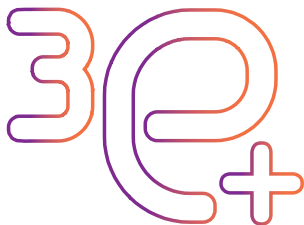


2023



SUMMER SCHOOL

3 weeks in magical Wrocław

10-28.07.2023



Wrocław University
of Science and Technology

Our Programme offers interactive small-scale courses. Our courses are designed to provide an intensive, in-depth look at your topic of study. As **3E+ is open to applicants from all over the world** you will engage in discussions with a unique group of peers!

Apart from lessons, you will get to enjoy our fun and exciting Social Programme! We offer City sightseeing tours, sport activities and all day trips outside the City of Wrocław. We arrange a variety of social events to help you get to know your colleagues and Poland better while having fun!

Why Wrocław?

- + one of the major academic centers in Poland
- + modern, open and dynamic city with rich history and culture
in the heart of Europe and in southwestern Poland, Wrocław is easily
- + accessible from many other major cities.





Why WUST?

- + one of the best technical universities in Poland
- + 23 817 students
- + 2 192 academic staff
- + 33 distinguished educational programmes, including courses taught in English and MBA programmes
- + Campus located in the city center

Why 3E+ Summer School?

- + 60 hours of specialized courses in a friendly atmosphere
- + 3 weeks of great experience
- + laboratory activities
- + 4 ECTS points
- + trips, events social activities
- + Polish language and culture course
- + participants from all over the world



How much does it cost?

- + **1200,00 euro**
- + **1100,00 euro** for students from partner institutions and UNITE!
- + Early bird (application before 05.05.2023)
1080,00 euro
1000,00 euro from partner institution and UNITE!
- + Application deadline 23.05.2023

What is included?

- + tuition + accommodation + welcome and farewell dinner
- + trips, events and social activities + welcome pack

...and not included?

- + airfare and visa's cost (if required)
- + insurance
- + living expenses

Early bird discount, reduction for students from partner institution and UNITE!



EACH YEAR WUST OFFERS SUMMER SCHOOL COURSES IN FACULTIES:

+ Faculty of Architecture:


Universal Design in Architecture

The course provide students with the skills to practically apply the principles of Universal Design and accessibility diagnosis both in public spaces and in the design of residential spaces considering individual or collective special needs, in particular people with disabilities and the elderly. Educating a new generation of designers representing a human-centered approach to design is one of the activities that bring us closer to realizing the idea of a civil society based on the principles of equal opportunities and non-discrimination. Summer school demonstrate the integrative role of Universal Design in the functioning of communities, by ensuring that as many people as possible can use architectural space independently and autonomously. Participants will experience architectural barriers through personal experience during simulation workshops.

+ Faculty of Fundamental Problems of Technology:

Computer-assisted scientific experiments

The development of new, sophisticated experimental setups requires the integration of many independent components into one, complex device. This task could be easily done with the use of so-called virtual instruments, that control all hardware devices from one software platform. Virtual instruments could be additionally assisted with electronic appliances, composed of components that nowadays are often available in a form of evaluation boards and modules. Unlike commercial laboratory equipment, custom-built devices provide unique features, that allow for exploration of unknown areas of natural sciences. In this course, we present the concept of virtual instruments and provide basic knowledge on electronics and electrical measurements.



+ Faculty of Chemistry:

Green Fuels and Environment

This course aims to provide participants with information on fuel properties, with particular emphasis on biofuels, and the impact of their use on environmental protection. The course will provide knowledge related to fuel economy - types of fuels, standards, the ability to manufacture and store fuels, etc.

The projects implemented by the participants of the course will be related to both the characteristics of biofuels and technologies for their acquisition, taking into account the latest trends in this field, as well as the use of membranes and supercapacitors.

Students will work in small teams and the results of their work will be presented during the course and evaluated by the teacher at the final meeting.

+ Faculty of Pure and Applied Mathematics:

Introduction to Data Science with Python

According to CareerCast, Data Scientist is one of the best job of recent years. It requires a unique blend of skills from three disciplines: mathematics computer science and domain, which is very attractive to many employers. Strong computer science skills and different approach to data analysis, based on scientific method, is what makes Data Scientists different from statisticians. At the same time, Python is becoming a language of choice for many data scientists, next to languages like Scala and statistical packages like R. It is also the first programming language many people learn, no matter their age. This course gives you a chance to quickly build up your Python skills, learn basics of how data scientist works and apply all this to a project on a real, large data sets.



+ Faculty of Mechanical Engineering:

Modern manufacturing from state of art processes to automation and Industry 4.0

Robotization and automation of processes, remote operation of machines, devices and sensors are issues directly connected with the current trends of a modern manufacturing. During the classes, students will learn about following contemporary solutions applicable in modern production systems: programming of industrial robots that perform advanced joining, forming and other processes related to engineering materials; technology development for different joining processes of metals and application of selected technological tests for quality assessment, using industrial robots and manipulators for coating technologies by thermal spraying; methods, design, production and post processing of parts by 3D printing technology; advanced programming of automation elements used in industrial networks and communication interfaces.

+ Faculty of Information and Communication Technology:

Designing secured and reliable computer networks

During the course, students will be introduced to the best practices of designing reliable and redundant computer network topologies. The aim: the creation of networks resistant to various types of failures. Redundancy issues in the second and third layer will be raised. Various methods of computer networks management will be presented. First, the standard methods of configuration and IOS systems management. Secondly, modern methods of programming SDN networks will be practiced, during which students will train the centralized configuration of devices using Python scripts and the API of IOS systems. Due to the increasing popularity of computer networks, the group of people interested in breaking into them is also growing. Therefore, the next part of the course is devoted to securing networks and network devices against attacks and overload. The final part will be devoted to monitoring and analyzing network traffic and detecting threats or attacks.



+ Faculty of Management:

Sustainability and Problem-Solving with Innovations

The 21st century is marked by an ever-growing need for sustainability and problem-solving with innovations. Technology has revolutionized our lives, work, travel, communication, and more. In every field, be it engineering, management, entrepreneurship, education, research, or politics, the expectation is to do more with fewer resources. This is where Design Thinking comes in. It is a tool that can be applied at any level, in any role, and in any organization to achieve sustainable and innovative solutions. The 3E Summer School offers this course, "Sustainability and Problem-Solving with Innovations", that introduces you to the concept of Sustainability, Problem-Solving, The DNA of new innovation, and Design Thinking. The course is designed in such a way that it Guides you through each stage of the process, from problem identification to prototyping and testing, and equips you with the skills to apply it to a practical, feasible project.

+ Faculty of Environmental Engineering:

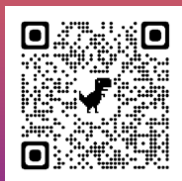
Thermal comfort and renewable energy for low energy buildings

The main goal of the course is to teach the students the holistic approach to the design of the low energy demand buildings with special emphasis on the utilisation of renewable energy in building installations, application of heat recovery systems and maintaining thermal comfort of users. The course focuses on thermal comfort and heat production (to supply heating and domestic hot water systems) for low energy buildings. The subject covers solutions based on sustainable design including for example solar thermal collectors, air-to-water heat pumps, energy recovery heat exchangers in air handling units, etc. Students will participate mostly in active forms like laboratory, calculus and simple project. All practical exercises will be preceded by short lectures.



BE A PART OF AN UNFORGETTABLE EXPERIENCE
AT ONE OF THE BEST TECHNICAL UNIVERSITIES IN POLAND
- WROCŁAW UNIVERSITY OF SCIENCE AND TECHNOLOGY
JOIN US FOR A SUMMER OF 3E+!

ENVIRONMENT + ENERGY + ELECTRONICS



Feel free to contact us at :

events@pwr.edu.pl

www.summerschools.pwr.edu.pl



@WrocławTech