



UNIVERSITY  
PARDUBICE  
FACULTY OF ELECTRICAL  
ENGINEERING  
AND INFORMATICS



# INFORMATION ABOUT STUDY PROGRAMMES

for the academic year  
**2023/2024**

University of Pardubice

**Faculty of Electrical  
Engineering and Informatics**



# UNDERGRADUATE STUDY PROGRAMMES

## ACADEMIC STUDY PROGRAMMES

### INFORMATION TECHNOLOGY

Type of study:  
**BSc**

Form of study:  
**FULL-TIME**

Length of study:  
**3 YEARS**

Do you want to become a member of the most demanded community in the job market? We will prepare you for a career in the field of information technologies. Through your own choice of courses you will specialize yourself in computer networks, web applications, computer graphics or operation systems.

#### WHAT WILL WE TEACH YOU?

We will teach you a wide range of programming and scripting languages, prepare you for team development of software products in a collaborative environment and get you acquainted with operation and database systems administration. You will gain practical experience in configuration and computer network maintenance. During your study you will also get an opportunity to get certification from renowned companies such as Oracle, Cisco, Autodesk and the like.

#### WHAT WILL YOU BECOME?

Study of information technologies opens countless opportunities for advancing yourself in the job market. It is one of the most dynamic fields of today. With your education you will be able to become an information systems and specialized applications developer, computer networks administrator, database systems and cloud systems administrator, software analyst, operation systems administrator, company information systems consultant, software tester, etc. The interdisciplinary preparation will give you the opportunity to choose your future career in IT according to your liking.



### COMMUNICATION TECHNOLOGY

Type of study:  
**BSc**

Form of study:  
**FULL-TIME  
PART-TIME**

Length of study:  
**3 YEARS**

Communication technologies are part of everyday life, but only true specialists know the principles of radio-communication systems and their future. The study will enable you to become a sought after expert in a progressively developing field.

#### WHAT WILL WE TEACH YOU?

In the field of communication technologies we will introduce you to the world of electronic systems which are used in mobile networks, sensor systems and wherever information transfer is needed. In our state-of-the-art laboratories you will verify the functions of many types of transmission technologies. You will design your antenna and analyze radio signals. All this will be completed with necessary theoretical knowledge, which you will be able to use for the designing and construction of electric circuits, signal processing or radio interference measurement.

#### WHAT WILL YOU BECOME?

The study provides you with an opportunity to find employment anywhere in fields which use electronic systems. You will find a career in many professions, especially in communication, automation and safety technology sectors. There is currently a lack of qualified employees in the area of Communication Technology, so we will provide you with quality education and highly valued skills. Then you can decide whether you wish to develop the acquired knowledge further and get a master degree, or go straight into industry.





## AUTOMATION

Type of study:  
**BSc**

Form of study:  
**FULL-TIME**

Length of study:  
**3 YEARS**

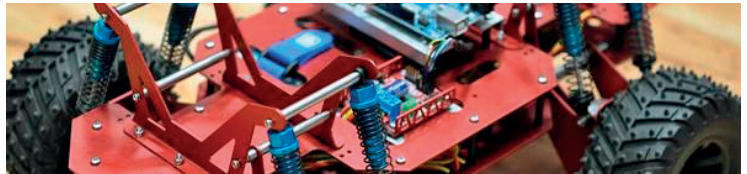
We meet automation in the true sense of the word in industry, agriculture and increasingly in everyday life. However, implementation of automation requires many experts in these new and fast developing technologies. Professionals who have not only good knowledge of the field, but are also able to apply new things. Join us and become one of them!

### WHAT WILL WE TEACH YOU?

Come to us to study a unique study programme. You will gain necessary theoretical knowledge which you will keep building on during your study. But the theory will only be the beginning. You will be verifying and testing everything in our laboratories as well as during extensive experience connected to our partners in industry. You can even bring in your own projects, which you will work on as part of your study, for example in the form of your bachelor thesis.

### WHAT WILL YOU BECOME?

You will become very familiar with terms such as measurement, controlling, feedback, controller, PLC, mechatronics or robotics. With the newly acquired knowledge and skills you will easily find a job in many technical, research and development positions in production, technology and design companies.



# BACHELOR'S DEGREE PROGRAMMES

## PROFESSIONAL STUDY PROGRAMMES

### APPLIED ELECTRICAL ENGINEERING

Type of study:  
**BSc**

Form of study:  
**FULL-TIME**

Length of study:  
**3 YEARS**

Are you interested in microprocessors, electronics, sensor networks and communication systems? The professional study programme of Applied Electrical Engineering is focused on practical verification of knowledge, design, development and application of modern electronics. While still a student, you will be able to test your skills during a three month professional internship in industry.

#### WHAT WILL WE TEACH YOU?

Modern applications of electronics, microprocessor and sensor technology, automation and networks will be persisting trends for a long time. You will be able to immediately verify your knowledge in end-product applications. At the same time the study will guide you through all phases of electronic systems development from design to production. This production is carried out in a prototype laboratory and other labs which have been specifically designed according to the renowned technology companies.

#### WHAT WILL YOU BECOME?

A part of the study is a semestral three-month professional internship in one of our partner companies. Therefore before you finish your studies you will already be a sought after specialist in a technical field with the possibility of finding a career in various branches of industry or project companies. The study will provide you with quality education and skills in the fields of electronics and microprocessor technology, which are widely used in production and service industries.



### WEB TECHNOLOGY

Type of study:  
**BSc**

Form of study:  
**FULL-TIME  
PART-TIME**

Length of study:  
**3 YEARS**

Are you interested in the world of web applications and services? The professional study programme Web Technology aims at acquiring practical knowledge of design, development and applications of modern web solutions. Within the study, you will test your skills during a three-month-long internship realised in an actual company where you will be solving real life projects.

#### WHAT WILL WE TEACH YOU?

Thanks to the acquired knowledge and skills, you will have a good understanding of modern applications based on web technologies, design and implementation of web solutions, analysis of user needs and system requirements, solutions of web application architecture, semantic data processing, web products testing, or design, measuring and evaluation of user experience.

#### WHAT WILL YOU BECOME?

The study of Web Technology allows you to succeed in the job market in one of today's most progressive fields. Thanks to your education, you can become a web application developer or tester, web services consultant, web designer, copywriter, web analyst, or a user experience designer. The comprehensive preparation for career in this area of study will enable you to choose your future job in the online world according to your liking.



# MASTER'S DEGREE PROGRAMMES

## INFORMATION TECHNOLOGY

Type of study:  
**MSc**

Form of study:  
**FULL-TIME**

Length of study:  
**2 YEARS**

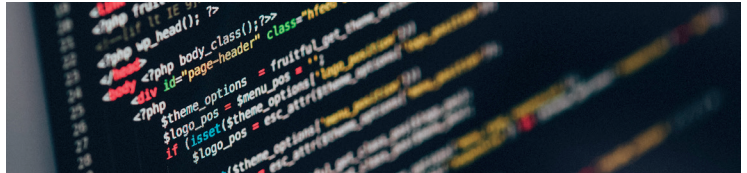
During the study of a follow-up master study programme Information Technology, you will become a university educated expert in IT with many great career opportunities.

### WHAT WILL WE TEACH YOU?

Study of this programme will help you become a university educated specialist who easily finds a job, especially in the fields of software, database and information systems development. Other employment can be found in the fields of operation systems and their administration. You can work in companies dealing with software development, industrial companies, services, and other areas which use applied information technologies.

### WHAT WILL YOU BECOME?

Study of this programme will prepare you for various IT related positions. Thanks to your knowledge of theoretical informatics, mathematical statistics, areas of operation, and information systems including their administration, you will be able to use your skills mainly in positions of development and control officers, administrators of information and software systems, research workers or university staff etc.



## COMMUNICATION AND RADAR SYSTEMS

Type of study:  
**MSc**

Form of study:  
**FULL-TIME  
PART-TIME**

Length of study:  
**2 YEARS**

Communication, radar and sensor technology has become an integral part of our lives. We encounter communication and radar/sensor systems daily not only in „intelligent households“, mobile communication and free time activities, but mainly in the areas of land and air transport safety or compound security. Become an expert who dictates new trends and shapes the future in this modern field.

### WHAT WILL WE TEACH YOU?

In the field of communications and radars you will gain unique knowledge in the areas of aircraft and other types of object detection and tracking. With this information, you will be able to design communication and location systems and their components. You will get familiar with the principles of localization using satellite and ground-based navigation systems. You will be verifying your knowledge with modern laboratory equipment which is used by technological companies during their systems development and analysis. During your study you will meet many experts with a practical background, and you will have an opportunity to choose the topic of your diploma thesis in cooperation with a company, or according to your involvement in research projects.

### WHAT WILL YOU BECOME?

The study will offer you a wide range of opportunities in the field of safety and sensor technology with the emphasis on application in communication and radar systems. The acquired expertise will open the door to employment in technological companies oriented on communication technology development or the area of object locating/tracking.



# MASTER'S DEGREE PROGRAMMES

## AUTOMATIC CONTROL

Type of study:  
**MSc**

Form of study:  
**FULL-TIME**

Length of study:  
**2 YEARS**

Join us and become an expert in the field of automation, mechatronics, robotics and artificial intelligence. These fields are experiencing rapid development, and after graduating you will be able to choose from a wide range of attractive job positions.

### WHAT WILL WE TEACH YOU?

During the study you will gain knowledge and experience in the areas of control and regulation, mechatronics, artificial intelligence, identification and modelling, industrial robots, industrial control systems and control systems design. Within the specialization you will be selecting courses such as industrial networks, cybernetic safety, optimization or signal processing. You will spend a lot of time in laboratories, where you will be able to apply your knowledge to solve real engineering tasks. Among your teachers will also be experienced specialists working in leading industrial companies. You can even bring in your own projects, which you will be developing during the study, for example in the form of a diploma thesis.

### WHAT WILL YOU BECOME?

The acquired knowledge of modern automation, control and information systems will help you keep up with the fast development in this field. Graduating from this study programme will secure you a career in many technical, development and research positions, and you will be working in production, technology and design companies.



# DOCTORAL STUDY PROGRAMMES

## ELECTRICAL ENGINEERING AND INFORMATICS

Type of study:  
**PhD**

Form of study:  
**FULL-TIME  
PART-TIME**

Length of study:  
**4 YEARS**

During the study of the doctoral study programme you will become a highly qualified specialist who will be able to solve complex scientific and technical tasks. You will learn to work here as a team-member, but individual tasks also await you.

### WHAT WILL WE TEACH YOU?

Study of this programme will prepare you for an independent creative work and solving complex scientific research tasks based on deep knowledge both individually or within a team.

### WHAT WILL YOU BECOME?

Study of this programme will prepare you for job positions of a highly qualified specialist in fields of information, communication or control technologies with focus on theoretical and experimental research using modern mathematic methods and advanced research techniques including means of computer technology. You will also be able to develop applications of research results and implement them in practice. You will find employment in basic and applied research and within the industry.



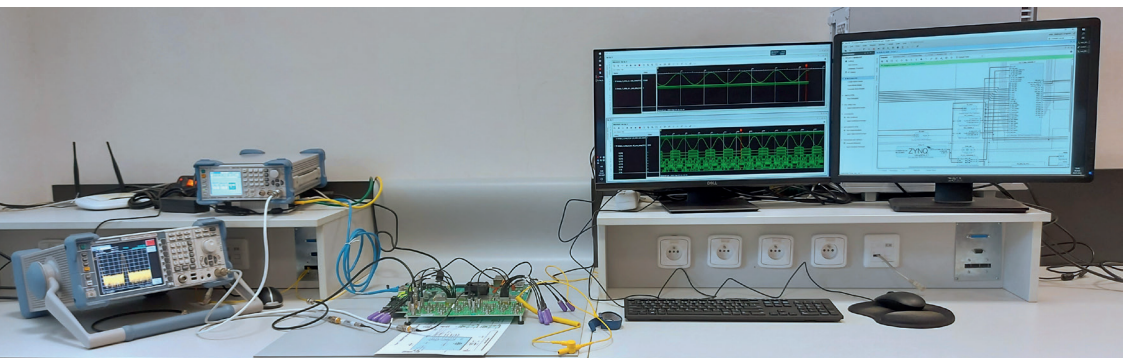
## WHY STUDY AT FEI?

- / we are a dynamically developing faculty educating professionals in perspective fields
- / we have a modern and technologically advanced background both for education and scientific activity
- / we cooperate with several commercial companies on both national and international levels
- / we lecture in an engaging manner at the Faculty
- / we organise attractive study programmes with a great deal of variability, creating space for self-realisation and self-specialisation
- / we offer the possibility of passing internationally recognised and certified exams during your studies
- / we facilitate a whole range of excursions to major technology companies during your studies
- / we care for and support talented students in achieving excellence
- / we prepare experts for vacancies in the global labour market
- / we enable students to complete part of their studies at foreign partner universities across Europe
- / we work with students in a friendly and collegial environment and maintain a personal approach toward each person

## ADMISSION PROCEDURE

BACHELOR'S DEGREE PROGRAMMES  
DEADLINE FOR APPLICATIONS / 31. 5. 2023

MASTER'S DEGREE PROGRAMMES  
DEADLINE FOR APPLICATIONS / 30. 6. 2023



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