

Taiyuan University of Technology (TYUT) & Otto von Guericke University (OvGU) First Summer School Detailed Schedule

Date: August 4th to August 18th, 2024

Day 1: Welcome to Magdeburg

Hainan Airlines Beijing-Berlin flight, arrival in Berlin at 6:30, airport transfer to Magdeburg and check-in at the hotel. Afternoon sightseeing along the Elbe River and welcome dinner in the city center.

Day 2: Opening Ceremony

Hello, OVGU! After the opening ceremony, we will take a stroll through Otto von Guericke University, familiarizing ourselves with the various faculties and campus.

Day 3: What's the Connection Between Arctic Sea Ice and Mathematics?

Who would think they'd find themselves standing between icebergs and polar bears while studying mathematics? Mathematicians Carolin Mehlmann and Thomas Richter from Otto von Guericke University did just that. These two mathematicians from Magdeburg spent eight weeks on the "Polarstern" research vessel in the Arctic and then headed to the North Pole. They collaborated with other scientists on a sea ice project, measuring sea ice-ocean-atmosphere coupling effects on Antarctic Sea ice distribution. Let mathematician Carolin Mehlmann lead you on a unique mathematical journey through Arctic Sea ice.

Elbedome Virtual and Real Experiment Laboratory

Located in Magdeburg, the Fraunhofer Institute for Factory Operation and Automation (IFF) focuses on developing technologies and finding solutions to help businesses enter the digital, networked, and intelligent working world. The so-called Industry 4.0 is a major social trend and an important factor in corporate competitiveness, implemented in specific research projects at the Virtual Development and Training Center (VDTC).

Day 4: Jahrtausendturm Magdeburg-The Millennium Tower

This tower has it all: from hand-ax to X-Ray telescope, from cave paintings to computed tomography – everything that has moved the human race in technical terms over the last 6.000 years – here it comes alive. 250 exhibits and representations on 5 exhibition levels invite you to experience, understand and interact. Lovingly also called „The smartest Tower in the World“ its 20 meter high dome-hall is able to hold events for up to 500 guests.

Day 5: Particle Journey

Explore the mysteries of particles, uncover the mystery of fluidized bed technology! On the last day of the camp, students will embark on a journey into the mysterious world of particle technology at the Otto von Guericke University's Process and Systems Control Institute, gaining insights into the technology behind products such as powdered milk, instant coffee powder, and popcorn. From theoretical exploration to hands-on practice, students will gain a deep understanding of the basic principles of fluidized bed technology, experience the operation of production equipment firsthand, and even experience simulation processes. This will be a unique particle journey, allowing you to experience the charm of science and master the latest technology.

Day 6: Exploring the Mysteries of Learning and Memory

The Leibniz Institute for Neurobiology, located in Magdeburg, is a German neuroscience research institute focused on learning, memory, and neural plasticity. Established in 1992, the institute is part of the Leibniz Association. On this day, scientists from the institute will showcase the latest research techniques and advancements, exploring the mysteries of memory.

Day 7: Exploring Autostadt - Wolfsburg

This is a world of automobiles. Autostadt is not only a communication platform for Volkswagen Group headquarters but also an exciting and diverse exploration site. Explore the 28 hectares of parkland and lake landscapes, delve into the history of automobile manufacturing in the automotive museum. You can even test drive the latest cars.

Day 8: Traverling in Wernigerode

Wernigerode is a recognized resort in the Harz region, also known as the colorful city by the Harz river. The Harz region represents mythology, legends, and fairy tales. Take a ride on the small train through the entire city, Wernigerode welcomes guests to stroll through the old town, with its historic half-timbered houses. Activities in the Prince's Stables or in the city's alleys always attract tourists. After visiting the castle or strolling through the aviation museum, various cafes and restaurants await.

Day 9: STIMULATE Research Center

The base is jointly established by Otto von Guericke University, Siemens Healthineers, and the STIMULATE Association. The goal is to develop new, patient-friendly, high-quality, and specially needed diagnostic and treatment procedures for societal diseases such as oncology, neurology, and cardiology. For this purpose, healthcare professionals identify the needs of healthcare,

interdisciplinary teams research and develop customized solutions, which are then tested and integrated into patient treatment.

Day 10: OvGU Formula Student Racing Club

Formula Student is an international student design competition based on competitions organized by the Society of Automotive Engineers (SAE). Teams from around the world are tasked with designing a single-seat formula-style race car with either an electric or internal combustion engine and producing a prototype car that can be driven at any time. Teams can also choose to implement autonomous driving functions in the vehicle, thereby participating in the Student Formula Driverless Competition. To gain rich experience in automotive design and production as a supplement to learning, students will receive a realistic scenario. This includes developing and producing prototypes for amateur racers and then moving on to small-scale production.

Day 11: The Production of Vaccines or for Gene and Cancer Therapies - How Is It Done?

Producing vaccines or developing modern gene and cancer therapies requires viruses. But how can these products be produced in sufficient quantity and high quality so that we can all afford vaccination and treatment? What are the challenges? What are the new manufacturing processes? Can innovations from basic research be implemented into industrialization? Discuss with our scientists how the Max Planck Institute Magdeburg contributes significantly to this.

Day 12: Dive into the World Robotics Challenge

The World Robot Olympiad was launched in 2004 with the aim of bringing young people together to nurture their creativity and problem-solving skills. Students from the Mathematical Engineering program at Otto von Guericke University have visited there many times. Do you want to experience the scene of the World Robotics Challenge with them? On this day, you can do just that, try to form your team, repair, build, program-like in the World Robot Olympiad...

Day 13: Closing Ceremony

After concluding the Particle Journey at the Process and Systems Control Institute, we will proceed to the closing ceremony. The closing ceremony will award students with a summer camp certificate, corresponding social practice credits from Taiyuan University of Technology, and outstanding campers will receive exquisite memorabilia.

Day 14: Berlin Free Tour - Hop On Hop Off-Sightseeing Tours in Berlin

This summer, we can explore the city of Berlin by open-top double-decker bus. Within 24 hours, we can freely tour the city and hop on and off at multiple stops

along the way. Additionally, we can embark on a 1-hour boat tour to explore Berlin from the water, visiting government districts and the city center.

Day 15: Return Journey Hainan Airlines Berlin-Beijing