SPECIALITIES IN THE FIELD OF COMPUTER ENGINEERING

3,5 YEARS (7 SEMESTERS) OF FIRST DEGREE ENGINEERING STUDIES

SPECIALITIES:

- Computer Game Development Engineering
- Artificial intelligence in engineering
- Database engineering
- Web technologies engineering
- Cybersecurity and computer networks engineering
- Information systems engineering

**STUDIES ARE CONDUCTED
IN 🇵🇱 OR IN 🇬🇧**

VISTULA
UNIVERSITY

SPECIALISATION: COMPUTER GAME DEVELOPMENT ENGINEERING

Poland is one of the leaders in computer games development. The video game industry is a rapidly growing sector and its prospects are excellent. Consequently, there is a growing demand on the market for qualified specialists in this field. If you are creative, you have interesting, engaging ideas for new games, and you want to develop in this area, then the Computer Game Engineering specialty is just for you. During your studies, you will gain both theoretical knowledge and practical experience in designing, developing and integrating computer games.
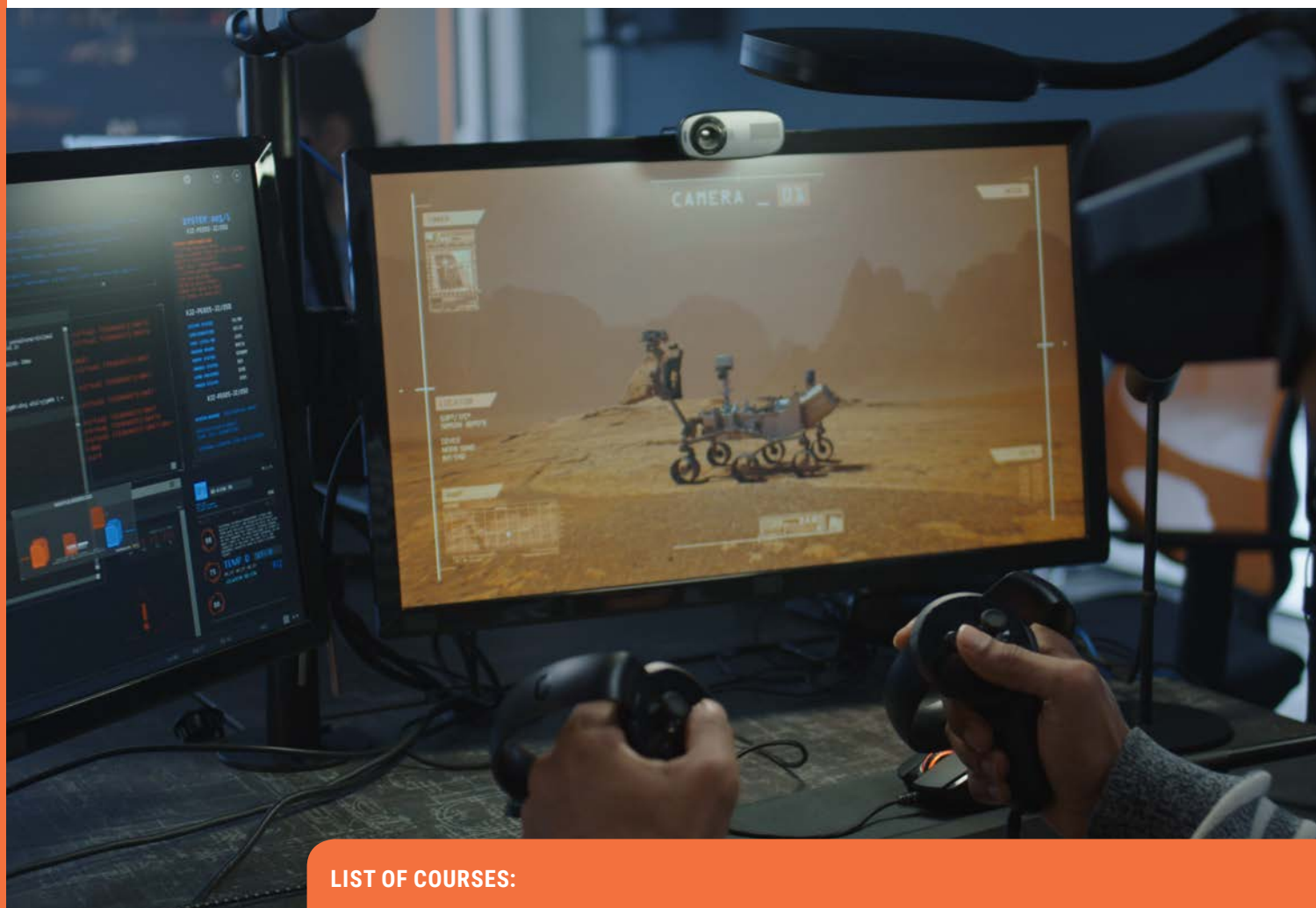
LIST OF COURSES:

- Design methodology for computer games,
- Designing computer games,
- Prototyping game mechanics and managing a team assignment project,
- Designing and balancing complex games with dynamic gameplay,
- Designing and programming a multiplayer for an assignment project,
- Production and publication of computer games.

You will acquire theoretical knowledge and practical experience in designing, developing and integrating computer games.

POSSIBLE CAREER POST-STUDIES:

- graphic designer and illustrator,
- game developer,
- self-employment.

SPECIALISATION: ARTIFICIAL INTELLIGENCE IN ENGINEERING

Artificial Intelligence is one of the most important technologies of the future. It has been part of our lives for years, but advances in computing power, availability of huge amounts of data, as well as development of new algorithms, have led to great breakthroughs in this field. Machines are capable of displaying human skills, such as: reasoning, learning, planning, and creativity. Artificial Intelligence is predicted to change virtually all aspects of our lives and of the economy. If you want to link your career with this area of knowledge, then the Artificial Intelligence and Its Applications in Engineering speciality is just for you. You will learn the theoretical aspects of Artificial Intelligence, with an emphasis on methodologies and techniques used in engineering and management. You will gain practical experience in using the acquired knowledge in practical projects.

LIST OF COURSES:

• Artificial Intelligence in management,
• Expert systems and their applications,
• Fuzzy logic and its applications,
• Machine learning and its applications,
• Neural networks and their applications,
• Robotics.

You will learn about the theoretical aspects of artificial intelligence with an emphasis on methodologies and techniques used in engineering and management, and gain practical experience in using the acquired knowledge in practical projects.

CAREER AFTER STUDIES:

• Big Data specialist,
• robotics engineer,
• artificial intelligence engineer.

SPECIALISATION: DATABASE ENGINEERING

You will gain both theoretical knowledge and practical skills in designing, developing, and integrating databases in information systems. You will learn SQL programming and the methods of data exploration and analysis. This sub-major is taught in collaboration with ORACLE and Microsoft.
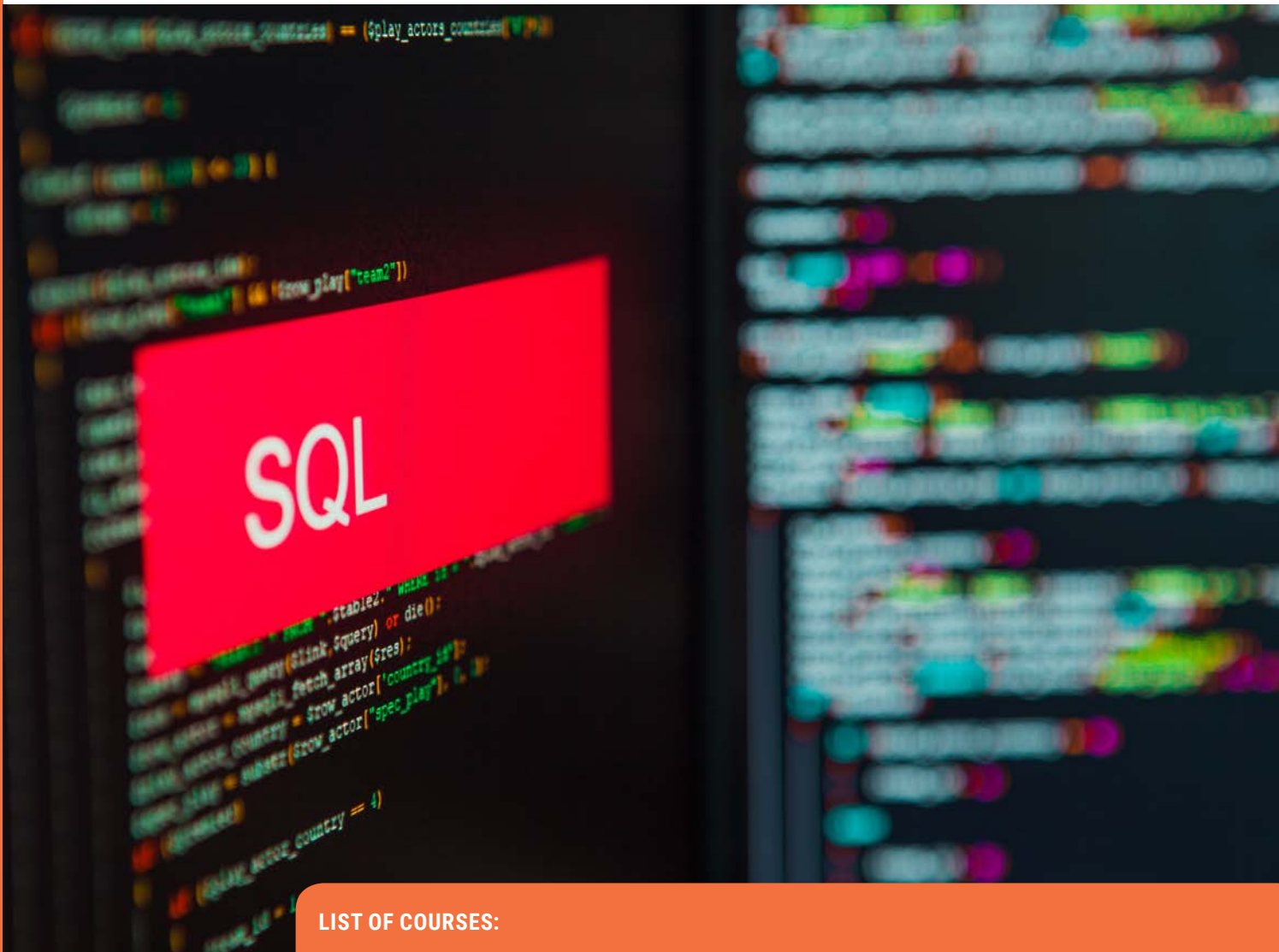
LIST OF COURSES:

- Database design,
- Database server administration,
- Web service design for databases,
- Data warehouse design,
- Advanced Database design,
- Methods of exploration and analysis of business data.

CAREER AFTER STUDIES:

- data analyst,
- data architect.

SPECIALISATION: WEB TECHNOLOGIES ENGINEERING

In this sub-major, you will learn how to design and integrate modern Internet applications to meet business and public administration needs. You will learn the tools of advanced Internet technologies, such as HTML5, CSS 3, Ruby on Rails, or JavaScript, as well as the techniques and tools for testing web and mobile applications. This sub-major's business partners are Microsoft and CISCO Systems.

LIST OF COURSES:

- Design of multi-tier Internet applications
- Advanced Internet Technologies
- Designing corporate portals
- Website design for multimedia
- Website design for mobile devices
- Techniques and Tools for testing web applications and mobile applications

CAREER AFTER STUDIES:

- graphic designer and illustrator,
- specialist in the Internet network,
- web developer.

SPECIALISATION: CYBERSECURITY AND COMPUTER NETWORKS ENGINEERING

This sub-major will introduce you to the world of designing and implementing ICT service infrastructure (current and next generation). You will learn aspects of switching and routing technologies in local networks, ICT systems and network safety, network technologies, wide area networks, and VoIP communication. You will learn how to design local network solutions and manage network infrastructure. CISCO Systems is this sub-major's business partner. Additionally, you will learn Protocols and tools for network security.
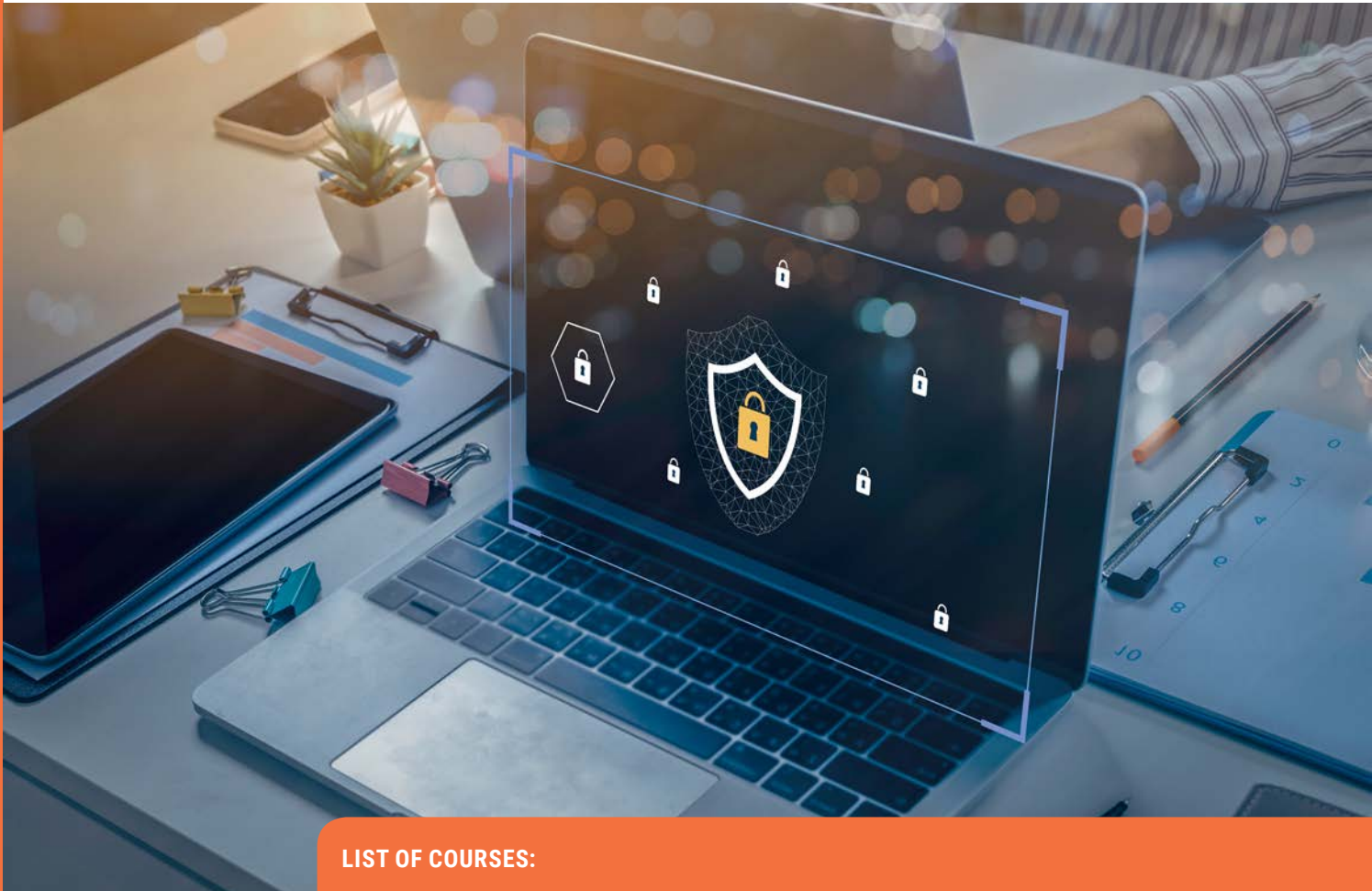
LIST OF COURSES:

- Switching and routing technologies for local area networks,
- Network infrastructure management,
- Wide area network technologies,
- Security of systems and telecommunication networks,
- Protocols and tools for network security,
- Identification and analysis of threats of communication and electronic transactions.

CAREER AFTER STUDIES:

- network and Internet specialist,
- White Hat Hacker,
- cybersecurity specialist.

SPECIALISATION: INFORMATION SYSTEMS ENGINEERING

This sub-major will teach you the latest IT methods and tools, aimed at supporting the design of complex IT systems with high performance and quality requirements. You will acquire knowledge of artificial intelligence and robotics. You will learn how to implement IT systems, and map and model business processes. This sub-major is taught in collaboration with ORACLE and Microsoft. Additionally, it will teach you how to combine curiosity, precision, and logical thinking with vast knowledge and the practical skills to become a great software tester. You will gain knowledge in the area of software verification and validation, and learn how to detect irregularities in software and prevent its malfunctions. You will be able to properly identify malfunctions and their causes and ensure the highest quality of software (Quality Assurance), as well as to measure and control quality (Quality Control). Furthermore, the programme will teach you how to measure non-functional features of software (e.g. efficiency, reliability).
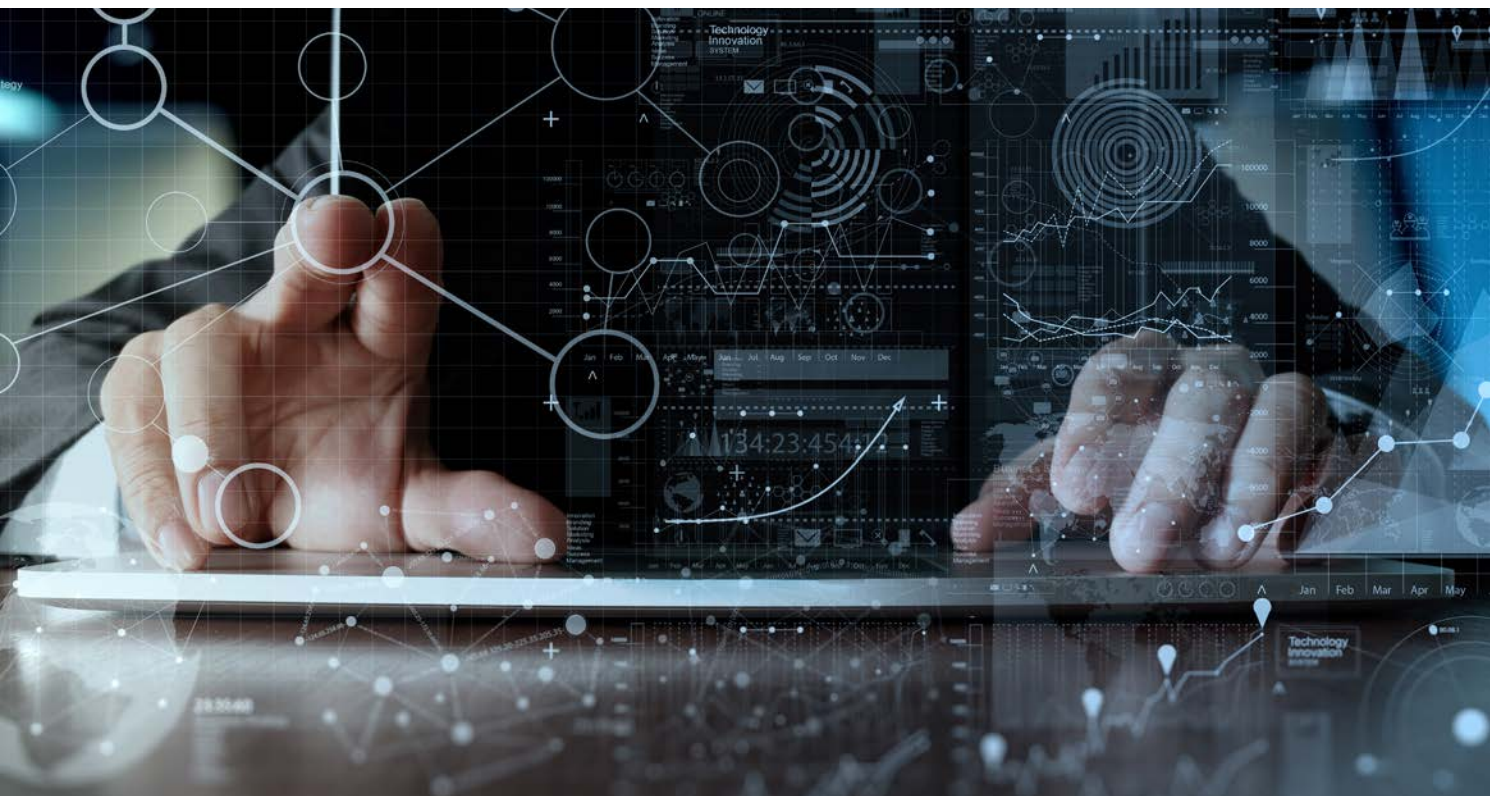
LIST OF COURSES:

• Design and development (maintaining) of application software,
• Analysis and modelling maintenance of business processes,
• Technologies for team work,
• Techniques and tools for automation of software testing,
• Software Engineering Tools and Methods,
• Methods of estimating the effects of IT investments.

CAREER AFTER STUDIES:

• quality controller and test specialist,
• software architect.

BUSINESS PARTNERSHIPS:

- Oracle
- Microsoft
- Asecco
- CISCO
- ICCSS
- IFS
- Olsonet
- Magnimind.

ACQUIRED COMPETENCES AND SKILLS IN COMPUTER ENGINEERING

ability to predict threats and supervise the processes of designing, implementing, testing and maintaining solutions for an engineering task

high level of technical communication in a multicultural environment

ability to work in a team, including a multicultural and virtual team

ability to select the methodology of solving engineering tasks and technology for the practical implementation of these solutions

defining engineering problems, as well as formulating and implementing their effective and ethical solutions

knowledge of the theoretical foundations of engineering activities

ability to use theoretical knowledge to solve practical engineering tasks

ability to plan your own work, your self-development and team development

AFTER COMPLETING YOUR ENGINEER'S DEGREE, YOU CAN CONTINUE YOUR STUDIES IN THE FOLLOWING SPECIALISATIONS DURING YOUR MASTER'S DEGREE:

1,5 YEARS (3 SEMESTERS) OF MASTER'S DEGREE PROGRAMME

- Applied data science
- Design and applications of wireless networks for internet of things
- Design and applications of mobile applications
- Cybersecurity and reliability of information and industrial systems

INTERNATIONAL OFFICE

address:
3, Stoklosy St., 02-787 Warsaw, 1st floor, room 122

phone: + 48 510 858 087
e-mail: admission2@vistula.edu.pl

COMPUTER ENGINEERING

LET'S MEET IN PERSON OR ONLINE

VISTULA UNIVERSITY

3, Stoklosy St., 02-787 Warsaw
tel.: +48 510 858 087

vistula.edu.pl

f @uczelniavistula

🐦 @uczelniavistula

📷 uczelniavistula

in uczelniavistula