepreneurship, ensuring you graduate with both strong theoretical foundations and practical, cross-disciplinary skills. Small class sizes allow for personalised mentoring and quick feedback. Entrepreneurship modules guide you from idea discovery to prototype, and the faculty's start-up hub offers seed funding for promising student ventures. By the end of the four-year programme you will be ready to innovate and lead wherever intelligent systems intersect with everyday life.

Career Opportunities

Graduates become AI engineers, industrial-automation specialists, IoT architects, data analysts, smart-city consultants, robotics developers, energy-system integrators, R&D engineers or tech entrepreneurs across manufacturing, IT, energy, finance, healthcare and environmental sectors.

Faculty: Faculty of Automation, Technical University of Sofia

Website for Further Information: https://fa.tu-sofia.bg

ELECTRICAL ENGINEERING

Professional Field: 5.2 Electrical Engineering, Electronics and Automation

Professional Qualification: Electrical Engineer

Programme Overview

The English-taught Bachelor's programme in Electrical Engineering provides a solid grounding in the science and technology of generating, converting and using electrical energy, while preparing you for the digital, sustainable industries of tomorrow. The first three semesters build a strong foundation in mathematics, physics, computer science and core electrical principles. From the fourth semester onward you deepen your expertise through courses in electrical machines and drives, power electronics, measurement and control, CAD/CAE design, renewable-energy technologies and smart-grid applications. Modern laboratories equipped with real-time simulators, high-efficiency converters and industrial automation systems let you verify theoretical concepts through hands-on experiments.

Updated syllabi stress computer modelling and simulation alongside physical testing, giving you the adaptability employers demand. Two elective tracks in the final year allow specialisation: Electrical Machines focuses on advanced motor design, finite-element field analysis and mechatronic applications; Electrical Apparatus emphasises switchgear design, manufacturing technologies and reliability engineering. Erasmus+ exchanges, industry-sponsored projects and paid internships offer international experience and a professional network even before graduation. Small class sizes, mentoring professors and an active student branch of IEEE foster teamwork, innovation and lifelong learning skills, ensuring you graduate ready to tackle real-world engineering challenges across the energy, transport and manufacturing sectors.

Career Opportunities

Graduates pursue careers as electrical design engineers, power-systems analysts, drive and automation specialists, maintenance engineers, CAD/CAM developers, project managers, R&D scientists, consultants in renewable energy, smart-grid, transport, and manufacturing sectors.

Faculty: Faculty of Electrical Engineering, Technical University of Sofia

Website for Further Information: https://tu-sofia.bg

MECHANICAL ENGINEERING

Professional Field: 5.1 Mechanical Engineering

Professional Qualification: Mechanical Engineer

Programme Overview

The English-taught Bachelor's programme in Mechanical Engineering equips future engineers with a comprehensive blend of scientific fundamentals and modern industrial skills. Years 1–2 establish a rigorous foundation in mathematics, physics, chemistry, informatics and engineering graphics, alongside core subjects such as materials science, mechanics, electrical engineering, electronics, automatic control, machine elements, safety and eco-design. Humanities modules in economics, management and marketing develop business awareness and soft skills.

From the third year onward you tailor your expertise through elective pathways: "Automation Engineering", "Engineering Logistics", "Non-metal Materials and Structures", "Precision Engineering", and "Construction and Ecotechnics". Project-based labs use state-of-the-art CAD/CAM/CAE software, 3D printing, CNC machining and industrial automation kits, ensuring you can transform ideas into functioning prototypes.

Close collaboration with manufacturing companies brings guest lecturers, plant visits and internship opportunities, while the university's Erasmus Charter allows a semester abroad at partner institutions across Europe. Small class sizes and mentoring professors foster creativity, teamwork and lifelong learning. By graduation you will command the analytical tools, digital competences and sustainability mindset required to design, implement and maintain innovative machines, devices and production systems, positioning you for leadership in the smart factories of tomorrow.

Career Opportunities

Graduates excel as design engineers, production planners, maintenance managers, automation specialists, logistics engineers, R&D technologists, quality supervisors or project coordinators across manufacturing, energy, transport, construction and public-sector organisations.

Faculty: Faculty of Mechanical Engineering, Technical University of Sofia

Website for Further Information: https://mf.tu-sofia.bg

MECHATRONIC SYSTEMS

Professional Field: 5.1 Mechanical Engineering

Professional Qualification: Mechatronics Engineer

Programme Overview

The English-taught Bachelor's programme "Mechatronic Systems" trains versatile engineers able to fuse mechanics, electronics and information technology into smart, reliable products. During the first four semesters you acquire a strong scientific core – mathematics, physics, chemistry, informatics and engineering graphics – together with business fundamentals in economics, management and marketing. Parallel engineering modules cover materials science, mechanics, electrical engineering, micro-electronics, automatic control, machine elements and safety engineering, supported by CAD/CAE laboratories and rapid-prototyping workshops.

Years 3–4 let you specialise through two elective tracks. "Robotics Engineering" focuses on embedded control and industrial robot integration, while "Precision & Micromechanical Engineering" explores micro-manufacturing, fine mechanics and metrology. Project-based courses employ 3D modelling, digital twins and real-time simulation to solve industry-sourced problems, often in partnership with automation suppliers and high-tech SMEs. Modern laboratories provide CNC machining centres, collaborative robots, PLC and IoT trainers, ensuring seamless transition from virtual design to physical prototype.

Student mobility is encouraged through the university's Erasmus Charter, enabling a semester or thesis at a partner institution abroad. Graduates emerge ready to design, implement and maintain advanced mechatronic systems for the smart factories, autonomous vehicles and high-precision devices of tomorrow.

Career Opportunities

Design and integration engineer, robotics specialist, automation developer, mechatronics maintenance engineer, CAD/CAM technologist, precision manufacturing expert, R&D engineer, project manager, consultant across automotive, aerospace, medical devices, logistics and energy sectors.

Faculty: Faculty of Mechanical Engineering, Technical University of Sofia

Website for Further Information: https://mf.tu-sofia.bg

TELECOMMUNICATION ENGINEERING

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Telecomunication Engineer

Programme Overview

The English-taught Bachelor's programme in Telecommunication Engineering at the Faculty of Telecommunications prepares you to design, deploy and maintain the critical communications infrastructure of the future. In your first two years you build a rigorous core in mathematics, physics, programming, digital electronics and signal processing, supplemented by courses in professional ethics, technical English and management. From year three onward you dive into wireless and optical transmission, network architectures (5G/6G, MPLS, SD-WAN), Internet of Things (IoT) systems, satellite communications, cloud-native networking and cybersecurity.

Hands-on labs feature software-defined radios, fiber-optic testbeds, packet-core simulators and carrier-grade switching equipment, giving you direct experience with industry-standard tools. Guest lectures, workshops and paid internships with Bulgaria's leading telecom operators and ICT vendors ensure your projects tackle real-world challenges—from densifying urban networks to securing smart-city deployments. Small class sizes and English-medium instruction sharpen both your technical fluency and intercultural communication skills.

International mobility is built in through Erasmus partnerships with universities across Europe, allowing you to spend a semester or complete your final project abroad. Throughout the programme you cultivate self-learning habits and adaptability to rapidly evolving technologies. Graduates leave ready to become the network engineers, systems integrators and R&D specialists powering next-generation broadband, mobile, satellite and IoT applications worldwide.

Career Opportunities

Graduates excel as network engineers, RF specialists, systems integrators, IoT architects, cybersecurity analysts, telecom consultants, project managers, R&D engineers or technical sales experts in operators, vendors and consulting firms.

Faculty: Faculty of Telecommunications, Technical University of Sofia

Website for Further Information: https://ftk.tu-sofia.bg

ELECTRONIC ENGINEERING

Professional Field: 5.2 Electrical Engineering, Electronics and Automation

Professional Qualification: Electronics Engineer

Programme Overview

In the first six semesters of the English-taught "Electronic Engineering" programme you build a rock-solid foundation in mathematics, physics, chemistry, semiconductor devices and integrated circuits, analogue and digital circuitry, microprocessor architectures and embedded-system programming. Hands-on laboratory work in PCB prototyping, component testing and CAD/CAM/CAE tools ensures you translate theory into practice.

After completing these core disciplines, you select one of four specialisation tracks—"Biomedical Engineering", "Electronic Devices and Systems", "Power Electronics or Microelectronics" — to deepen your expertise through advanced courses and project work. Along the way, you acquire the skills to design, analyse and optimise electronic circuits; develop measurement and control instrumentation; conceptualise medical-grade electronics and robust industrial systems; and explore cutting-edge nanoelectronic technologies.

Regular seminars and company-hosted workshops connect you with industry leaders, while faculty members share their real-world experience to prepare you for the challenges of modern high-tech sectors. Without electronics and microelectronics, breakthroughs in computing, communications, automation and advanced manufacturing simply wouldn't exist—this programme places you at the heart of innovation. Graduates emerge with high professional competence, an innovative mindset and the problem-solving abilities required for successful careers in today's dynamic engineering landscape.

Career Opportunities

Embedded-systems developer, IC designer, RF circuit engineer, power-electronics specialist, CAD/CAE engineer, medical-electronics designer, industrial-electronics integrator, nanoelectronics researcher, telecom-hardware engineer, R&D project leader.

Faculty: Faculty of Electronic Engineering and Technology, Technical University of Sofia

Website for Further Information: https://fett.tu-sofia.bg

AVIATION ENGINEERING

Professional Field: 5.5 Transport, Shipping and Aviation
Professional Qualification: Aviation Engineer

Programme Overview

The English-taught Bachelor's programme in "Aviation Engineering" at Faculty of Transport, delivered by the Department of Air Transport, builds the specialists Bulgaria and the world need to design, operate and maintain tomorrow's aircraft. In Years 1–2 you master core engineering sciences—mathematics, physics, fluid mechanics, materials science, strength of materials, thermodynamics and automatic control—alongside introductory avionics and aircraft-systems courses. Years 3–4 deepen your expertise through aerodynamics, flight mechanics, aircraft structures, turbine and piston propulsion, stability & control, navigation, air-traffic management and EASA/ICAO-compliant airworthiness regulation.

Practical training is central: in collaboration with Lufthansa Technik, Bulgaria Air, Hemus Air, Air Scorpio, Heli Air, ATC and others, you gain hands-on experience in aircraft maintenance, avionics calibration, non-destructive testing and airworthiness inspections at leading MRO facilities. Simulator sessions and airport field visits reinforce operational knowledge. The programme's main purpose is to meet national needs for flight-operations engineers, technical-operations specialists, airworthiness managers, airport-services personnel, production and repair engineers, research-implementation teams and regulatory bodies. Continuous curriculum updates ensure alignment with international aviation standards and recommendations. A capstone design project in your final semester challenges you to propose safety-conscious enhancements to real aviation systems. Graduates emerge with analytical rigour, practical expertise and regulatory know-how essential for shaping the future of safe, efficient air transport.

Career Opportunities

Graduates qualify for roles such as aircraft design engineer, maintenance planner, airworthiness manager, avionics specialist, flight-operations engineer, airport operations manager, MRO consultant, ATC systems engineer, regulatory inspector, aviation safety auditor.

Faculty: Faculty of Transport, Technical University of Sofia

Website for Further Information: https://transtu.org/

AUTOMOTIVE ENGINEERING

Professional Field: 5.5 Transport, Shipping and Aviation

Professional Qualification: Automotive Engineer

Programme Overview

The English-taught Bachelor's programme in "Automotive Engineering" at Faculty of Transport equips you with the theoretical foundations and practical skills needed to excel in vehicle design, production and operations. In the first four semesters, you build a robust engineering core: mathematics, physics, materials science, mechanics, strength of materials, machine elements, thermodynamics, heat transfer, fluid mechanics, manufacturing technology, technical measurements, electrical engineering, electronics, computer science and automatic control.

From Semester 5 onward, specialised automotive modules cover the theory, design and construction of conventional and alternative internal-combustion engines; chassis and body engineering for passenger cars, commercial vehicles, buses, electric and hybrid drivetrains; application of CAD for vehicle development; electronic and embedded control systems; logistics engineering; production technology; maintenance, repair and diagnostic techniques; and applicable European safety and environmental regulations.

Hands-on workshops and semester-long internships immerse you in engine labs, vehicle diagnostics and workshop practices, ensuring you graduate with real-world experience. The programme's close ties to industry include seminars, plant visits and projects with leading transport and manufacturing firms. Erasmus+ and bilateral exchange agreements enable study or internships at partner universities across Europe, broadening your international perspective. Graduates emerge as innovative, safety-conscious engineers ready to drive the future of the automotive and transport sectors.

Career Opportunities

Graduates become vehicle design engineers, powertrain developers, production supervisors, maintenance planners, CAD specialists, EV integration experts, automotive safety engineers, R&D engineers or technical consultants in automotive, transport and related industries.

Faculty: Faculty of Transport, Technical University of Sofia

Website for Further Information: https://transtu.org/

AEROSPACE ENGINEERING

Professional Field: 5.5 Transport, Shipping and Aviation

Professional Qualification: Mechanical Engineer

Programme Overview

The English-taught Bachelor's programme in "Aerospace Engineering" at Faculty of Transport (Department of Air Transport) prepares you for every stage of aircraft and spacecraft life-cycles. Years 1–2 build core engineering knowledge—mathematics, physics, fluid mechanics, materials science, strength of materials, thermodynamics, flight mechanics and automatic control—alongside introductory avionics and aerospace systems. In Years 3–4, you deepen your expertise in aerodynamics, aircraft and rocket propulsion, structural design of airframes and space vehicles, orbital mechanics, stability and control, navigation and guidance, and airworthiness regulation under EASA/ICAO standards.

Hands-on training with industry partners (Lufthansa Technik, Bulgaria Air, Hemus Air, Air Scorpio, Heli Air, ATC and others) gives you practical experience in maintenance, non-destructive testing, avionics calibration and airworthiness inspections. Simulator sessions, laboratory projects and field visits to MRO and launch-support facilities reinforce applied skills. The curriculum evolves to meet international aviation and space-flight standards, drawing on over 60 years of TU Sofia's aerospace heritage. A capstone design project challenges you to innovate—optimizing drone aerodynamics or refining micro-propulsion for satellites—under real-world safety and regulatory constraints. Graduates emerge with analytical rigour, practical expertise and regulatory know-how essential for shaping the future of safe, efficient air and space transport.

Career Opportunities

Graduates work as aerospace design engineers, propulsion specialists, flight-systems analysts, MRO managers, avionics engineers, spacecraft-systems developers, launch-operations coordinators, airworthiness inspectors, mission planners or R&D engineers.

Faculty: Faculty of Transport, Technical University of Sofia

Website for Further Information: https://transtu.org/

INDUSTRIAL MANAGEMENT

Professional Field: 5.13 General Engineering

Professional Qualification: Engineer Manager

Programme Overview

Since its launch in 1991, the English-taught Bachelor's in **Industrial Management** at TU Sofia has led national rankings for excellence in combining engineering and management education. You begin with a solid engineering core—mathematics, physics, materials science, mechanics, electronics and information technologies—paired with foundational courses in economics, marketing and project management. Building on this, you master technological-process analysis, quality management, resource planning and lean production methods, alongside modern information-management and ERP systems.

Case studies and applied course projects challenge you to propose data-driven solutions that optimize workflows, enhance product quality and reduce operational costs. You engage in multidisciplinary team projects under faculty mentorship, collaborating with the Entrepreneurship & Innovation Centre to develop and pitch real-world applications. Intensive modules in innovation management and strategic planning equip you to drive continuous improvement and competitive advantage. Seminars by industry leaders and plant visits immerse you in best practices across manufacturing and high-tech sectors.

Strong emphasis on English language proficiency and intercultural teamwork prepares you for global roles, while Erasmus+ exchanges extend your perspective at partner universities across Europe. In your final semester, a capstone bachelor's thesis integrates technical feasibility with financial viability to solve an existing industrial challenge. Graduates emerge as engineer-managers—possessing the analytical rigour, technical literacy and leadership skills demanded by Industry 4.0 and the digitalized economy.

Career Opportunities

Graduates work as operations managers, production-engineering leaders, quality directors, supply-chain analysts, innovation consultants, project managers, process optimizers, industrial strategists, technology entrepreneurs or management consultants in manufacturing and service industries.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

INDUSTRIAL ENGINEERING

Professional Field: 5.13 General Engineering

Professional Qualification: Industrial Engineer

Programme Overview

The English-taught Bachelor's programme in Industrial Engineering at the "English Language Faculty of Engineering" provides a multidisciplinary education aligned with the standards of leading European universities. The curriculum integrates engineering fundamentals with management, economics and information technologies, enabling graduates to bridge technical innovation and organisational efficiency. During the first two years, students build a rigorous foundation in mathematics, physics, chemistry, mechanics, materials science, electronics, measurement systems and control theory. Later semesters expand into industrial electronics, electrical drives, automotive systems, process communication networks, and computer-aided design and manufacturing (CAD/CAM/CAE).

Emphasis is placed on computational methods, object-oriented programming and finite-element structural analysis, supported by laboratory exercises and project-based learning. Business-oriented modules in economics, operations management, human-resource management and financial control develop strategic thinking and leadership. Instruction in English enhances communication skills and cross-cultural competence.

International mobility is encouraged through Erasmus+ partnerships with over 16 universities and 10 industrial companies across the EU, offering semester exchanges and internships. The programme's modular, harmonised structure keeps students up to date with the latest scientific and industrial developments, while fostering adaptability to rapidly changing technologies.

Career Opportunities

Graduates are prepared for diverse roles as industrial engineers, production and operations managers, process-control specialists, quality engineers, CAD/CAE analysts, project coordinators, logistics and supply-chain experts, and consultants in manufacturing, energy, transport and technology sectors. Many pursue Master's degrees at TU Sofia or continue their education in leading European and American universities.

Faculty: English Language Faculty of Engineering, Technical University of Sofia

Website for Further Information: https://elfe.tu-sofia.bg

COMPUTER SCIENCE AND ENGINEERING

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Computer Engineer

Programme Overview

The English-taught Bachelor's programme "Computer Science and Engineering" at the "Faculty of Computer Systems and Technologies" (FCST) provides a comprehensive education in the design, implementation and maintenance of modern computer systems, software architectures and intelligent information technologies. FCST is the largest and most highly accredited academic unit in Bulgaria for education and research in computer engineering, software development, and IT infrastructure.

The curriculum combines a strong theoretical foundation with practical training in modern programming languages, algorithms, computer architectures, databases, networks and system integration. Core courses cover mathematics, physics, electronics, digital and microprocessor systems, operating systems, software engineering, computer graphics, artificial intelligence, cybersecurity, and data science. Advanced electives include embedded and distributed systems, system-on-chip design, high-performance computing, virtual and augmented reality, multimedia systems, and intelligent automation. Students gain hands-on experience in state-of-the-art laboratories equipped for CAD, parallel computing, and cloud-based development.

International cooperation is encouraged through Erasmus+ partnerships with universities across Europe, Asia and the Americas, allowing students to participate in exchange semesters, joint research and internships.

Career Opportunities

Graduates are prepared for careers as software engineers, systems architects, data scientists, network administrators, cybersecurity analysts, AI developers, or IT project managers. They find employment in high-tech companies, research institutions, public administration, banking, education, transport, and environmental sectors. Over 98% of graduates successfully secure professional employment in the IT industry in Bulgaria and abroad.

Faculty: Faculty of Computer Systems and Technologies, Technical University of Sofia

Website for Further Information: https://fcst.bg/

English-taught programmes

Master Degree

Duration of Study: 1 year (2 semesters)

Mode of Study: Full-time

MECHANICAL ENGINEERING

Professional Field: 5.1 Mechanical Engineering

Professional Qualification: Master of Engineering

Programme Overview

The one-year Master's programme in "Mechanical Engineering" builds on Bachelor-level foundations to prepare you for leadership in research, design, implementation and management of advanced machines, devices and production systems. In the first semester, compulsory modules reinforce scientific rigor with courses in applied mathematics for engineers, continuum mechanics, advanced materials, computational methods and computer-aided engineering, alongside studies in sustainability, industrial economics and project leadership.

In the second semester, you choose one of five specialist tracks to match your career goals: Automation of Discrete Manufacturing; Engineering Information Technologies; Logistics Engineering; Metrology, Precision Mechanics & Optics; Polymer Engineering

Each pathway features project-based labs using state-of-the-art CAD/CAE/CAM software, finite-element simulation, digital-twin platforms, CNC and additive-manufacturing equipment, and industrial automation kits. Close industry collaboration brings real-world design briefs, plant visits and paid internships, ensuring your portfolio aligns with market needs.

The programme culminates in an individual Master's thesis—often industry-sponsored—where you tackle a complex engineering challenge, demonstrating independent research and problem-solving skills. Throughout, small class sizes and mentoring faculty foster creativity, teamwork and lifelong-learning. Graduates emerge as analytical, creative engineers, ready to drive innovation and lead projects within the rapidly evolving landscape of Industry 4.0 and smart manufacturing.

Career Opportunities

Graduates advance as design leads, R&D engineers, production-automation specialists, logistics analysts, metrology managers, polymer-process engineers, CAE consultants or project managers in automotive, aerospace, energy, medical device and high-tech manufacturing.

Faculty: Faculty of Mechanical Engineering, Technical University of Sofia

Website for Further Information: https://mf.tu-sofia.bg

MEDICAL ENGINEERING

Professional Field: 5.13 General Engineering
Professional Qualification: Master of Engineering

Programme Overview

The English-taught Master's programme in "Medical Engineering" trains you to become a leading expert in the design, development, certification and upkeep of medical devices and systems compliant with international safety and quality standards. Building on your Bachelor's background, you deepen your engineering foundation with advanced courses in materials science, biomedical measurement techniques, metrology, micro- and macro-mechanics, electronics, control systems, and healthcare informatics.

Specialized modules cover electromechanical medical equipment, prosthetics & orthotics, regulatory affairs, standardization and certification processes, ensuring you understand the full lifecycle of medical products—from initial concept through clinical validation. Hands-on labs introduce state-of-the-art CAD/CAM tools, rapid-prototyping, sensor and actuator integration, plus quality-assurance protocols. Guest lectures and case studies from regulators and medical-device manufacturers highlight real-world compliance challenges within the EU and beyond.

A substantial Master's thesis—often in partnership with hospitals, certified labs or industry—sharpens your ability to tackle interdisciplinary technical problems under regulatory constraints. Courses in project management, economics, marketing and legal aspects equip you to lead multidisciplinary teams. Graduates emerge as versatile professionals, ready to optimize existing technologies or create innovative solutions for hospitals, clinics, research institutes and medical-device firms, driving Bulgaria's competitiveness in the Single European Market and advancing patient care through dependable, compliant medical engineering.

Career Opportunities

Graduates work as design engineers, R&D specialists, quality-assurance managers, certification consultants, clinical-engineering leads, prosthetics developers, regulatory-affairs experts or project managers in hospitals, medical-device manufacturers, testing laboratories and government agencies.

Faculty: Faculty of Mechanical Engineering, Technical University of Sofia

Website for Further Information: https://mf.tu-sofia.bg

MECHATRONIC SYSTEMS

Professional Field: 5.1 Mechanical Engineering

Professional Qualification: Master of Engineering

Programme Overview

The one-year Master's programme in "Mechatronic Systems" builds on your Bachelor's foundations to develop advanced expertise at the intersection of mechanics, electronics and intelligent control. In the first semester, compulsory modules deepen your scientific toolkit—covering advanced dynamics, mechatronic system design, sensor and actuator integration, real-time control and industrial communication networks—alongside engineering management, systems engineering and research methods.

In the second semester you choose between two specialist streams:

- Robotics & Automation, focusing on robotic kinematics, machine vision, motion planning, PLC and embedded control, and collaborative-robot integration;
- Precision & Micromechanical Systems, covering micro-manufacturing processes, precision mechanism design, metrology, MEMS technology and high-resolution automation.

Project-based labs employ CAD/CAE/CAM software, digital-twin simulation, rapid prototyping, CNC machining and industrial IoT platforms. Close industry collaboration—through case studies, plant visits and paid internships—ensures your skills match real-world needs. The programme culminates in an individual Master's thesis tackling a complex mechatronic challenge under faculty supervision and often in partnership with a corporate or research lab. Small class sizes and mentoring professors foster creativity, critical thinking and interdisciplinary teamwork. Graduates emerge as adaptive, innovative engineers ready to lead the design, integration and maintenance of advanced mechatronic systems in smart factories, autonomous vehicles, medical devices and precision-manufacturing environments.

Career Opportunities

Graduates excel as robotics engineers, automation system designers, embedded-control specialists, precision-mechanics developers, R&D mechatronics engineers, project managers or consultants across automotive, aerospace, medical, logistics and high-tech manufacturing sectors.

Faculty: Faculty of Mechanical Engineering, Technical University of Sofia

Website for Further Information: https://mf.tu-sofia.bg

AVIATION ENGINEERING

Professional Field: 5.5 Transport, Shipping and Aviation

Professional Qualification: Master of Engineering

Programme Overview

The one-year, English-taught Master's programme in "Aviation Engineering" at Faculty of Transport—led by the Department of Air Transport—builds on your bachelor's foundation to cultivate advanced expertise in all facets of civil aviation. In Semester 1 you deepen your knowledge of engineering research methods, aeromechanics, aircraft electrical-power systems, flight-operations organization, and the structural mechanics of airframes. You study advanced topics in automated air-traffic control, propulsion systems, primary and secondary radar signal processing, and on-board automatic control and computing systems. Reliability engineering, diagnostics, non-destructive testing and airworthiness maintenance under EASA/ICAO standards ensure rigorous technical competence.

Practical training is delivered in close collaboration with leading Bulgarian aviation firms—Lufthansa Technik, Bulgaria Air, Hemus Air, Air Scorpio, Heli Air, ATC and others—through workshops, internships and simulator exercises. In Semester 2 you tackle airport engineering, methods for airworthiness certification, advanced analysis of aviation structures and radio-technical systems. A substantial Master's thesis, often industry-sponsored, challenges you to solve a real-world aerospace problem under regulatory constraints. Throughout, guest lectures and field visits keep you aligned with international aviation standards and best practices. Graduates emerge as adaptive, safety-focused engineers ready to lead design, maintenance, operations or regulatory roles across the global air-transport sector.

Career Opportunities

Graduates become aircraft design and MRO engineers, avionics specialists, airworthiness managers, flight-operations planners, air-traffic systems developers, airport-services managers, reliability analysts, regulatory inspectors, aviation safety auditors or aerospace R&D consultants.

Faculty: Faculty of Transport, Technical University of Sofia

Website for Further Information: https://transtu.org/

BUSINESS MANAGEMENT

Professional Field: 3.7 Administration and Management

Professional Qualification: Master in Business Management

Duration of Study: 1–2 years (2–4 semesters)

Programme Overview

The English-taught Master's in "Business Management" at Faculty of Economics and Management develops versatile leaders ready to excel in both private and public sectors. Tailored for graduates from any discipline, the programme offers two pathways—1 year for those holding a relevant Master's or 2 years for Bachelor's holders—each culminating in a specialized skill set across three streams: Operations Management, Human Resource Management and Marketing Management.

Core modules cover strategic planning, organizational behavior, financial decision-making, data analytics and digital business systems. You examine advanced topics in process optimization, supply-chain design, talent management and brand strategy through case studies, simulations and guest lectures from industry and government practitioners. Emphasis on contemporary information-management platforms and change-management techniques ensures you can drive digital transformation.

Project-based learning and a final Master's thesis—often conducted in partnership with leading firms or agencies—challenge you to deliver actionable solutions to real organizational challenges. Small cohorts and personalized mentorship foster peer collaboration, while intensive workshops in negotiation, innovation and leadership polish your managerial presence. Erasmus+ exchanges and networking events broaden your global outlook, preparing you to navigate multicultural environments.

Graduates emerge as strategic thinkers equipped to lead teams, manage complex projects and implement sustainable growth initiatives across industries, public administrations and non-profit organizations in an increasingly digitalized world.

Career Opportunities

Graduates become operations directors, HR managers, marketing strategists, policy advisors, project leaders, management consultants, organizational development specialists, program managers or executive administrators in private firms, government bodies and NGOs.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

INDUSTRIAL MANAGEMENT

Professional Field: 5.13 General Engineering

Professional Qualification: Master of Industrial Management

Duration of Study: 1–2 years (2–4 semesters)

Programme Overview

The English-taught Master's programme in "Industrial Management" at Faculty of Economics and Management offers two tailored tracks: a one-year pathway for graduates in Technical Sciences or related fields, and a two-year pathway for those from other disciplines. Both tracks combine advanced engineering foundations with managerial expertise, culminating in a research-based thesis.

Building on your prior degree, you deepen your command of strategic decision-making, technology transfer and innovation management. Core modules cover business-process modeling, design and control of production and operations systems, project and risk management, quality assurance, supply-chain optimization, and organizational structures for SMEs. Specialized seminars in marketing management, operations management and human-resource management sharpen your ability to lead cross-functional teams and implement data-driven solutions.

Hands-on group projects and case studies under faculty mentorship bridge theory and practice, while close ties to industry ensure real-world relevance. You gain proficiency in contemporary information-management systems and develop analytical, communicative and entrepreneurial skills through applied assignments. Erasmus+ mobility and guest lectures by senior practitioners broaden your global perspective. Graduates emerge as versatile engineer-managers—capable of designing efficient systems, optimizing resources and driving innovation in manufacturing, services, and public administration.

Career Opportunities

Graduates advance as production and operations managers, project-risk analysts, quality-assurance directors, supply-chain strategists, HR and marketing leaders, innovation consultants, department heads, management advisors or technology-transfer specialists.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

MANAGEMENT AND BUSINESS INFORMATION SYSTEMS

Professional Field: 5.13 General Engineering

Professional Qualification: Master of Management and Business Information Systems

Duration of Study: 1–2 years (2–4 semesters)

Programme Overview

This English-taught Master's in "Management and Business Information Systems" at Faculty of Economics and Management blends advanced management theory with cutting-edge IT practice. Designed for graduates holding any Bachelor's or Master's degree, the programme offers a one-year track for those from engineering, IT or business fields, and a two-year track for all other backgrounds.

You begin with foundational modules in strategic management, organizational behaviour, financial analysis and data-driven decision-making, all delivered via an interactive, distance-enabled format. Next, you specialise in one of three streams—"Information Support for Modern Business", "Remote Collaboration Systems" or "Intelligent Business Analytics"—learning to architect enterprise IT solutions, manage software-development lifecycles, secure digital assets and apply AI-powered analytics for strategic insights. Electives cover digital transformation, service-management standards (ITIL), virtual prototyping and augmented-reality platforms, ensuring you master technologies that drive innovation.

Project-based assignments and a research-led thesis—often conducted in partnership with leading firms—apply theory to real organisational challenges. Guest lectures, hackathons and case studies sharpen your practical skills, while Erasmus+ exchanges broaden your global perspective at partner universities across Europe. Throughout, you develop the analytical, communicative and entrepreneurial competencies required to lead interdisciplinary teams and steer organisations through rapid technological change.

Career Opportunities

Graduates become business-IT consultants, ERP project managers, data-analytics leaders, IT service directors, systems architects, software-project leads, cybersecurity managers, enterprise-application administrators or digital-innovation strategists.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

PROJECT MANAGEMENT

Professional Field: 5.13 General Engineering

Professional Qualification: Master of Project Management

Duration of Study: 1–2 years (2–4 semesters)

Programme Overview

The English-taught Master's in "Project Management" at TU Sofia's Faculty of Economics and Management equips you with the methodological rigor and practical skills to lead complex projects across engineering, IT, transport, infrastructure and EU-funded research programmes. Offering both a one-year track for graduates in Technical Sciences or related fields and a two-year track for candidates from other disciplines, the programme culminates in a research-based thesis.

You begin by mastering the five PM process groups—Initiation, Planning, Execution, Monitoring & Control, and Closure—along with specialized tools for scope, schedule, cost, quality, risk, procurement and stakeholder management. Core courses cover advanced methodologies from PMI, IPMA, PRINCE2, ISO 21500 and other global standards. Parallel modules develop your strategic planning, financial appraisal, legal-contractual knowledge (national and international), and behavioral skills for leading multicultural teams.

Interactive lectures, simulations and case studies are complemented by hands-on exercises in industry-standard PM software. Guest seminars by senior practitioners and site visits to live projects reinforce real-world application. Throughout, you learn to define project objectives, secure stakeholder buy-in, allocate and optimize resources, and steer projects to successful completion under dynamic constraints. Erasmus+ mobility options further broaden your global perspective. Graduates emerge as certified-ready project coordinators, planners and managers—capable of delivering results in any sector requiring robust project governance.

Career Opportunities

Graduates serve as project coordinators, planners, risk managers, PMO leads, procurement managers, stakeholder engagement specialists, project controllers, schedule analysts, quality managers or senior project directors in industry, government and NGOs.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

SENIOR MANAGEMENT

Professional Field: 3.7 Administration and Management

Professional Qualification: Master of Senior Management

Programme Overview

The English-taught Master's programme "Senior Management" at the Technical University of Sofia is designed as an intensive, practice-oriented course that bridges academic knowledge with executive-level managerial skills. Unlike traditional management programmes, it emphasises interactive learning, case-based problem solving and the transformation of knowledge into actionable competence for senior decision-makers.

Because of its multidisciplinary nature, the programme builds upon the prior professional experience of managers and enhances their ability to apply modern concepts and principles of effective leadership, organisational governance and strategic decision-making at the highest corporate level. The curriculum combines core subjects such as International Business Management, Banking and Financial Markets, Business Intelligence, Investment Management, Leadership Psychology, and Industry–Public Sector Relations with elective courses allowing specialisation in Corporate Management or Public Sector Administration.

The one-year programme is offered in full-time, part-time and distance-learning formats, providing flexibility for professionals balancing academic advancement with managerial responsibilities. Learning is delivered by experienced professors, business practitioners and guest lecturers from leading companies and institutions.

Career Opportunities

Graduates are equipped for executive and consulting positions in multinational corporations, public institutions and international organisations. They are prepared to assume senior roles such as corporate directors, policy advisers, strategic consultants, investment and innovation managers, or to continue their academic development through doctoral studies in management and leadership.

Faculty: Faculty of Economics and Management, Technical University of Sofia

Website for Further Information: https://tu-sf.org/

ELECTRONIC GOVERNANCE

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Master in Electronic Governance

Duration of Study: 1.5 years (3 semesters)

Programme Overview

The English-taught Master's programme "Electronic Governance" prepares professionals capable of leading digital transformation in public administration and corporate management. Developed within the English Language Faculty of Engineering", the programme combines technical, managerial and analytical disciplines to train experts who can design, implement and evaluate complex information systems for administrative and public services.

The curriculum integrates IT governance, project management, systems evaluation, research methodology, public relations and philosophy of science, enabling students to approach governance challenges from both technological and strategic perspectives. Emphasis is placed on interoperability, data security, user-centric service design and the alignment of ICT solutions with public policy objectives. Learning takes place in an international academic environment, with courses and seminars entirely in English and strong involvement of lecturers experienced in EU-funded e-government projects.

Students develop their Master's thesis during the third semester, often in collaboration with partner institutions or government agencies. Erasmus+ mobility agreements with 16 universities and over 10 industrial partners across the EU provide opportunities for study and professional internships abroad, enhancing both technical competence and intercultural understanding.

Career Opportunities

Graduates are qualified for managerial, consulting, and research positions in public institutions, NGOs and private organisations. Typical roles include e-government system architect, digital-service designer, ICT policy consultant, project manager for EU programmes, research associate or university lecturer in public administration and information management.

Faculty: English Language Faculty of Engineering, Technical University of Sofia

Website for Further Information: https://elfe.tu-sofia.bg

INDUSTRIAL ENGINEERING

Professional Field: 5.13 General Engineering

Professional Qualification: Master in Industrial Engineering

Duration of Study: 1.5 years (3 semesters)

Programme Overview

The English-taught Master's programme Industrial Engineering at the "English Language Faculty of Engineering" offers a two-year course of study designed for graduates holding a Bachelor's or Master's degree in engineering, computer science, or economics. The programme builds upon the solid technical foundation of undergraduate studies and extends it toward integrated process control, automation, and innovation management within industrial environments.

The curriculum follows a harmonised modular structure aligned with leading European universities, combining advanced engineering disciplines with management and digital transformation topics. Core modules include Process Control and Production Automation, Quality Management Systems, Production Management, Power Distribution Systems, Project Development, Java Programming and Internet Applications, Robotics and Automation Technologies, Energy Efficiency, Intelligent Manufacturing Systems, Organisational Behaviour, and Knowledge Management. During the second academic year, students dedicate their time to research and the preparation of the Master's thesis, usually developed in partnership with industrial companies or international institutions.

Courses are taught entirely in English by experienced academic staff and visiting lecturers from partner universities and industry. Erasmus+ mobility with more than 16 universities and over 10 industrial partners across the EU enables participation in exchange programmes, research projects, and internships.

Career Opportunities

Graduates are qualified for managerial, engineering, and consulting positions in industrial and service sectors worldwide. Typical employers include leading international and Bulgarian companies such as Coca-Cola Company, FESTO Bulgaria, Honeywell Ltd., Nestlé Sofia, and Siemens Building Technologies, as well as mobile operators and logistics providers. Graduates may also continue their academic development through doctoral studies or pursue careers abroad in Belgium, Germany, the Netherlands, Canada, or the United Kingdom.

Faculty: English Language Faculty of Engineering, Technical University of Sofia

Website for Further Information: https://elfe.tu-sofia.bg

INFORMATION TECHNOLOGIES FOR BUSINESS MANAGEMENT

Professional Field: 5.13 General Engineering

Professional Qualification: Master Engineer

Duration of Study: 1.5 years (3 semesters)

Programme Overview

The English-taught Master's programme Information Technologies for Business Management focuses on the design, development and implementation of software platforms that support modern business processes. The curriculum is centred on Enterprise Resource Planning (ERP) systems – integrated software environments that automate and synchronise core corporate functions such as finance, logistics, production, human resources and customer management. By consolidating data and processes into a unified digital infrastructure, ERP systems enable faster, data-driven decision making, real-time information visibility and improved operational efficiency.

Students acquire both theoretical knowledge and practical competence in software engineering, database design, business process modelling, enterprise systems integration and IT project management. The programme emphasises the ability to analyse, adapt and deploy software solutions tailored to the specific needs of organisations in both the private and public sectors. Instruction is entirely in English and combines lectures, laboratory sessions and project work across three semesters, culminating in a Master's thesis.

International mobility under the Erasmus+ programme provides opportunities for study or internships with over 16 European universities and 10 industrial partners.

Career Opportunities

Graduates are qualified to work as ERP system designers, business application developers, IT consultants, project managers and system integration specialists in manufacturing, finance, logistics, telecommunications, and public administration. They can also pursue careers in research or higher education, focusing on enterprise software engineering and digital business transformation.

Faculty: English Language Faculty of Engineering, Technical University of Sofia

Website for Further Information: https://elfe.tu-sofia.bg

TECHNOLOGICAL ENTREPRENEURSHIP

Professional Field: 5.13 General Engineering

Professional Qualification: Master Engineer

Programme Overview

The English-taught Master's programme "Technological Entrepreneurship" is designed to prepare a new generation of highly qualified professionals capable of launching and managing innovative, technology-driven enterprises across various sectors of the economy. The programme bridges the gap between engineering expertise and entrepreneurial competence, combining technological insight with business strategy, innovation management and leadership skills.

Developed following the model of the University of California, Berkeley's renowned programme in technology entrepreneurship, the curriculum reflects global best practices in innovation education. Students gain applied knowledge in innovation management, product life-cycle management, high-tech marketing, sustainable business modelling, financial management, strategic entrepreneurship, high-tech product design, intellectual property, and value-added engineering. Elective courses further develop skills in opportunity recognition, entrepreneurial behaviour, project management, ethics and social responsibility, start-up financing, 3D printing and rapid prototyping.

The one-year programme integrates lectures, workshops, and project-based learning led by experienced academic staff and practicing entrepreneurs. Erasmus+ mobility allows outstanding students to study or prepare their thesis at partner universities and international companies across Europe.

Career Opportunities

Graduates are equipped to become founders of start-ups, innovation managers in high-tech companies, venture capital investors, or R&D consultants in technology-intensive industries. The programme also provides a strong foundation for doctoral studies in entrepreneurship, innovation, or engineering management.

Faculty: English Language Faculty of Engineering, Technical University of Sofia

Website for Further Information: https://elfe.tu-sofia.bg

COMPUTER SCIENCE AND ENGINEERING

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Master of Engineering

Programme Overview

The English-taught Master's programme „Computer Science and Engineering" at the Faculty of Computer Systems and Technologies (FCST) provides advanced training in modern computing paradigms, software engineering methodologies and intelligent information systems. Designed for graduates in engineering, computer science, mathematics and related disciplines, the programme offers a one-year curriculum aligned with current technological and research trends in the IT industry.

The study plan combines theoretical depth with practical project experience. Core courses cover Cloud Computing and Technologies, Web Applications, Computer Vision, Fuzzy Logic and Sets, Network Communications and Wireless Technologies, Software Design Methodologies, and Query-Based Languages. Students develop analytical and creative skills to design scalable, secure and adaptive computing systems. Elective modules expand expertise in areas such as Semantic Web, Numerical Methods for Research, Data Analysis and Management, Computer Security Technologies, E-Government, Project Management, Geographic Information Systems, and Optimization Methods for System-on-Chip Design.

Learning involves lectures, laboratory sessions, coursework and a capstone Master's Thesis developed in collaboration with research teams or industrial partners. The programme emphasises modern engineering practice, critical thinking and innovation in digital systems design.

Career Opportunities

Graduates are equipped for professional careers as software engineers, data scientists, network specialists, AI developers, cloud-architecture consultants or IT project managers. They can also pursue doctoral research in computer science, artificial intelligence, or information technologies, both in Bulgaria and internationally.

Faculty: Faculty of Computer Systems and Technologies, Technical University of Sofia

Website for Further Information: https://fcst.bg/

INNOVATIVE INFORMATION AND COMMUNICATION TECHNOLOGIES

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Master of Engineering

Programme Overview

The English-taught Master's programme Innovative Information and Communication Technologies provides advanced education for graduates aiming to specialise in the design, development and integration of next-generation ICT systems. Offered jointly by the Faculty of Computer Systems and Technologies (FCST) and the Faculty of Telecommunications (FTK), the programme combines modern information technologies with advanced communication engineering, equipping professionals capable of leading digital innovation across industrial and research sectors.

The one-year curriculum blends theoretical knowledge with practical laboratory experience. Core courses cover Network Convergence, Audio and Video Technologies, Optical Communications, Computer Networks, Internet Programming and Java Technologies, supported by project work and a Master's Thesis developed under academic supervision. The study plan allows individual specialisation through two integrated academic tracks – Information Technologies and Communication Technologies – encompassing disciplines such as mobile application development, software design, image processing, microwave systems design, service architectures and teletraffic engineering. Additional electives expand professional competence in areas such as embedded systems, cloud computing, network security, agent-based and biometric systems, and business information management. The learning process emphasises innovation, teamwork and the application of modern tools for simulation, software development and network analysis.

Career Opportunities

Graduates are prepared for professional careers as software and network engineers, ICT consultants, R&D specialists, project managers and system architects in telecommunications, IT, media, healthcare, manufacturing and public administration. The programme also provides an excellent foundation for doctoral research and innovation-oriented careers in information and communication technologies.

Faculty: Joint programme of the Faculty of Computer Systems and Technologies and the Faculty of Telecommunications, Technical University of Sofia

Website for Further Information: https://cst.tu-sofia.bg, https://ftk.tu-sofia.bg

German-taught programmes

Bachelor Degree

Duration of Study: 4 years (8 semesters)

Mode of Study: Full-time

COMPUTER SYSTEMS AND TECHNOLOGIES

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Computer Engineer

Programme Overview

The German-taught Bachelor's programme in Computer Systems and Technologies at TU Sofia, delivered under the Otto von Guericke Universität Magdeburg curriculum, spans seven semesters of intensive coursework and one semester dedicated to thesis work. In the early semesters, you master the fundamentals of computer architecture, microprocessor systems, peripheral interfaces, digital and analogue electronics, programming paradigms, algorithms, data structures, mathematics, physics and electrical engineering. As you progress, advanced modules cover computer networks, communication systems, operating systems, database and information systems, internet technologies, image and multimedia processing, cybersecurity and the management of IT projects.

All instruction is in German, and faculty from both TU Sofia and OvGU ensure you earn dual diplomas—Bulgarian and German—while gaining exceptional language skills sought by German-speaking employers operating in Bulgaria. The curriculum comprises 34 mandatory, 10 elective and 10 facultative courses, allowing you to personalise your path toward specialisms such as IoT platforms, AI-driven analytics or cloud architectures. Hands-on laboratories and industry-linked projects prepare you to design, develop, test and deploy both hardware and software solutions. A DAAD-supported semester at OvGU Magdeburg and Erasmus+ mobility options further enrich your learning with international exposure. Upon graduation, you will be bilingual, biculturally fluent and ready to bridge Bulgarian and German technology industries.

Career Opportunities

Graduates excel in roles such as embedded-systems engineer, network architect, software developer, cybersecurity analyst, IT project manager, hardware designer, systems integrator, R&D engineer and technical consultant in multinational IT firms.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg/

MECHATRONICS AND INFORMATION TECHNOLOGY

Professional Field: 5.13 General Engineering

Professional Qualification: Engineer in Mechatronics and Information Technology

Programme Overview

The German-taught Bachelor's programme in „Mechatronics and Information Technology" at Faculty for German Engineering Education and Industrial Management, in partnership with the Karlsruhe Institute of Technology (KIT), equips you with the interdisciplinary skills to design, develop and integrate mechanical, electronic and IT subsystems. In Semesters 1–4 you build a solid engineering foundation, studying materials science, technical mechanics, machine design, thermodynamics, fluid mechanics, manufacturing technology, measurement and control engineering, informatics in mechanical engineering, electrical engineering and electronics, all delivered in German by Bulgarian and KIT faculty. Semesters 5–7 deepen your expertise in embedded control, sensor networks, robotics, networked automation and system simulation through project-based labs and industry-linked assignments. In Semester 8 you undertake a term at KIT and complete a four- to six-month specialized internship in a German enterprise. Your capstone thesis challenges you to integrate hardware and software into a cohesive mechatronic solution under real-world constraints. Graduates earn dual diplomas from TU Sofia and OvGU Magdeburg, graduate fluently in German and English, and are ready to bridge Bulgarian-German high-tech industries.

Career Opportunities

Graduates work as mechatronic systems engineers, embedded-control developers, automation specialists, robotics integrators, sensor-network designers, R&D engineers, project managers or technical consultants in multinational technology firms.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg/

BUSINESS INFORMATICS

Professional Field: 5.13 General Engineering

Professional Qualification: Engineer-Manager

Programme Overview

The German-taught Bachelor's programme in „Business Informatics" is delivered under the Otto von Guericke Universität Magdeburg curriculum, and trains you to bridge management and information-technology domains. Over seven semesters of coursework and one semester of thesis work, you acquire organisational and project-management skills alongside deep technical expertise. In early semesters you study economic theories and business models, organisational structures, project planning and leadership, as well as IT fundamentals: computer architectures, microprocessors, networks and communication systems, algorithms, programming paradigms, databases, operating systems, internet technologies and information security. Mathematics underpins your analytical training throughout.

From Semester 5 onward you integrate these disciplines: implementing ICT solutions in various sectors, designing hardware and software applications, and managing complex IT projects. All instruction is in German by Bulgarian and OvGU Magdeburg faculty, and you follow the partner university's module sequence to earn dual diplomas—TU Sofia's Bachelor in Business Informatics and OvGU's Bachelor of Computer Science. A personalized mix of 32 mandatory, 12 elective and 10 facultative courses allows you to tailor your path toward areas such as intelligent systems, remote-collaboration platforms or data analytics. Hands-on assignments and a DAAD-funded semester at OvGU enrich your practical skills, while Erasmus+ mobility offers further industry exposure. Graduates emerge fluent in German and English, ready to serve as managerial and technical leaders in German-speaking and international IT enterprises.

Career Opportunities

Graduates advance as business-IT consultants, ERP project managers, data-analytics specialists, IT service directors, systems architects, software-project leaders, cybersecurity analysts, enterprise-application administrators or digital-innovation strategists.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg/

INDUSTRIAL ENGINEERING

(Faculty of Engineering and Pedagogy – Sliven)

Professional Field: 5.13 General Engineering

Professional Qualification: Industrial Engineer

Programme Overview

The English-taught Bachelor's programme in *Industrial Engineering* at the **Faculty of Engineering and Pedagogy – Sliven** (the city of Sliven) provides an interdisciplinary education that integrates mechanical, electrical, and information engineering with management and economic sciences. The curriculum covers eight semesters and combines theoretical knowledge, practical laboratory work, and industrial training. During the first four semesters, students acquire fundamental engineering and scientific knowledge through courses in higher mathematics, physics, mechanics, materials science, chemistry, informatics, computer-aided design, electrical engineering, and electronics. They also study economics, communication skills, and foreign languages to develop a holistic engineering profile.

In the upper semesters, the programme advances toward specialised modules in industrial management, production systems and logistics, quality assurance, automation and control of technological processes, industrial safety, computer-integrated manufacturing, and sustainable production. Students learn to model and simulate industrial processes, apply control theory, design manufacturing systems, and integrate information technologies into production environments. Elective disciplines allow further specialisation in fields such as intelligent manufacturing, CAD/CAM/CAE integration, engineering economics, communication networks in automation, energy efficiency, and project management.

Laboratory and project-based activities are integral to the curriculum, encouraging the application of theory to real-world industrial problems. Industrial internships and *Erasmus*+ exchange programmes offer opportunities for practical training and international experience in leading companies across Europe.

Career Opportunities

Graduates are qualified to work as industrial engineers, production managers, project coordinators, quality engineers, and consultants in manufacturing, logistics, automation, and service sectors. They are prepared to manage interdisciplinary teams and implement innovative solutions in international industrial enterprises or pursue further studies in engineering management or industrial technologies.

Faculty: Faculty of Engineering and Pedagogy – Sliven, Technical University of Sofia

Website for Further Information: https://tu-sliven.com/

INDUSTRIAL ENGINEERING

(Plovdiv Branch)

Professional Field: 5.13 General Engineering

Professional Qualification: Industrial Engineer

Programme Overview

The English-taught Bachelor's programme in "Industrial Engineering" at the Technical University of Sofia – Plovdiv Branch (the city of Plovdiv) provides a comprehensive interdisciplinary education focused on the design, optimization and management of industrial systems and processes. Over eight semesters, students gain a solid grounding in mathematics, physics, mechanics, materials science, chemistry, electrical and electronic engineering, and computer science. Building upon this foundation, the curriculum advances toward specialized modules in industrial management, production system design, automation of technological processes, quality assurance, control theory, computer-integrated manufacturing and sustainable industrial development. Elective courses offer the flexibility to specialize in fields such as intelligent manufacturing systems, CAD/CAM/CAE integration, communication networks in automation, industrial data analysis, finite element modelling and corrosion protection.

The programme combines theoretical preparation with intensive laboratory work, industrial practice and project-based assignments. Instruction is conducted entirely in English, fostering both technical competence and professional communication skills. Students participate in industrial internships and research collaborations with Bulgarian and international companies, and are encouraged to join Erasmus+ mobility programmes for study or practical training abroad.

Career Opportunities

Graduates are qualified to work as industrial engineers, production system designers, project coordinators, quality-control and automation specialists, or consultants in manufacturing, logistics, electronics, and high-tech industries. The programme prepares professionals capable of integrating mechanical, electrical, and information technologies to manage and optimize modern industrial systems in line with the global shift toward digital and sustainable manufacturing.

Faculty: Faculty of Electronics and Automation, Technical University of Sofia – Plovdiv Branch

Website for Further Information: https://tu-plovdiv.bg

German-taught programmes

Master Degree

Duration of Study: 2 or 2.5 years (4 or 5 semesters)

Mode of Study: Full-time

INDUSTRIAL MANAGEMENT

Professional Field: 5.13 General Engineering
Professional Qualification: Master in Industrial Management
Duration of Study: 2.5 years (5 semesters)

Programme Overview

The German-taught Master's in "Industrial Management" at Faculty for German Engineering Education and Industrial Management is delivered in partnership with Technische Universität Braunschweig, one of Germany's TU9 institutions. Over four semesters you build advanced competencies in technology-driven business management: strategic planning, innovation management, quality control, ergonomics, project leadership, marketing management and financial steering. Core modules include controlling, business informatics, intercultural communication and legal frameworks, all taught in German by Bulgarian and German faculty. You learn to analyse complex industrial processes, design efficient production and operations systems, manage cross-functional teams and implement Industry 4.0 solutions, supported by seminars, simulations and case studies.

In your fifth semester you undertake a capstone thesis—often in a German enterprise—applying your interdisciplinary knowledge to a real-world challenge. Throughout the programme, elective modules let you tailor your studies to areas such as remote collaboration IT, advanced analytics or sustainable manufacturing. Intensive language immersion and a German diploma from TU Braunschweig—alongside your Bulgarian degree—equip you to serve as a bridge into German-speaking industry. Graduates emerge as engineer-managers ready to lead technical and organisational transformations in manufacturing, automation, logistics and related high-tech sectors.

Career Opportunities

Graduates become operations directors, project and innovation managers, quality assurance heads, supply-chain strategists, ERP specialists, business-IT consultants, production planners, technical controllers or senior managers in multinational industrial enterprises.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg

COMPUTER SYSTEMS AND TECHNOLOGIES

Professional Field: 5.3 Communication and Computer Engineering

Professional Qualification: Computer Engineer

Duration of Study: 2 years (4 semesters)

Language of Instruction: German; English

Programme Overview

The dual-language Master's programme in "Computer Systems and Technologies" at Faculty for German Engineering Education and Industrial Management builds on the Otto von Guericke Universität Magdeburg curriculum and is delivered in German and English by both Bulgarian and German faculty. In Semesters 1–2, you deepen your theoretical grounding in advanced computer architecture, microprocessor design, peripheral systems, communication networks, operating-system principles, distributed and cloud computing, database engineering, software-engineering methodologies, and cybersecurity. Laboratory courses and project workshops teach you to prototype and integrate hardware-software solutions for industrial and IoT applications.

Semesters 3–4 focus on cutting-edge technologies: real-time and embedded systems, machine learning for signal and image processing, network virtualization, blockchain for secure transactions, and advanced cryptographic methods. You refine project-management skills, system-integration techniques and enterprise-scale deployment practices. A DAAD-supported semester at OvGU Magdeburg or an Erasmus+ placement at a German partner enriches your international experience, while cross-border internships enable you to apply your skills in high-tech firms. Your final semester culminates in a research-driven master's thesis—often industry-sponsored—where you design, build and validate a comprehensive computing solution under real-world constraints. Graduates earn dual Bulgarian and German master's diplomas, emerge fluent in German and English technical terminology, and possess the interdisciplinary expertise to lead innovation in multinational IT and engineering enterprises.

Career Opportunities

Graduates work as systems architects, embedded-systems engineers, cloud solutions designers, network security analysts, AI and data-science specialists, software R&D leads, IT project managers or technical consultants in global technology firms.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg

BUSINESS ADMINISTRATION

Professional Field: 3.7 Administration and Management

Professional Qualification: Master in Business Administration

Duration of Study: 2.5 years (5 semesters)

Programme Overview

The German-taught Master's in "Business Administration" at Faculty for German Engineering Education and Industrial Management is delivered in collaboration with the University of Applied Sciences for Economics and Management (FOM) Essen. Over four semesters you build advanced competencies across management, economics, law and intercultural communication. Core modules include strategic management, marketing management, human-resource and organizational-process management, controlling, finance, quality management and innovation management. Instruction—offered in German by both Bulgarian and FOM Essen faculty—ensures you master the specific terminology and methodologies used in German-speaking business environments.

Your studies emphasize practical application through business simulations, project-based assignments and seminars led by industry practitioners. You refine your ability to plan and lead complex projects, perform empirical research, craft market strategies and implement digital solutions for organizational performance. Elective and facultative courses let you tailor your path toward specialized interests such as international economic relations, operations research or advanced project management. In the final semester you undertake a research-driven thesis—often in partnership with German enterprises—demonstrating your capacity to develop strategic solutions to real-world business challenges. Upon graduation, you receive dual Bulgarian and German diplomas and emerge fluent in German and English, ready to assume leadership roles in multinational corporations, public institutions and NGOs.

Career Opportunities

Graduates become management consultants, strategic planners, marketing directors, HR and organizational-development managers, financial controllers, project leaders, innovation specialists or executive administrators in international businesses, public administrations and nonprofit organizations.

Faculty: Faculty for German Engineering Education and Industrial Management, Technical University of Sofia

Website for Further Information: https://fdiba.tu-sofia.bg

French-taught programmes

Master Degree

Duration of Study: 5 years (10 semesters)

Mode of Study: Full-time

ELECTRICAL ENGINEERING

Professional Field: 5.2 Electrical Engineering, Electronics and Automation

Professional Qualification: Diplôme d'Ingénieur

Programme Overview

The French Faculty of Electrical Engineering (FFEE) offers an elite francophone engineering education recognised by France as equivalent to training in a French Grande École d'Ingénieurs. The faculty provides a unique five-year integrated Master's programme in "Electrical Engineering" that combines rigorous scientific preparation, strong linguistic competence and direct exposure to European industrial and academic standards.

The programme follows the educational model of leading French engineering schools, beginning with a two-year foundation module in Electrical Engineering taught entirely in French. This multidisciplinary stage builds a solid base in mathematics, physics, informatics, materials science, electronics and automation. After the second year, students specialise in one of two advanced engineering pathways — "Electronics, Automation and Electrical Engineering" or "Information and Communication Technologies". Laboratory work, research projects and internships ensure a constant connection between theoretical principles and their real-world applications.

All curricula are harmonised with partner universities in France, including Université de Lille, ESIEE Paris, INSA Rennes, INP Grenoble and Université de la Méditerranée, Marseille, as well as École Polytechnique de Montréal in Canada.

The learning environment is fully francophone and intercultural. Students benefit from guest lectures and courses taught by visiting professors from French universities and industry. Each academic year begins with an intensive preparatory French course, while English is studied in parallel throughout the programme. Extensive mobility is available through Erasmus+ and AUF partnerships, enabling study, internships and diploma work in France and other EU countries.

Career Opportunities

Graduates of FFOE obtain both Bulgarian and French diplomas, making them highly competitive internationally. They pursue careers as software, electronics, automation, telecommunications and energy engineers in leading multinational companies such as Schneider Electric, Melexis, ABB, Proxiad, HP, IBM and others. Many continue their studies in doctoral programmes offered jointly by Bulgarian and French institutions.

Faculty: French Faculty of Electrical Engineering, Technical University of Sofia

Website for Further Information: https://ff.tu-sofia.bg

Application procedure

General Admission Requirements for international applicants for **Bachelor's degree**, paid tuition.

Application at the Technical University of Sofia is open to foreign students who hold a Secondary School Diploma, which allows them access to higher education institutions in the respective countries where they have completed their secondary education.

Required Documents

1. Application form, containing some brief biographical data, exact address, telephone and the label of the applicant's desired specialty. The Application form can be downloaded in MS Word format;
2. A copy of the Passport;
3. A notarised copy of the Secondary School Diploma and its Supplement (s);
4. A document, issued by competent authorities, which testifies to the right of the applicant to further his/her education at university level in the country where they have completed their secondary school education;
5. Certificate of recognized secondary education issued by the Regional Department of Education / https://ruo-sofia-grad.com /;
6. Four recent passport-size photos;

Ranking of the candidates/applicants for students is based on their high school diploma scores in mathematics, physics, informatics and English which should be no less than 62% of the maximum possible result according to the adopted evaluation system.

Documents No 3 and 4 must be legalised in accordance with the provisions contained in the intergovernmental agreements between the Republic of Bulgaria and the country in which these documents were issued, (or Apostille). If such agreements do not exist, the documents must be validated, translated and legalized, according to the standard procedure for legalisation of official papers.

Then they must be officially translated into Bulgarian language.

- by a person appointed by an order of the head of the diplomatic or consular representation of the Republic of Bulgaria abroad

or

- by a person working individually as a translator or by translation companies and verified by a Bulgarian notary.

Only original seals and stamps are accepted.

Required level of proficiency in English:

- FCE (First Certificate in English).

- CAE (Cambridge Certificate in Advanced English).
- CPE (Certificate of Proficiency in English).
- IELTS (bands 6, 7, 8, 9).
- PITMAN – Higher Intermediate – Advanced.
- TOEFL Paper, CBT, IBT (respectively with min. 550, 213 or 79 score).
- PTE Academic (59 score minimum).
- PTE General (third level minimum).

Applicants, who have some level of proficiency in English, but do not hold one of the above certificates, sit for an exam at university. Those, who pass the language exam successfully, will be enrolled in the first year of study in their chosen degree course. Otherwise, they have to attend 10 months of preparatory language and specialised course in English or Bulgarian depending on the language in which the specialties are provided.

When the documents are prepared according to the requirements of the regulation, they are submitted in one of the following ways:

- Personally – at the Office of International Students' Sector at the TU – Sofia
- By registered mail to the following address:

International Students' Sector
Technical University of Sofia,
8, Kliment Ohridski Blvd, Sofia 1000, Bulgaria

- Via authorized person (the power of attorney should be legally verified by the consular service of the Republic of Bulgaria in the country of issue or with apostille).

Application deadline: no later than September 25 for the first semester and no later than February 1 for the second semester in the year of application.

Initial Fees: Application fee – BGN 50 /€ 25.57/ - paid upon submission of the complete set of documents. Fee for official note for accommodation in a dormitory - BGN 50 /€ 25.57/.

The annual tuition fee for training is from EUR 3000 to EUR 4000, depending on the specialty*. The annual fee for the preparatory year is EUR 2500*. The half of the annual tuition fee is paid at the beginning of the semester, after the applicant receives the notification letter on behalf of the Ministry of Education and Technical University of Sofia that she/he has been admitted as a student and has received a student visa.

**Each year the amount may vary in accordance to Bulgarian legislation.*