



Wrocław University
of Science and Technology

30+

SUMMER SCHOOL

BLENDED EDITION

2 weeks in magical Wrocław
and 1 or 2 online course

Our Programme offers interactive small-scale courses. They are designed to provide an intensive, in-depth look at selected 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,
- + open and dynamic city with rich history and culture in the heart of Europe,
- + Wrocław is easily accessible from many other major cities.



WHY **WROCLAWTECH?**

- + one of the best technical universities in Poland
- + over 22 000 students
- + over 1 500 academic staff
- + 35 distinguished educational programmes, in English
- + Campus located in the city center





WHY **3E+** SUMMER SCHOOL?

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

HOW MUCH DOES IT **COST?**

+ 1200 euro (special discount for Unite! students, partner institutions and early bird registration applicable)

Follow our website for the details!

APPLY NOW

EACH YEAR WUST OFFERS SUMMER SCHOOL COURSES IN FACULTIES:

+ Faculty of Management

Virtual Identity Management

8-26.07.2024

Youth aged 18 to 35 form the most extensive user base of digital media, especially various social networks. At large, these users can be categorized into three groups, (i) users who are pursuing higher education at colleges or universities (age: 18-23 years), (ii) users who are in the early years of their professional careers (age: 23-28 years) and (iii) users with professional experience looking to advance their career. They use platforms such as Facebook, LinkedIn, WhatsApp, Twitter, YouTube, and others to engage in personal, social, and professional activities. They are forming their virtual personalities. Statistics show that these users spend over 2 hours per day online, but the return on this time invested by them is still a vague area. This course is aimed at students pursuing higher education to build careers in their field. The course guides them to consider the personal, social, and professional aspects of their lives and use it to enhance career opportunities. The course structure allows the students to plan for the upcoming phases of their career, starting from their first employment and going on to utilize their virtual personalities to progress further.

+ Faculty of Chemistry

Alternative Fuels

8-26.07.2024

This course aims at providing foreign students with basics knowledge and skills in the field of renewable energy. It offers a few specialized courses, including lectures, laboratories, and seminars, covering a wide range of topics such as understanding problems of manufacturing and using crude oil origin fuels, natural gas, and biofuels, production of high purity hydrogen and biogas, physical and chemical properties of biofuels and their production methods in the industry. During the laboratories and seminars, students are involved in some experiments and problem solving activities associated with the subject of the course.



+ Faculty of Information and Communication Technology

Designing secured and reliable computer networks

8-26.07.2024

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, including 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 Architecture

Universal Design in Architecture

8-26.07.2024



The course provides 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 demonstrates 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.



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European
Funds
Knowledge Education Development



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APPLICATION FORM

+ Faculty of Architecture

Innovative Design Studio: Forming the Public

Architecture with Landscape in the Built Environment

8-26.07.2024

The "Innovative Design Studio: Forming the public architecture with landscape in the built environment" focuses each time on one of the major cities in Central and Eastern Europe and studies medium-size urban sites. The design theme focuses on the bionic green architecture of the multifunctional conference and exhibition pavilion that ensures harmony between built and the natural environment, maintaining ecological balance, and achieving the sustainable development. Students will be dealing with various themes (e.g., spatial, energy, societal, acoustical), sharing insights and perspectives about the multifaceted future challenges of public architecture within a given context. Students will work together also in designing part of their own study pathway by means of workshops, lectures, excursions, and other (extra) curricular activities.



+ Faculty of Mechanical Engineering

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

8-26.07.2024

Robotization and automation of processes, remote operation of machines, devices and sensors are issues directly connected with the current trends of a modern manufacturing. The idea of the course is to present the current state-of-art manufacturing processes, followed by automation and robotization and Industry 4.0 approach. During the classes, students will learn about following contemporary solutions applicable in modern production systems: (i) programming of industrial robots (Fanuc, Yaskawa, Kawasaki) that perform advanced joining, forming and other processes related to engineering materials, (ii) technology development for different joining processes of metals (preparation of raw materials, selection of feedstock materials and process parameters, etc.) and application of selected technological tests for quality assessment, (iii) using industrial robots and manipulators for coating technologies by thermal spraying methods (twin-wire arc spraying, plasma spraying, cold spraying), (iiii) design, production and post processing of parts by 3D printing technology, (iiiii) advanced programming of automation elements (PLC controllers, network blocks, actuators and sensors) used in industrial networks and communication interfaces.

+ Faculty of Pure and Applied Mathematics

Introduction to Data Science with Python

8-26.07.2024

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 Electronics, Photonics and Microsystems

SMART ENGINEERING WITH LABVIEW



8-26.07.2024

Have you ever wanted to write an advanced software within a few hours? How to build a complete application for hardware control or data acquisition in one day? Is there a programming language which may be learnt without memorizing instructions and syntax? Find the best solution to these and many other engineering tasks by learning LabVIEW! This programming environment developed by National Instruments (NI) has been used worldwide to develop automated research, validation and production test systems, and many other challenges of today's engineering. LabVIEW uses graphical symbols which are easy to learn and understand, and therefore it is a very efficient tool for building versatile applications, especially by engineers who are non-professional programmers. Take part in this summer course, learn LabVIEW from zero and check out that programming may be simple, easy... and smart!



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APPLICATION FORM

+ Faculty of Electrical Engineering

ADVANCES IN ELECTRIC POWER SYSTEMS

Department of Electrical Power Engineering Provides an advanced education in electrical power engineering. It gives graduate students the course, the knowledge and the skills they need to make sound decisions in a rapidly changing electricity supply industry. It gives a sound understanding of the principles and techniques of electrical power engineering. Give a broad knowledge of the issues and problems faced by electrical power engineers. It gives a solid working knowledge of the techniques used to solve these problems. It educates students with advanced research skills necessary to address current and future technological advancements. Advances in Electric Power Systems is the course devoted exclusively to a subject of increasing urgency to power systems operations and planning. Created for students, practicing engineers, and post-grads concerned with power systems planning and load forecasting, this summer course brings together contributions from many of the world's foremost technology in the field who address a range of critical issues, from forecasting power system load, power system state estimation and stability analysis to post-storm service restoration times.



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+ Faculty of Environmental Engineering

Net-zero emission buildings - maximum energy efficiency and comfort for users

(DAAD) Funding opportunity

1-26.07.2024

Currently, the building design sector is facing a number of challenges for engineers related to the European climate neutral policy, as well as the climate change. The proposed course meets these challenges. The main goal of the course is to present the holistic approach to the design of the net-zero energy buildings with special emphasis on the passive solutions, utilisation of renewable energy in modern building installations, application of heat recovery systems and maintaining thermal comfort of the users. The subject covers solutions based on sustainable design including solar thermal collectors, air-to-water and ground-source heat pumps, energy recovery heat exchangers in air handling units, etc. Students will have an opportunity to measure the air and physical parameters with the high quality laboratory equipment and familiarise with the range of engineering tools (EDSL TAS, PVGIS, TRNSYS and others) for building and installations' energy simulations.

Students will participate mostly in active forms like laboratory, calculus and simple projects. All practical classes will be preceded by short lectures.



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+ Faculty of Environmental Engineering

On the renovation wave - sustainable

thermomodernisation - toward climate neutral cities

1-26.07.2024

This summer school is an international program which aims to provide students with the knowledge and skills needed to deal with the modernization solutions in existing buildings in terms of lowering energy demand and its impact on the environment. The topic of the course is in line with the EU Renovation Wave Strategy and policy toward climate neutral European cities. The emphasis will be placed on historic buildings, technical and legal issues and limitations in such buildings, the technical solutions that can be applied to lower energy consumption, including unconventional techniques like the utilization of greenery on the building envelope. The topic will focus on engineering calculations and computer simulations crucial to assess the level of energy usage, techniques and materials applied to lower energy demand. Moisture condensation issues, thermal comfort of building users, choosing of energy source and possibilities of applying renewable solutions will be discussed.

The course is based on practical classes and applies different forms: mainly projects, calculations and laboratory classes. Theoretical knowledge will be presented during the short lectures. The emphasis will be placed on close cooperation among participants.

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- 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

