FH University of Applied Sciences
TECHNIKUM WIEN

ANNUAL REPORT
2023/24

Contents

FOREWORD

Our university celebrated its 30th anniversary in the past academic year. To mark the occasion, we are taking a look back in this annual report not just at the past 12 months, but also at several milestones in the history of UAS Technikum Wien.

It is an impressive performance. Three decades ago, barely more than a single class started in the teaching space at what is now our neighbor, tgm. And today the university of applied sciences produces more than 1,000 alumni every year. A touch of the pioneering spirit of those early days carries us forward today.

We enjoy remembering the joint festivities in June, but with one eye firmly on the future. Four new degree programs and strong demand for our courses provide strategic direction. UAS Technikum Wien will continue to grow and fulfill its mandate for society and business. We provide a few insights in this annual report in the usual magazine format.

Vienna, November 2024

Barbara Czak-Pobeheim,
Managing Director

Florian Eckkrammer,
Managing Director

Managing Directors of UAS Technikum Wien: Barbara Czak-Pobeheim and Florian Eckkrammer

One Birthday, Two Parties

ANNIVERSARY. Our university celebrated its 30th anniversary with stakeholders and employees along with their families and friends.

30 JAHRE CHANGE OUR TOMORROW

Study programs started in 1994 at what is now UAS Technikum Wien with the goal of training experts in future technologies. 30 years later, Austria's leading university for technology and digitalization has produced more than 18,000 graduates and has more students than ever – just the occasion for two celebratory events at the UAS Technikum Wien main campus.

On June 12, Kari Kapsch, President of UAS Technikum Wien, Managing Directors Barbara Czak-Pobeheim and Florian Eckkrammer, and Rector Sylvia Geyer invited political representatives and major partner companies and institutions from the university of applied sciences sector to an anniversary party at Höchstädtplatz.

MINISTER IN ATTENDANCE AT CEREMONY

It goes without saying that Martin Polaschek, Federal Minister for Education, Science and Research, was among the well-wishers: "'Change Our Tomorrow' isn't just a suitable motto for UAS Technikum Wien on the occasion of its anniversary, it applies to the whole university of applied sciences sector. With its practical, application- and job-oriented academic training at a high university level, this institution has now been educating desperately needed experts for Austria as an economic hub for 30 years," said Minister Polaschek. "This is particularly true of the STEM subjects."

BEING ADAPTABLE

Kari Kapsch, President of UAS Technikum Wien, highlighted the economic and social significance of well-trained engineers in his opening address: "With our motto 'Change Our Tomorrow,' we are expressing that technical training equips people to make a meaningful contribution to shaping our future. Preparing sufficient

Early summer family festival at our main location

Left to right: Barbara Czak-Pobeheim, Kari Kapsch, Martin Polaschek, Sylvia Geyer, and Florian Eckkrammer at the party.

TECHNIKUM VIDEO

Students and alumni sent us their personal messages for 30 years, Change Our Tomorrow.

The video shows a wide selection

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numbers of these experts for Austria's economy and industry to the standard required in order to strengthen Austria's position as a technology and business hub in the long term is the primary goal of UAS Technikum Wien," explained the President. "We want to carry on striving for this in the future. We have both the specialist, educational expertise and a reputation as a leader in providing attractive technical degree courses to applicants across Austria."

FAMILY AND FRIENDS

Just a week before, on June 6, over 600 people came together for a laid-back open day for employees, their families, and their friends. Teaching, research, and administrative staff took the opportunity to give their children, partners, relatives, and friends a tour of the university and rounded off the day with live music from the band Großmütterchen Hatz. ▮

"We have a reputation as a leader in providing attractive technical degree courses to applicants across Austria."

KARI KAPSCH,
PRESIDENT OF
UAS TECHNIKUM WIEN

Three Decades of Innovation

MILESTONES. We take a look at the history of our university while highlighting major technical and scientific developments.

1994

On January 24, the authority is notified that Walter Skorpik, a qualified engineer from the company Kapsch, has been chosen as the first chairman of the newly founded Association for the Promotion of a University of Applied Sciences Degree Course in Electrical Engineering. Courses start being delivered in the space at tgm.

Netscape Navigator is launched. Austria declares itself in favor of joining the EU during a referendum.

2000

The Technikum is the first Viennese institution to achieve the new university of applied sciences status. Today, UAS Technikum Wien is the third largest of the 21 Austrian universities of applied sciences based on the number of students.

The Human Genome Project celebrates an initial "rough draft" of the human genome.

30 JAHRE CHANGE OUR TOMORROW

Graphic cards capture the mass market and *The Matrix* hits cinemas.

2001

The training options are expanded with degree programs that run alongside employment. 23 years later, around 50% of students are on degree programs that offer evening classes.

2003

As the first university of applied sciences in Austria, UAS Technikum Wien begins the transition to the new Bachelor's and Master's system, which is applied consistently. In the same year, the current Building A opens on Höchstädtplatz. Actively shaping change becomes one of the main characteristics of our institution.

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For the first time, more digital cameras are sold than analog cameras.

2005

With the Life Long Learning Academy, we set up our own continuing education institute. From the very beginning, the goal is to provide additional qualifications for UAS alumni and establish independent continuing education options and postgraduate courses. Today, it comes under the Technikum Wien Academy brand.

The first users find their way around with Google Maps and get lost on YouTube.

Apple opens its App Store.

2008

The second location is opened in the ENERGYbase passive office building in the Floridsdorf district of Vienna. This is where renewable energies degree programs are delivered to this day.

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OUR

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2013

The premises on Höchstädtplatz is significantly extended. Our main site is given its current design. With the slogan “More Room for Technology,” Building F and the new bridge to Building A are ceremonially opened.

The Industry 4.0 working group presents its final report with recommendations for digitalization.

2018

Five years after the opening of the Josef Ressel Center, the first doctoral program in Embedded Systems is launched in partnership with TU Wien. This is followed three years later by a second doctoral program in Tissue Engineering.

30 JAHRE
CHANGE OUR TOMORROW

Fridays for Future raises international awareness of climate protection.

© TU WIEN/HEISLER

2020

The coronavirus pandemic poses major challenges for courses, but they are superbly overcome. The first remote learning formats get started just a few days after the start of the first lockdown.

The COVID-19 vaccination from Pfizer and BionTech is approved in Europe and the US at the end of the year.

2021

For the first time, the number of female students reaches four figures. 1,000 budding engineers is a significant milestone in our ongoing efforts to promote diversity and inspire girls and women to pursue technical careers.

OpenAI introduces DALL-E machine learning for image generation and announces other applications of its GPT technology.

2024

Austria's university of applied sciences for technology and digitalization has produced 18,000 alumni to date. We currently have over 4,500 students enrolled on more than 30 Bachelor's and Master's degree courses that prepare them for top jobs in business and industry. UASTW nurtures partnerships with around 100 businesses. As a university of technology, our remit is to provide a broad spectrum of training and continuing education and we strive to produce the highest quality of graduates. In this way, we make a significant contribution to Austria's position as a technology and science hub.

Evolution of the logo:

FHE Fachhochschul-Studiengang Elektronik

VFH Verein zur Förderung von Fachhochschulstudiengängen

Fachhochschule Technikum Wien

Fachhochschule Technikum Wien

FH University of Applied Sciences Technikum Wien

“THE WAY YOUNG PEOPLE GROW WITH US MOTIVATES ME EVERY DAY”

INTERVIEW. Managing Director Barbara Czak-Pobeheim on her first months in the job and the future of UAS Technikum Wien.

You’ve been at the helm of UAS Technikum Wien since January 2024. What stands out from this time, and what are your highlights?
Barbara Czak-Pobeheim: It has been an eventful time. One of my first major projects was setting the budget for the 2024/25 academic year. We have received a clear mandate from the committee for the long-term expansion of the current 30,000 m² space – a plan that will have an impact on the next 20 years. The goal of this expansion is to further emphasize the campus feeling and position UAS Technikum Wien as a leader in technical in-person degree programs among Austrian universities of applied sciences over the long term. As the largest purely technical university of applied sciences, UAS Technikum Wien offers an attractive environment for students from Austria and abroad who are looking for first-rate technical training in the most

Barbara Czak-Pobeheim became Co-Managing Director of UAS Technikum Wien in 2024.

vibrant city in the world. A sustainable rise in student numbers compared to Austrian technical university competitors forms the basis for long-term growth and strengthening our position as the preferred training institution in the technical field.

Which strategic priorities have you identified?
A key concern was enhancing the UASTW women's network. The proportion of female students has risen to 25% in recent years, and almost 30% of our employees are now female. Our goal is to increase these figures even further. In addition to supporting women, I'm also passionate about personal development in general. That's why we launched the employer branding project and transformed the HR department. In future, HR won't just take on administrative tasks like payroll accounting and drawing up contracts. It will also act as a strategic partner for management.

So you have also undertaken organizational changes?
Yes, exactly. In addition to HR, the finance department and facility management will be more closely involved in the key processes of teaching. These departments don't just provide strategic support for management – they also provide support for the faculties in daily business. This creates freedom for the teaching staff to focus on their main tasks. Digitalization plays a key role in this. We will rely more on AI in future to automate processes and make them more efficient. One good example is the current use of AI in teaching so we're always one step ahead in terms of training and content.

> **The proportion of female students has increased to 25% in recent years.**
>
> **BARBARA CZAK-POBEHEIM,** MANAGING DIRECTOR

You held a strategy meeting with faculty leaders and the Rector. What were the outcomes?
In April, we set nine new strategic development directions for 2030. They were communicated to all 60 senior leaders at the end of April to ensure clarity and transparency. This strategy forms the foundation of our operational planning. All faculties, specialist departments, and Technikum Wien Innovations have set operational targets for 2024/25, which were agreed during an integration meeting with management in September. It's important to me that every employee understands the goals we are pursuing together through objectives and key results (OKR) and how they fit into the overall strategy. This combination of strategy, budget, and goal setting should be visible for everyone.

Can you tell us more about these strategic development directions and the operational goals?
Of course. A key focus is on digitalization – both in administration and teaching. This will be supported by the introduction

BARBARA CZAK-POBEHEIM

54-year-old Barbara Czak-Pobeheim has been Managing Director of UAS Technikum Wien since January 8, 2024. Before that, she held various leadership positions during her more than 27 years at Volksbankenverbund, including on the Management Board of Schulze-Delitzsch Ärzte und Freie Berufe e.Gen. and on the Executive Board of Volksbank Akademie. In her most recent role, she was responsible for the comprehensive digitalization of the training and continuing education of over 3,000 employees, managers, and supervisory boards. At the same time, the trained economist and business studies teacher spent 14 years working as an external lecturer on over seven university of applied sciences degree programs and at two universities.

› of Microsoft Office 365 in the 2025/26 academic year, which will enable central, universal access to digital tools for communication and collaborative working. This will facilitate not only improved collaboration between employees within UASTW but also efficient networking with national and international universities and collaboration and research partners.

Sustainability plays just as big a role and permeates throughout all strategic development directions. We're working toward achieving the Austrian Ecolabel for educational institutions and promoting sustainable actions from resource efficiency to governance. These development directions strengthen our internal culture, our partnerships, and our collaborations in industry and research. In terms of teaching, quality and being fit for the future with a dynamic educational portfolio are the primary objectives, in alignment with the requirements of the labor market. Thanks to the jointly developed OKRs, we're able to track our progress and gauge the success of our measures. In doing so, we unite innovation, efficiency, and sustainability as the cornerstones of the future-oriented development of UAS Technikum Wien.

Innovation is a core topic in teaching. How do you incorporate it?
UAS Technikum Wien is strong when it comes to innovation, but not for its own sake – rather with the goal of developing technologies that create real benefit. Our motto says it all: Change Our Tomorrow. An example of this is our focus on hydrogen technology and sustainable environmental technology. During the summer semester, in addition to working on the budget for 2024/25, HR and staff filled four new degree programs, including the Bachelor's in Sustainable Environmental and Bioprocess Engineering and the Master's in Climate-Responsive Building Technologies. At the same time, we're investing in the continuing education of our employees to prepare them for using AI. We held a workshop in summer on this subject to take the first steps toward the integration of AI in administration.

How are student numbers looking?
We have seen staggering demand. For the 2024/25 academic year, we had 7,391 prospective students, of whom 5,343 submitted applications. In the end, 2,147 new students got a place with us. These numbers confirm that we are on the right track and that both our Bachelor's and Master's programs are in demand. We're particularly proud that we have established ourselves as a leading university for technical subjects. We want to maintain and build on this status through marketing campaigns. One highlight is our branded tram, which will be traveling around Vienna in fall 2024 and spring 2025 – it's a real eye-catcher and we're really looking forward to seeing it. We're focusing on staying attractive to students and alumni. As part of a competition for our 30th anniversary, for example, we gave eight winners an exclusive trip to the CERN nuclear research center in Switzerland – including a tour that money can't buy.

> **My greatest motivation is the belief in the potential of technology to overcome current and future challenges such as the climate crisis.**
>
> **BARBARA CZAK-POBEHEIM,**
> MANAGING DIRECTOR

What do you see in the future of UAS Technikum Wien? What are your next steps?
My goal is to continue to position UAS Technikum Wien as a leader in innovation. We need to remain resilient to be up to the task of dealing with the challenges of the digital transformation. To me, resilience means standing firm and staying innovative despite the changes happening in the world. This applies to our structures as much as to the people who work here. Regardless of how automation and AI evolve, it is ultimately always the people – be it the leadership team, teaching staff, researchers, or specialist departments – that define the success of UASTW. And that's reflected in our strategic and operational targets.

What drives you personally?
My greatest motivation is the belief in the potential of technology to overcome current and future challenges such as the climate crisis. UASTW is taking on a special role in Austria by combining academic excellence and practice-oriented research, and I'm proud to be contributing to this. I'm especially motivated by the commitment of our employees and students. Together, we develop solutions that result in technical advancements but also create added social value. The daily pursuit of innovation and sustainability in our degree programs, university courses, and research projects really inspires me.

What makes for a successful managing director?
For me, success as a managing director means bringing the right mindset. You need to recognize your own strengths and develop constantly but remain flexible and open to change along the way. At UAS Technikum Wien, we put people front and center – it's a case of attracting talent and exploiting the potential of our teams. When employees and students grow while here, our institution grows too, and so does our success. ▮

> **UAS Technikum Wien is strong when it comes to innovation, but not for its own sake – rather with the goal of developing technologies that create real benefit.**

BARBARA CZAK-POBEHEIM,
MANAGING DIRECTOR

FROM BIO TO QUANTUM

EDUCATION OPPORTUNITIES.
Four new degree programs started in fall 2024 at UAS Technikum Wien.

The 2023/24 academic year saw the launch of four new degree programs, all of which started in fall 2024: Sustainable Environmental and Bioprocess Engineering, Hydrogen Engineering (both Bachelor's programs), Climate-Responsive Building Technologies, and Quantum Engineering (both Master's programs).

FOREFRONT OF UAS EXPANSION

Three of the four degree programs facilitate the overall expansion of UAS study places, while the fourth enables the reallocation of existing places. "Once again, we are at the forefront of the expansion of the university of applied sciences sector," said Managing Director Barbara Czak-Pobeheim. "We are increasing our range of courses on offer in four future-forward areas. In doing so, we are demonstrating that we are in a position to react quickly to technological developments and develop practical training options of a high academic standard from them," explains Rector Sylvia Geyer.

TWO KEY TECHNOLOGIES

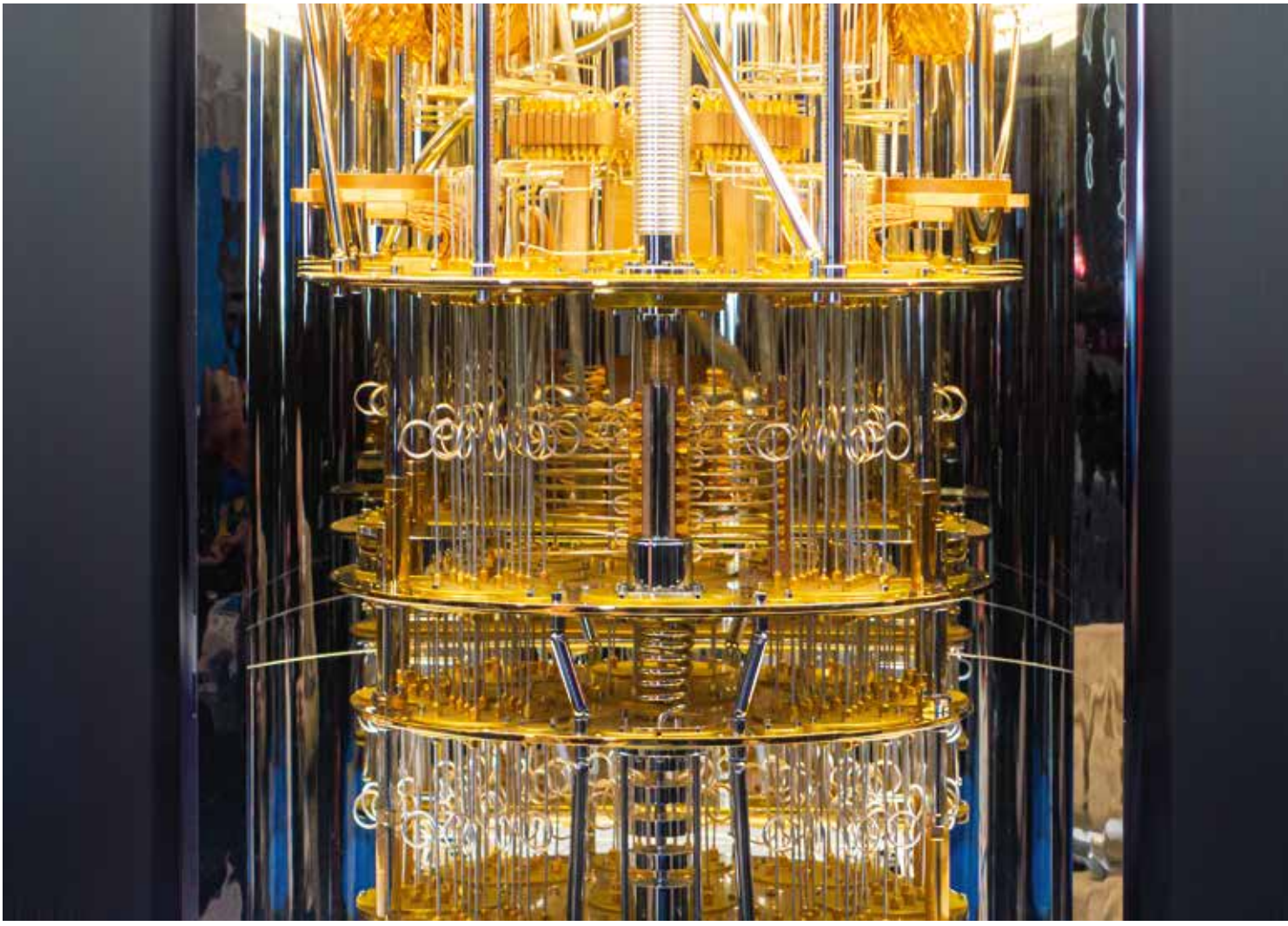
Bioprocess engineering and environmental engineering are two key technologies for a sustainable future. By applying bioprocess engineering, biological systems such as organisms or parts of them are used to produce biobased chemicals, complex substances for medical use, or products in the food industry, for example. Environmental technology helps to solve environmental problems, improve resource efficiency, and reduce the environmental footprint of industry and society. "The focus on holistic life cycle thinking doesn't just help to ensure that students receive well-founded scientific and technical expertise – they can also help businesses in the environmental transformation," said Barbara Gepp, head of the development team for the new degree programs.

> **Our students receive scientific and technical expertise, and help businesses in the environmental transformation.**
>
> **BARBARA GEPP,**
> HEAD OF THE DEVELOPMENT TEAM FOR THE SUSTAINABLE ENVIRONMENTAL AND BIOPROCESS ENGINEERING DEGREE PROGRAM

CORE FACTOR FOR THE FUTURE

Hydrogen is rapidly becoming increasingly important when it comes to climate protection and sustainability. As a key energy source, hydrogen can accelerate the move away from fossil fuels. Moreover, new technologies enable the development of new

A new Bachelor's program deals with hydrogen technology.



Quantum technologies (the image shows the IBM Q System One) are on the verge of market readiness.

areas of application – mobility, mechanical engineering, energy storage, and energy transport are just a few examples. The Hydrogen Technology Bachelor's program provides an overview of the technologies used along the entire value chain. It is a work/study program.

SUSTAINABLE AND RESILIENT BUILDINGS

Climate-responsive building technologies are in demand in order to promote the expansion of local and district heating and achieve Austria's climate neutrality goal. The focus here is on buildings that are energy-flexible and energy-saving at the same time. The Climate-Responsive Building Technologies Master's course is also a work/study program.

QUANTUM TECHNOLOGY FOR PRACTICAL APPLICATIONS

Quantum technologies are making a critical leap from fundamental research to market readiness. They are among the key digital technologies of the 21st century. The English-language Master's program in Quantum Engineering is an excellent continuation of a Physics, Electronic Engineering, or Computer Science Bachelor's course, but also offers graduates of other technical studies great job prospects in a promising professional field.

Festival of Teaching

EXCELLENCE. The Teaching Award highlights exceptional educational performance every year.

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Award winners, members of the judging panel, and well-wishers at the Teaching Awards.

The best lectures of the previous academic year were recognized in October 2023. “I think it’s appropriate to show, reward, and celebrate the hard work that is put in day after day,” said Managing Director Florian Eckkrammer. On this evening, he revealed who the judging panel had chosen to receive awards – people he referred to as “leading lights” who others could look up to.

For Rector Sylvia Geyer, the evening was a “Festival of Teaching”: “From the point of view of a university of applied sciences, it is important and fundamental to enjoy teaching well.” Thanks should also go to the students, whose nominations were decisive in assigning the awards and whose feedback in evaluations helped to highlight excellent performance.

SPECIAL INTERNATIONALIZATION AWARD

FH-Prof. DI Dr. Erich G. Markl, FH-Prof. PD DI Dr. techn. Maximilian Lackner, MBA, Dipl.-Ing. Markus Lutz

FACULTY OF INDUSTRIAL ENGINEERING STUDY TRIP

For the Teaching Awards, a total of 62 lectures and lecture concepts from four faculties were submitted in a window between March and August 2023. There were 46 submissions from teaching staff and 18 nominations from students. The 46 submissions from teaching staff were in the categories Good Teaching, Diversity in Teaching, Internationalization, and Research and Development. The judging panel selected the seven winners from these.

TEACHING AWARD 2023 WINNERS

GOOD TEACHING CATEGORY

DI Wolfgang Berger with support from FH-Prof. DI Alexander Nimmervoll and Lukas Aichbauer, MSc.
DEVOPS AND CLOUD COMPUTING

"He has explained the complex topic of cloud computing to all of us in a clear and understandable way, to the extent that even those of us who hadn't heard of it before now have a good overview and comprehensive understanding of the topic."
STUDENT

Markus Holzer, MSc.
SOFTWARE ENGINEERING 2

"The students benefit greatly from his extensive experience, which he incorporates into lectures in an interesting and humorous way!"
STUDENT

Dr. Susanne Gangl, DI Ursula Knaack, MSc., Dr. Ariane Giesriegl, MSc.
APPLIED CHEMISTRY

"The lecturers managed to create a positive atmosphere in the lab that meant it was easy to ask questions, and they would always be answered in a useful and informative way." STUDENT

DI Michael Iro, Moritz Kriegleder, BSc., MSc., Dr. Lukas Mairhofer, Mira Maiwöger, MSc.
CURRENT TOPICS IN COMPUTER SCIENCE: QUANTUM COMPUTING

"After this lecture, you feel ready to work in this field and discuss it with people at Master's and Doctorate level!"
STUDENT

Dipl.-Ing. Pascal Plank, BSc., FH-Prof. Priv.-Doz. Mag. Dr. David Meyer
MACHINE LEARNING

"Keeping content up-to-date and incorporating new developments gives students insights into current trends and use cases." STUDENT

RESEARCH & DEVELOPMENT CATEGORY

FH-Prof. Dr. techn. Mohamed Aburaia, MSc., Michael Schebek, MSc.
ROBOTICS MODELING

"One of the best lectures ever, as you were allowed to construct/select everything from A to Z yourself." STUDENT

TECHNIKUM
PODCAST

#95 Nerve grafts from the lab

Aspects of Application

INSIGHTS. Research at UAS Technikum Wien is diverse and aimed at specific applications.

The employees at UAS Technikum Wien research in a practical and application-guided way. A foray into some of the projects running in 2023/24 shows how varied these areas of application are.

NETWORKING IN NURSING

Mobile nursing and care: The Linked Care project, which is funded by FFG, simplifies the flow of information in these areas and networks those involved. The project's nursing research revealed that the way in which patients who are no longer mobile get their prescriptions, and consequently their medication, requires huge improvement. The aim of Linked Care is for those in healthcare professions to work directly with those affected, relatives and companions, doctors, therapists, and pharmacists in a way that is safe and easily accessible with optimal IT support.

MOBILE APPLICATIONS IN THE PENAL SYSTEM

The penal system appears far removed from nursing. The common denominator is the potential for digitalization in administrative processes. Another research project funded by FFG, MAIJA, aims to generate an innovative mobile application. The acquisition and processing of data in prisons is often time-consuming and manual. MAIJA improves this process by providing important information on mobile devices that can be used by prison staff. This doesn't just support prisons with their administrative tasks – it also aids the entire prison system across Austria.

DIGITALIZED DRILL

Digital support is also sought after by emergency response organizations, which regularly practice in realistic conditions. In order to obtain meaningful results in drills, close monitoring and objective interpretation of what happens in the practice sessions is required. The FFG-funded MEASURE project is looking into the application of artificial intelligence (voice analysis) and multidimensional analysis of sensor signals in order to evaluate drills more quickly and more informatively. Coordinating the project is the Austrian Institute of Technology, with partners including UASTW and emergency response organizations such as the Austrian Red Cross and the Styrian regional fire brigade.

AR IN TEACHING

The City of Vienna Competence Team for the Integration of Virtual Systems in Teaching and Laboratory Exercises (INVIS) has proven how technologies can support teaching. Virtual systems like virtual, augmented, and mixed reality (VR/AR/MR) are now mature, easily accessible technologies

© ADOBE STOCK

Mobile nursing is an area that can really benefit from networking and digitalization.

FUNDED BY

FFG Forschung wirkt.

Gefördert von Stadt Wien Wirtschaft, Arbeit und Statistik

for visualization and interaction, but they aren't often incorporated into teaching. During the INVIS project, AR and the other technologies have proven their benefits in teaching. Two laboratories were set up – the augmented reality lab and the virtual reality lab. Virtual technologies were integrated into six lectures at Bachelor's and Master's level. A new lecture was developed and virtual technologies are included in the Master's degree program that was launched in fall 2024.

AI FOR SMES

Applying and Understanding AI (AIAV), a research project funded by the City of Vienna, has helped to support small and medium-sized businesses in recognizing and exploiting the potential of artificial intelligence (AI). Through the combination of theoretical explanations, practical use cases, and concrete examples of applications, the project gave companies and interested parties the knowledge required to independently use and implement AI technologies. A platform provides structured, step-by-step instructions for the successful implementation of AI solutions in a number of industries and areas of application.

AWARD-WINNING RESEARCH

Application-oriented research into an entirely different area led to prominent recognition at the Futurezone Awards in November. The research work carried out by the ImmunTissue project, which is funded by the City of Vienna, received the Futurezone Award in the Health Tech category. Artificial nerve grafts can be used in the treatment of peripheral nerve injuries, which are nerve injuries outside the brain, for example in the nerves of the hand, caused by an event like an accident. The research can also help reduce testing on animals. ▮

TECHNIKUM VIDEO

Working in teaching and research

JOINING APPRENTICES IN A MINIATURE FACTORY

NEXT GENERATION.
During a summer workshop at Böhler Edelstahl GmbH, apprentices acquired knowledge of mechatronics and digitalization.

The Digital Miniature Factory workshop took place in July as a collaboration between Böhler Edelstahl and UAS Technikum Wien. The goal of the two-week program was to familiarize the 21 participating apprentices with mechatronic systems and digitalization.

3D, AI, ETC.

Over the course of the project, apprentices developed an entire factory in miniature. Among the topics covered were industrial controls, actuators, sensors, programming, the industrial Internet of Things, artificial intelligence, and 3D printing.

FROM PROTOTYPE TO PLANT

The apprentices tested their conceptual ideas in iterative prototyping cycles and incorporated the mechatronic components and partial solutions until the entire factory was completed and programmed as a process manufacturing facility. A 3D logic puzzle with packaging served as the product being made.

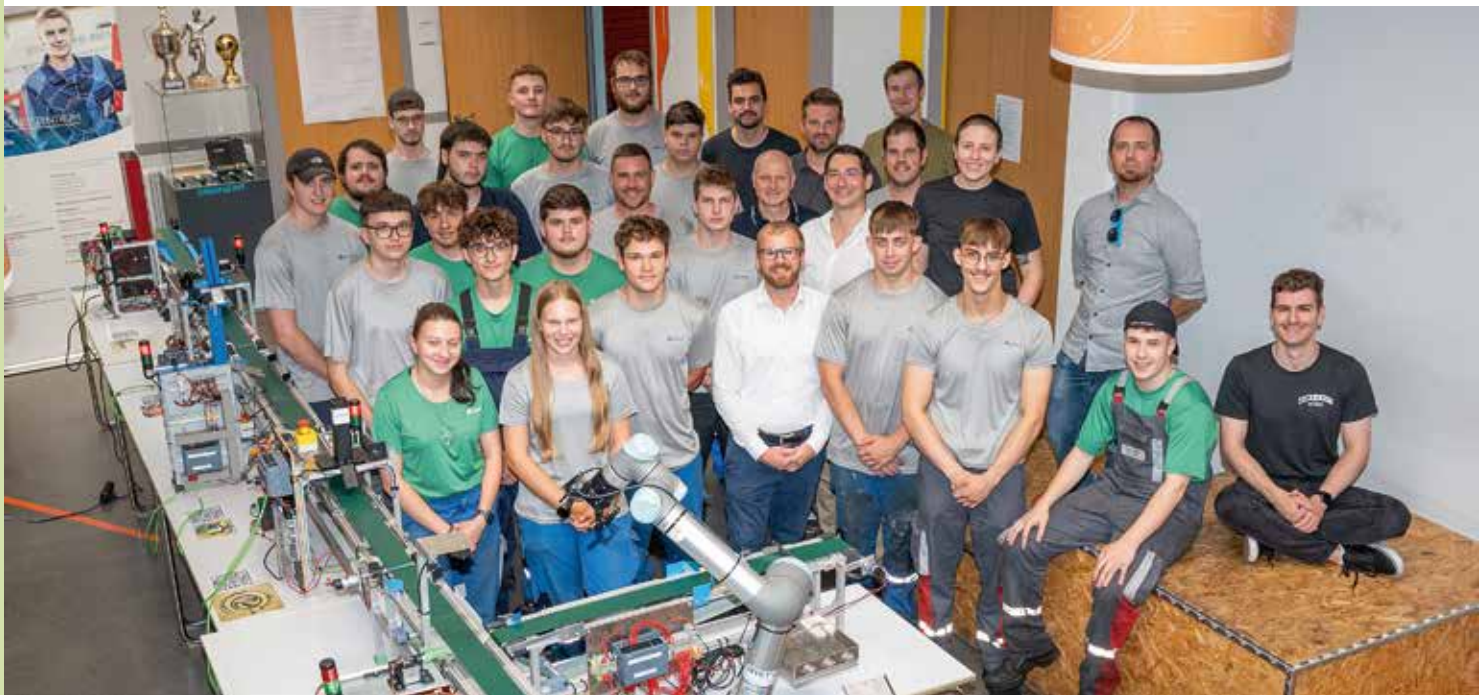
STATION BY STATION

Teams of three and four worked at various stations, some on the development of conveyor belts and others on the separation of components and boxes. Furthermore, an AI quality station and a collaborative robot were employed to recognize and pick out defective components.

BEYOND BOUNDARIES

"The apprentices had to collaborate across their domain boundaries to implement their self-developed ideas and solve joint problems within an industrial plant," said project manager Nikolaus Angel. Participants celebrated the conclusion of the workshop by presenting their findings to Böhler CFO Claus Mittendorfer, Head of Training Richard Vadlja, Mayor of Kapfenberg Matthäus Bachernegg, and other guests.

Production laid out: participants in the summer workshop at Böhler Edelstahl.



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Robert Fellner is a lecturer/researcher in the specialist area of Industrial Product Life Cycle Technologies.

THE BENEFITS OF SIMULATION

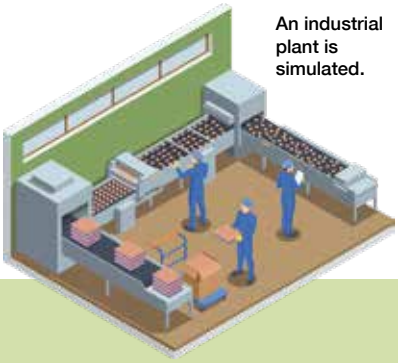
VIRTUAL COMMISSIONING. Expert Robert Fellner explains an important concept for industry.

What is virtual commissioning?
Robert Fellner: Virtual commissioning is a collection of various preliminary simulations in the course of developing mechatronic systems. The simulation of industrial plants and plant systems is the primary focus in order to implement aspects of actual commissioning in parallel with the development process and identify errors in the process. For several years, the (advance) visualization of plants/plant systems and other uses of the simulation environments created, like for virtual training on plants, smart maintenance, and more, have been becoming increasingly topical.

What are the advantages of the concept?
A preliminary simulation of a developing plant chiefly reduces errors that would otherwise only be detected during the real commissioning. Virtual commissioning therefore aims to identify and rectify errors as early as possible, which leads to cost savings and reduces the time required for the actual commissioning.

How complex is it to simulate the behavior of different machines?
The fewer different elements there are interacting with each other, the easier it is to reproduce. In the best case scenario, behavioral models of producers already exist, and then it's "only" a matter of integrating the models. If there is no behavioral model available and the plant is very complex (or the creation of the behavioral model is very complex), it may be necessary to cut back and choose a higher level of abstraction.

How are virtual systems used in teaching?
We have established that subtasks of virtual commissioning can be used in the teaching of various topics. Students without programming experience, for example, can implement "real" virtual robot sequences safely and at their own pace.



An industrial plant is simulated.

DRONES IN TEACHING

COMPETENCE TEAM.
A project funded by the City of Vienna ties in with enthusiasm for flying.

Gefördert von
Stadt Wien
Wirtschaft, Arbeit und Statistik

With the City of Vienna Competence Team for Drone Technology in University of Applied Sciences Education (DrohnFH), which was established on February 1, 2024, UAS Technikum Wien is picking up the diverse technical topics of drone technology from the fields of electronic engineering, mechatronics, embedded systems, and robotics. During the project, exciting and motivating teaching examples, project work, and the possibility to incorporate the topics into Bachelor's and Master's theses and demonstrators are presented to students.

SOUGHT-AFTER AND DIVERSE

Drones are the ideal intersection of interests and technology. Students often bring enthusiasm for autonomous flying, driving, or swimming vehicles. In practice, they can be used in a number of fields, from the inspection of electricity lines, railway tracks, and sources of fire from the air to the drone-assisted measurement of buildings and drone photography.

HARDWARE AND SOFTWARE

At the same time, drones and autonomous robots cover a broad technical spectrum – from electricity supply and the control of sensors and actuators at a fundamental electrical level to the implementation of control algorithms for flight attitude or flight behavior, the integration of individual controller nodes in a larger network for data processing and mission control, and complex algorithms for data processing, localization, mapping, and path planning. Fault tolerance and the best possible safeguarding of secure conduct toward the surroundings also play an important role. ▮

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Since February 2024, UAS Technikum Wien has been focusing on various forms of drone technology.

TECHNIKUM PODCAST

#88 Degree program leader Peter Rössler on the new Electronics course

BREATHING IN STUDIES

INTERNET OF THINGS. Indoor air quality sensors in 60 rooms improve the working environment for students and employees.

Indoor air quality sensors have been installed in over 60 rooms at UAS Technikum Wien's main location as part of a collaboration between the Faculty of Electronic Engineering & Entrepreneurship and Magenta Business.

There is also a sticker with a QR code in these rooms in addition to the sensors, allowing people to view the current values in the room they are in on their smartphone in real time, for example the temperature, CO_2 level, humidity, and air pressure.

"Our partnership with Magenta Business has already borne fruitful results in the past," said Harald Winkelhofer, senior lecturer and researcher, marketing coordinator, and coordinator of the IoT lab at UAS Technikum Wien. "This project goes beyond the mere installation of sensors in the laboratory environment. It marks the beginning of a wide-ranging initiative on the entire campus to optimize the learning setting and improve indoor air quality."

CO_2 LEVEL BY SENSOR

The sensors signal poor air quality, especially high CO_2 levels. Those present can access real-time data via the QR codes in every room and, if required, receive recommended actions, such as short periods of ventilation to improve the quality of air in the room. The project signals the start of future developments in the fields of energy management and monitoring. Further collaborations with Magenta Business will aim to improve campus management to be more sustainable and efficient in future.

IOT COLLABORATIONS

The Internet of Things can be experienced in a number of ways at UASTW. The basis for this includes the introduction of the Internet of Things and Smart Systems Master's course, the IoT and Electronics Competence Center, and our own IoT laboratory. "This initiative enables us to implement IoT projects across the campus and, in doing so, successfully conclude practical project work and Master's theses with industrial partners," said Stefan Paschek, Head of the IoT and Electronics Competence Center. "We have lots of ideas of what we want to do with the IoT hub in the future, such as solutions to ensure efficiency in the energy sector." ▮

The app provides insights into air quality at UAS Technikum Wien.

Iris-Sabine Nemec (left) and Sarah Langer at the Girls' Center.

MEDICAL TECHNOLOGY IN THE WALDVIERTEL REGION AND THE GIRLS' CENTER

The 12th MedTec Summer Academy took place in summer 2024 in the Waldviertel region and provided students with a week of intensive workshops and interaction with experts. 30 Austrian and international students, including five from Ukraine, worked on company projects and benefited from a program of presentations and practical exercises. The goal of the event was to promote international collaboration and prepare participants for future challenges related to medical technology. In fall, young women at the Caritas *peppa Girls' Center in Vienna were taught about the world of medical technology. Researchers and lecturers Sarah Langer and Iris-Sabine Nemec from UAS Technikum Wien talked about their daily working lives and the career opportunities in their field. The visit was a collaboration between the BERTL project funded by the City of Vienna and the ALMAH project funded by Austrian women's fund LEA.

VIRTUALLY EXPERIENCE AN OR

The Medical Technology in Mixed Reality research project makes it possible to virtually experience operating rooms and other medical settings as early as the planning phase. This helps to reduce poor planning and increase user satisfaction, while allowing students and specialists to practice using medical devices in virtual scenarios. An example of this is configuring a patient monitor in virtual reality. The project is funded by the Austrian Research Promotion Agency (FFG).

Gefördert von
Stadt Wien
Wirtschaft, Arbeit und Statistik

FFG
Forschung wirkt.

FIRST FULLY AUTOMATIC BIKE WASHING SYSTEM

In November, Wintersteiger Sports entered into a collaboration with UAS Technikum Wien to test Austria's first fully automatic bike washing system. The Velobrush provides an environmentally and user-friendly solution to bike care in urban settings. The washing system cleans bikes over 20 inches using rotating brushes and low-pressure nozzles. Following successful tests in the winter, July saw the introduction of an optimized version of the Velobrush. Students are still analyzing the user-friendliness of the system to enable future improvements. The washing system uses a closed water cycle so that it is not only efficient but also environmentally sustainable.

Velobrush in action.

© WINTERSTEIGER

BREATHING SIMULATION IN RESEARCH AND IN PRACTICE

INNOVATION. Innovations like the xPULM™ lung simulator make it possible to gain new insights into the treatment and research of respiratory illnesses.

Simulating breathing has become a significant component of teaching and research work. Taking center stage is the xPULM™ lung simulator, which makes it possible to realistically model the behavior of the human respiratory system and harness it for clinical applications. These developments have been recognized at various levels and are being used in both teaching and medical technology research.

At the annual conference of the Austrian Society for Biomedical Engineering in November 2023, Richard Pasteka, researcher and lecturer at UAS Technikum Wien, received the Best PhD Award for his work on modeling the human respiratory system. His research lays the foundation for improving ventilators and optimizing the aerosolization of administering drugs, for example for the treatment of respiratory illnesses. Significant progress has also been made in neonatal research, as Vasil Vodenicharov, laboratory assistant at UASTW, presented at the conference. Thanks to the xPULM™ simulator, new possibilities have opened up in the examination of administering surfactants to newborns – an area that was previously unresearched.

© UASTW/LEITNER

The lung simulator shows how respiratory illnesses affect lung function.

UAS Technikum Wien has been showing off what the xPULM™ simulator can do at public-facing events as well as in the context of research. At the Future Health Lab open day in August, visitors were able to observe in real time how respiratory conditions like chronic obstructive pulmonary disease (COPD) affect lung function using the simulator. The depiction of breathing using a pig's lung and the opportunity to analyze individual breathing patterns using spirometry provided fascinating insights into the function of human lungs.

Students take digitalization to the bookstore.

From the Lecture Hall to Business

USABILITY.
Computer Science students conducted mobile and stationary eye tracking studies.

Students on the Computer Science Bachelor's program conducted innovative eye tracking studies to assess the usability of products and services in various companies. Thanks to the practical application of this technology, valuable findings were uncovered and specific areas for improvement were identified. The successful collaboration with businesses like ÖGB Verlag and Twinformatics GmbH shows how theoretical knowledge from the lecture hall can be directly applied in practice.

EYE TRACKING AT FAKTORY

Students tested the navigation of the Faktory bookstore using eye tracking glasses for ÖGB Verlag. The goal of this study was to analyze the experience of visiting the bookstore and reveal potential areas for improvement. The results were promising. The test subjects found it easy to navigate around the store but found that clearer marking of the shelves would improve the user experience even further.

COLLABORATION WITH TWINFORMATICS

The second project took place in collaboration with Twinformatics GmbH, which develops software solutions for Wiener Städtische Versicherung, among other things. An eye tracking bar was used to evaluate new input masks in an expert system for advisors. By analyzing eye movements, it was possible to identify focal points and problem areas. Here too, the findings were positive. The design of the input interface was rated as good, while the study made access to relevant information easier for users.

VALUABLE PRACTICAL EXPERIENCE

These collaborations are exceptional examples of how the knowledge gained during studies can be successfully applied in practice. Students gain valuable experience through practical work and at the same time contribute to the optimization of user-friendliness in the businesses involved.

THE FIRST EUROPEAN HEALTH DATA SPACE

April saw the launch of IDERHA (Integration of Heterogeneous Data and Evidence towards Regulatory and HTA Acceptance), a new Europe-wide consortium of 33 institutions, which includes UAS Technikum Wien. The goal is to make the wealth of data in the healthcare sector accessible in a meaningful way and use it to give lung cancer patients in particular new opportunities for personalized treatment and cures in future. One example of an initiative to emerge during the course of the project is the first pan-European Health Data Space. In addition, recommendations to politicians and authorities are being developed on how heterogeneous data and results of research can be used in the healthcare sector for the benefit of patients. This project is being supported by the Innovative Health Initiative Joint Undertaking (IHI JU) as part of grant agreement no.101112135. The IHI JU is supported by the European Union's Horizon Europe research and innovation program and the life sciences industry, represented by COCIR, EFPIA/Vaccines Europe, EuropaBio, and MedTech Europe. IDERHA is financed by the European Union, private members, and the partners of the IHI JU.

Co-funded by the European Union

TECHNIKUM PODCAST

#94 Artificial intelligence: what development is possible?

GAMES, AI, AND PIZZA

Once again this year, students on the Artificial Intelligence Engineering Master's degree program (including both specializations AI Technologies and Game Engineering) presented their theses at the Showcase Evening: AI and Game Master event. A total of 150 visitors took the opportunity to test and evaluate games and AI projects developed by students. "The evening wasn't just a platform for creative technology solutions – it was also an inspiring look into the future of artificial intelligence and game engineering at UAS Technikum Wien," said head of the degree program Bernhard Knapp. Guests were even treated to pizza and beer.

Full focus during testing of the students' games.

NETWORKED TEACHING, RESEARCH, AND ADMINISTRATION

EXCHANGE. UAS Technikum Wien is looking back on a successful year of international activities.

The International Office once again played a key role in connecting students and employees across national borders. Winning the Erasmus+ Award 2023 was one of the biggest achievements. As one of three universities, UAS Technikum Wien was recognized by an international judging panel for its implementation of mobility projects. On the occasion of the award ceremony in December, Managing Director Florian Eckkrammer said: "This award is confirmation of our efforts and motivation to keep driving innovation."

CREATIVE FORCE OF AI

In the last decade, International Week has grown into a major specialist event. Under the motto "Friend or Foe? Unleashing the Creative Power of (Generative) AI," 40 experts from 14 countries participated and discussed the potential and challenges of generative AI. This demonstrated how AI can be implemented as a tool in university teaching and which new demands it will place on graduates.

NEW FORMS OF COLLABORATION

During the academic year, students and teaching staff were guided by a special form of collaboration: short-term mobility. Topics are worked on and covered together virtually during the semester. All the participants then usually meet up at the end of the semester for their project presentations at the organizing university. The Cooperative International Student Project (CIP) with Lapland UAS also brought students from the Portuguese Universidade des Trás-os-Montes a Alto Douro (UTAD) on board in the sixth intake, making it an EU-funded Erasmus+ Blended Intensive Program (BIP). The content focused on a wind power plant with a vertical shaft.

In addition, a BIP with students and teaching staff from Lapland UAS and Fontys UAS in the Netherlands took place for the third time. Participants looked into the challenges faced in sectors such as agriculture, infrastructure, transport, healthcare, and labor economics. The second BIP format took place in the summer semester, developed jointly with Brno University of Technology and Chemnitz University of Technology, and students looked into movement analysis in sport and health. Aside from these examples, students complete a large number of short-term mobility programs at various universities every year.

STRENGTHENED PARTNERSHIPS

To mark the ten-year anniversary of the collaboration with Mid Sweden University, the current double degree program was extended for another five years, securing the international perspective for Master's students in Sports Technology. The collaboration with Portugal is just as long and fruitful, with a new double degree program having been started with the Universidade de Trás-os-Montes e Alto Douro (Master's in Medical Engineering and eHealth). Furthermore, three employees from UAS Technikum Wien were recognized as UTAD alumni ambassadors – a symbol of the successful long-term partnership.

In January, Rector Sylvia Geyer, Managing Director Florian Eckkrammer, and colleagues from HR, the International Office, and Technikum Wien Innovations braved the snow and visited Lapland UAS in Rovaniemi. They discussed three key areas of collaboration for the new year.

The network was also expanded outside of Europe. With its membership of Africa-UniNet, UAS Technikum Wien opened new doors for collaboration on the African

Full house at International Week.

Four students from four faculties took part in the ABC BootCamp in California.

TECHNIKUM PODCAST

#108 Global perspectives

FURTHER HIGHLIGHTS FROM THE INTERNATIONAL YEAR

- Building on the collaboration with Brno University of Technology with a visit to Vienna and a return visit to Brno.
- Internationalisation@Home with a tour of Vienna on the topic of “EU made our city” and a day trip to a partner university in Bratislava.
- Students from the Faculty of Computer Science explored Bangkok as a major IT and business hub in Southeast Asia.
- During an Instagram takeover, two UASTW students reported live for a week from Berlin and Buenos Aires.
- Visit to the Faculty of Industrial Engineering at the Mongolian University of Science and Technology in Ulaanbaatar.

continent in July. At the same time, the International Office acquired an additional EUR 50,000 in Erasmus+ funding for the collaboration with South Africa.

EXTENDING INTERNATIONAL NETWORKS

Another highlight was the delegation trip in June to Reykjavík University in Iceland. During the visit, synergies in fields including renewable energies and mechanical engineering were discussed, and the university management teams gathered for conversations.

A six-person delegation visited three universities in four days as part of a trip to Turin, Genoa, and Florence in June on the topic of scientific integrity and innovation. This intense exchange provided valuable motivation for the further development of our own teaching and learning methods, as well as for R&D and collaboration with start-ups.

25 employees attended the English course in Dublin – a familiar format that was expanded this year with an additional branch for teaching staff. All staff working in teaching and administration received exciting insights into Irish culture.

STUDENTS IN SILICON VALLEY

One exciting highlight was the two-week trip to Silicon Valley, during which four students from four faculties took part in the summer ABC BootCamp. In addition to workshops and visits to businesses, they were also able to participate in a business pitch competition and were even crowned as winners.

University and Business in Exchange

INTERFACES.
From career and start-up events to entrepreneurial alumni and an internal do tank.

The world is waiting outside the lecture halls and ideally you can bring the world into the university. It's not just the many practitioners who demonstrate this in their work at UASTW as teaching staff. The area of innovation, scale-up, and networks serves as an interface between internal skills, the start-up scene, and numerous partner companies.

IN-HOUSE JOB OPPORTUNITIES

The career events promoted networking between students, alumni, and businesses. The Career Start 2023 event in October brought together 131 businesses and over 700 engineering students. In spring 2024, the Career Lounge was another success. 79 partner businesses presented themselves in the university's banqueting hall and showcased a diverse range of career opportunities to around 500 visitors.

The relaxed atmosphere, complete with cocktail bar and networking opportunities, made it possible to make new contacts and take the first step into the world of work.

The Career Start event brings businesses and job seekers together.

INCENTIVES THROUGH START-UP EVENTS

At the interface between the start-up community and the expertise of the faculties, the start-up events took place again to stir up interest from students. The following topics were covered this academic year:

- The circular economy with the Faculty of Life Science Engineering
- Virtual commissioning and simulation with the Faculty of Industrial Engineering
- Green innovations with the Faculty of Computer Science & Applied Mathematics
- Sustainable districts of the future with the Faculty of Industrial Engineering

Jobs come to UASTW – Career Start in fall 2024.

© UASTW/BÜCHELE, NUSSBAUM

"These events continue to show that the university isn't just a platform for exchange and networking. It is also active in the development of new technologies and business models," said Rafael Rasinger, Head of Innovation, Scale-up & Networks. The collaboration between the various faculties and external partners contributes to boosting the transfer of knowledge and technology between universities and business.

PROVEN RELEVANCE

The important role of the Austrian start-up scene has been confirmed twice by external parties. According to the Top 100 Start-up list by business magazine *trend*, graduates from UAS Technikum Wien can be found in almost half of the start-ups listed, and seven of the companies were founded by alumni. One thing to point out in particular is that two of these start-ups, Biome and Toolsense, are the result of the founder program at the university. Toolsense also won the EY Scale-up Award in the category PropTech & Real Estate. The EY Scale-ups of the Year in the fields of Disruption & Innovation, Software & Digital Transformation – B2B, and Software & Digital Transformation – Consumer also have a connection to UAS Technikum Wien.

The university is a platform for exchange and networking, actively supporting the development of new technologies and business models.

RAFAEL RASINGER, HEAD OF INNOVATION, SCALE-UP & NETWORKS

INNOVATION AT WORK

Through the V do tank, UAS Technikum Wien took up previous innovation formats and discussed significant cross-cutting issues with 60 participants, such as (AI) business model development, the Green Deal, and simulation technology. This event provided the opportunity to actively help shape the strategic development of the university and to create new momentum for internal innovation management. ▮

Technology, Environment, and Society

ESG. Highlights from the academic year at a sustainable university.

Sustainability is one of the most important cross-cutting issues at UAS Technikum Wien. Aspects of ESG (environment, social, and governance) criteria can be found in study plans and research projects, and they play a critical role in the framework for the buildings and economic activities of the university.

A core project in this area is the Austrian Ecolabel. This independent seal for the environment and quality is awarded by the Ministry for Climate Action. UAS Technikum Wien has undertaken to obtain the Austrian Ecolabel for educational institutions, having started in this endeavor in October 2023. The project group is focusing keenly on the topics of education for sustainable development, energy and construction, indoor air quality, procurement, mobility and waste management, water consumption, and general Ecolabel criteria.

SUSTAINABLE DEGREE PROGRAMS

Two new degree programs stand out in particular among the courses on offer. The new Sustainable Environmental and Bioprocess Engineering and Hydrogen Engineering Bachelor's degree programs, and the new Climate-Responsive Building Technologies Master's degree program contain aspects of sustainability and ESG-related areas in their names, which reflect the focus of the course content (see p. 14). At Technikum Wien Academy, a five-day seminar for ESG managers has also started (see p. 37). Via its subsidiary and the current Ecotoxicology & Environmental Management Master's

Climate-conscious building technology is the focus of another degree program targeting sustainability.

degree program, UAS Technikum Wien is also a training facility itself for ESG management.

RESEARCH WITH IMPACT

The 17 Sustainable Development Goals from the UN aim to ensure sustainable development at a global level. An evaluation of all 85 of the research projects running at UAS Technikum Wien in the 2023/24 academic year related to these goals shows that research at the university of applied sciences counts toward sustainable development in a variety of ways, with 15 out of the 17 goals covered by research projects. The most widely represented goals were *Affordable and clean energy* (38% of all projects are connected with this SDG), *Industry, innovation, and infrastructure* (also 38%), *Quality education* (36%), and *Sustainable cities and communities* (34%).

EVENT ON THE CIRCULAR ECONOMY

At the Start me up Monday in fall, experts discussed the significance of the circular economy and how better product design can help reduce environmental pollution. Carina Huber-Gries, Head of the Faculty of Life Science Engineering, pointed out that the climate crisis is already a reality and is manifesting itself in extreme weather events and economic impacts. Head of the Ecotoxicology & Environmental Management degree program Martina Ortbauer and other speakers presented technological innovations that aim to improve the material cycle, for example through recycling or improved product design. One topic was the potential to improve the repair, reuse, refurbish concept in Austria in order to reduce the consumption of resources.

IN ALLIANCE

UAS Technikum Wien is a member of the Alliance of Sustainable Universities, a union that currently consists of 15 universities of applied sciences. The alliance's second annual conference took place in May under the motto "New Paths for Current Challenges" at UAS Burgenland. Teaching staff, researchers, and students discussed current and future sustainability topics. Martina Ortbauer was also in attendance. Her presentation focused on the cradle-to-cradle (C2C) concept and associated technical innovations, while she also presented the Systemic Environmental Evaluation Methods for Technology and Environmental Management project, funded by the City of Vienna.

She showed practical case studies such as the optimization of milk packaging and methods such as life cycle assessment and eco design, which measure and minimize the impact on the environment.

FOCUSING ON TIRE WEAR

Her colleague Elisabeth Simböck attended Sustainability Day 2024 in April and gave a talk on the impact of tire wear on the environment. As part of the City of Vienna Competence Team for Microplastics and Nanoparticles as Environmental Risks, Simböck scrutinized the environmental compatibility of "green" bike tires from a leading market supplier. A comparison with a traditional product showed that both contain toxic substances. ▮

TECHNIKUM PODCAST

#90 Three pillars of sustainability

FUNDING

The Systemic Evaluation Methods for Technology and Environmental Management project and the Competence Team for Microplastics and Nanoparticles as Environmental Risks are funded by the City of Vienna.

Gefördert von Stadt Wien Wirtschaft, Arbeit und Statistik

WECANTECH AWARD HONORS FEMALE EXCELLENCE

ROLE MODELS. Exceptional female students and graduates were among those honored by Austria's First Lady Doris Schmidauer.

Once a year, ten students are recognized for their exceptional performance with the WeCanTech Award. This year's event took place in May under the auspices of Doris Schmidauer, wife of Austrian President Alexander Van der Bellen. "We urgently need women with expertise in technical professions to overcome the major challenges of our time. It would be reckless not to make the most of their potential," said Schmidauer.

1,000 STUDENTS

The university of applied sciences has been involved in attracting more female students and positioning technology as an appealing training option for years. An important milestone has already been reached in this regard – more than 1,000 enrolled female students.

1,000 EUROS

At the WeCanTech Awards, female students and alumni are honored in two categories – balance and grades. In the "balance" category, female students are recognized for performing exceptionally in their studies despite family commitments. The award winners are selected by a judging panel from UAS Technikum Wien. In the "grades" category, female students are recognized for achieving an excellent average grade of at least 1.3. The WeCanTech Award also comes with a prize of €1,000.

10 MENTORS

Female students on Bachelor's and Master's degree programs are also enrolled on a mentoring program in their final year. Through the WeCanTech initiative, ten chosen participants receive one-to-one mentoring from suitable female mentors who share their own experiences from their careers. ▮

© UAST W/MIESS

Doris Schmidauer (right) hands a proud student the WeCanTech Award.

TECHNIKUM VIDEO

Profile of women at UAS Technikum Wien

OTHER NEWS FROM THE ACADEMIC YEAR

© ADOBE STOCK

Moodle receives an AI upgrade.

MOODLE: THE FIRST AI BOT FOR STUDIES

With the new AI chatbot plug-in for Moodle, technology to support learning and teaching will be used at UAS Technikum Wien from the next academic year. The plug-in, which was developed jointly by UAS Technikum Wien and external partners, incorporates the advanced artificial intelligence of OpenAI and enables students to have a personalized learning experience right in their Moodle courses.

The goal is to offer students better support during self-study. The AI chatbot plug-in for Moodle was developed as a result of this requirement. Testing started in May and it was then made available for all Moodle users around the world via Github. The use of AI in teaching is being continually improved in order to cater to the needs of students.

STATE PRIZE FOR TEACHING

UAS Technikum Wien received a special honor at the Ars Docendi State Prize for Excellent Teaching for its long-term project on the comprehensive overhaul of all lectures on Bachelor's programs, taking into consideration modern educational principles such as constructive alignment and blended learning in order to improve quality and the ease of study. Furthermore, the innovative Cell Culture Technologies module from the Biomedical Engineering degree program was placed on the shortlist for its interactive and student-focused approach.

COLLABORATION IN THE CAMPUS MANAGEMENT SYSTEM

For 20 years, UAS Technikum Wien has been developing and running the FH Complete (FHC) campus management software as free software, and it's now on version FHC3.3. The entire course of a study program is mapped out by FH Complete – from system administration and maintenance and communication between employees, students, and external teaching staff to the student life cycle, plus student and employee administration, from the teaching appointment to the fully web-based teaching plan.

Collaboration has intensified recently with partners from the university of applied sciences sector, such as UAS St. Pölten, UAS Burgenland, University of Applied Sciences BFI Wien, and the Catholic Private University Linz, all of which have been using the free software for several years.

To ensure the joint evolution of FH Complete, this collaboration was cemented as part of a collaboration agreement in a community maintained by UAS Technikum Wien with all universities.

FH COMPLETE
DAS FREIE CAMPUS MANAGEMENT SYSTEM

TECHNICAL CONTINUING EDUCATION KNOWS NO CRISIS

MODEL FOR SUCCESS. Technikum Wien Innovations is able to look back on a successful year in respect of the team, services, network, and projects implemented, and above all it can look positively to the future.

Double intake for the UX Master's.

UX EXPERIENCES FURTHER GROWTH

Two intakes on the Master's in UX Management started in the 2023 winter semester. This course provides the most comprehensive training in this area in the German-speaking region. What's more, the UX options comprising seminars, certifications, and the Master's, combined under the umbrella of the UX Academy, were established. One event that took place in May was an exclusive UX Strategy Workshop with internationally renowned expert and author Jaime Levy. The usability laboratory offers businesses a wide range of opportunities to test and optimize the user experience of their products.

IN-HOUSE TRAINING: NEW MAJOR CLIENT

In addition to ICT training for A1, we have also gained further organizations for in-house training with a focus on requirements engineering. Technikum Wien Academy has become a proud continuing education partner of the Basic IT Academy from Wiener Stadtwerke GmbH. It is conducted over 18 months alongside employment and enables career changers to forge a career in IT. After a one-year tender and development phase, it was launched in the winter semester of 2024. For the Wüstenrot subsidiary Wüstenrot Tec, Technikum Wien Academy implemented the WTEC Academy in 2024.

Basic IT Academy from Wiener Stadtwerke.

© WIENER STADTWERKE

All of the options from Technikum Wien Innovations

NEW TECHNIKUM WIEN INNOVATIONS UMBRELLA BRAND

Technikum Wien GmbH, a wholly owned subsidiary of UAS Technikum Wien, has new Managing Directors in the form of Mathias Forjan and Angelika Ott. Technikum Wien Innovations was introduced as the umbrella brand of Technikum Wien GmbH. For customers like businesses, research, public institutions, and private individuals, Technikum Wien Innovations offers three specific services to manage the opportunities and challenges of technology and digitalization.

These services are

- Technikum Wien Academy for continuing education
- Technikum Wien Solutions for order development in the B2B area
- Technikum Wien Research for research into new technologies, innovations, and solutions

eLAB AS A VIDEO STUDIO SERVICE TO HIRE

Modern knowledge transfer via videos is no longer out of the ordinary. At UASTW, we have the privilege of being able to produce our own professional video studio – the eLab. This is a privilege that we are now also providing as an external service, creating full webinars, teaching videos, greetings, and much more. At the heart of it is an interactive smart board where content can be prepared in a creative way.

The eLab in action.

NEW SEMINARS: ESG AND QUANTUM TECHNOLOGY

The ESG seminar launched in the winter semester of 2023 has been fully subscribed since the first day and complements the range of seminars as part of the existing collaboration with the OVE in the area of renewable energies. Three seminars on photovoltaics, small-scale wind power, and power quality have already been held. The one-day practical seminar on quantum technology provides up-to-date and relevant insights into the areas of quantum computing and cryptography, with a focus on how businesses can use quantum technology.

COLLABORATION: WAFF JOBS PLUS PROGRAM

The collaboration with waff (Vienna Employment Promotion Fund) focused on the topic of enterprise resource planning (ERP) this year. A new course covering ERP is set to be introduced in 2024/25. It has been developed under the leadership of Christian Nebenführ and already received many successful applications.

All the information on continuing education

ADAPTATION OF ALL UNIVERSITY DEGREE PROGRAMS

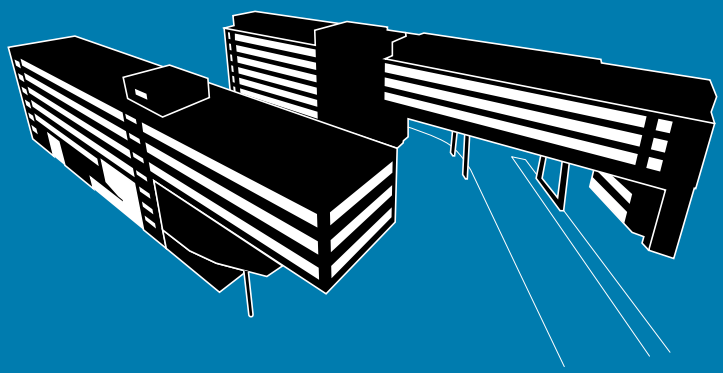
As a result of the changes to laws applying to universities of applied sciences, the degree programs at Technikum Wien Academy were adapted accordingly in 2024 in terms of admission requirements and qualifications. The previous UX Management, Process and Project Management, and Digital Business Master's degree programs were offered as MBA programs starting in the winter semester 2024. The previous Rolling Stock and Business Analytics Master's will then conclude with the title MSc CE (continuing education).

TECHNIKUM PODCAST

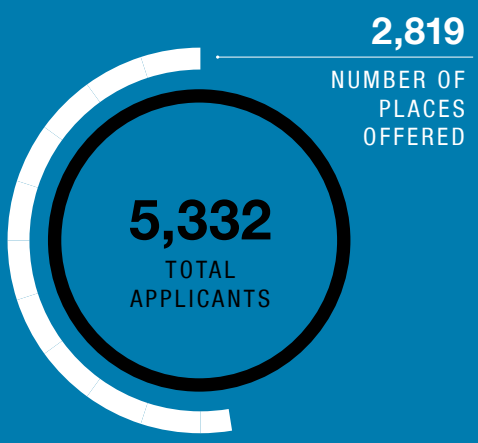
Podcast #87 Technikum Wien Innovations

The 2023/24 Academic Year in Figures

STATISTICS. How many people studied and worked at UAS Technikum Wien during the last year? Where did they come from? How many of them were women? On the following pages, we have presented facts and figures from various units to provide a quantitative overview of how the university is evolving.

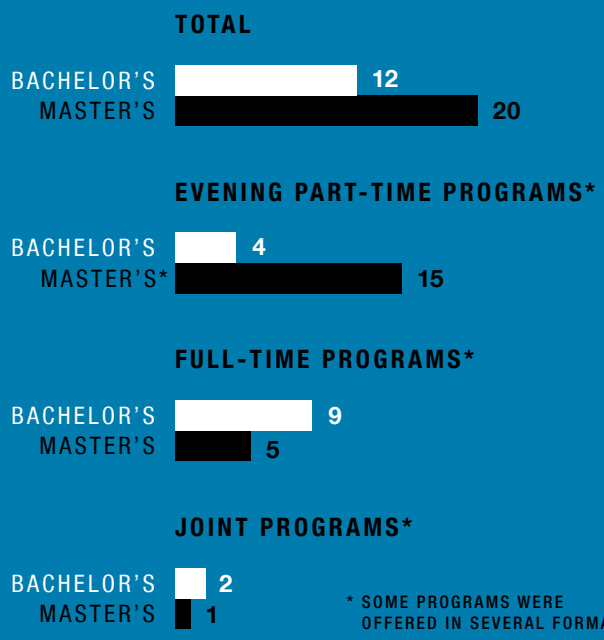


NUMBER OF APPLICANTS



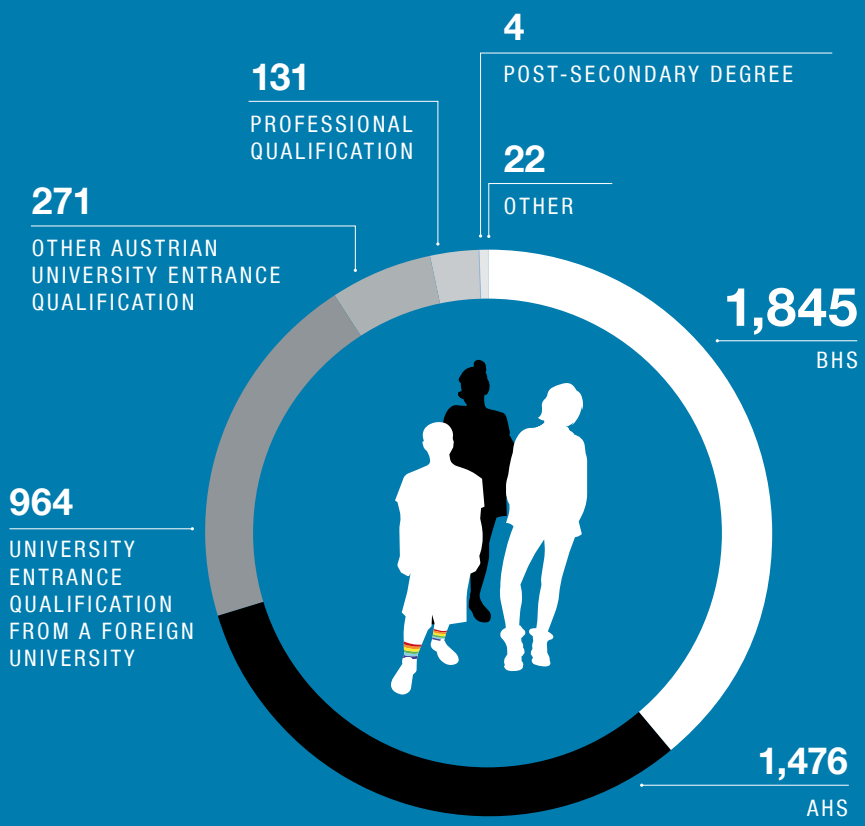
53%
APPLICANTS ACCEPTED

NUMBER OF PROGRAMS

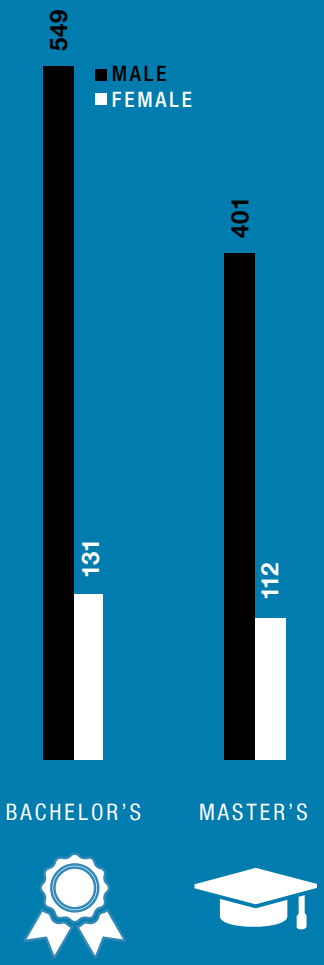


* SOME PROGRAMS WERE OFFERED IN SEVERAL FORMATS

BACHELOR'S STUDENTS BY SCHOOL TYPE



NUMBER OF GRADUATES



NUMBER OF STUDENTS

22.38%
PROPORTION OF WOMEN

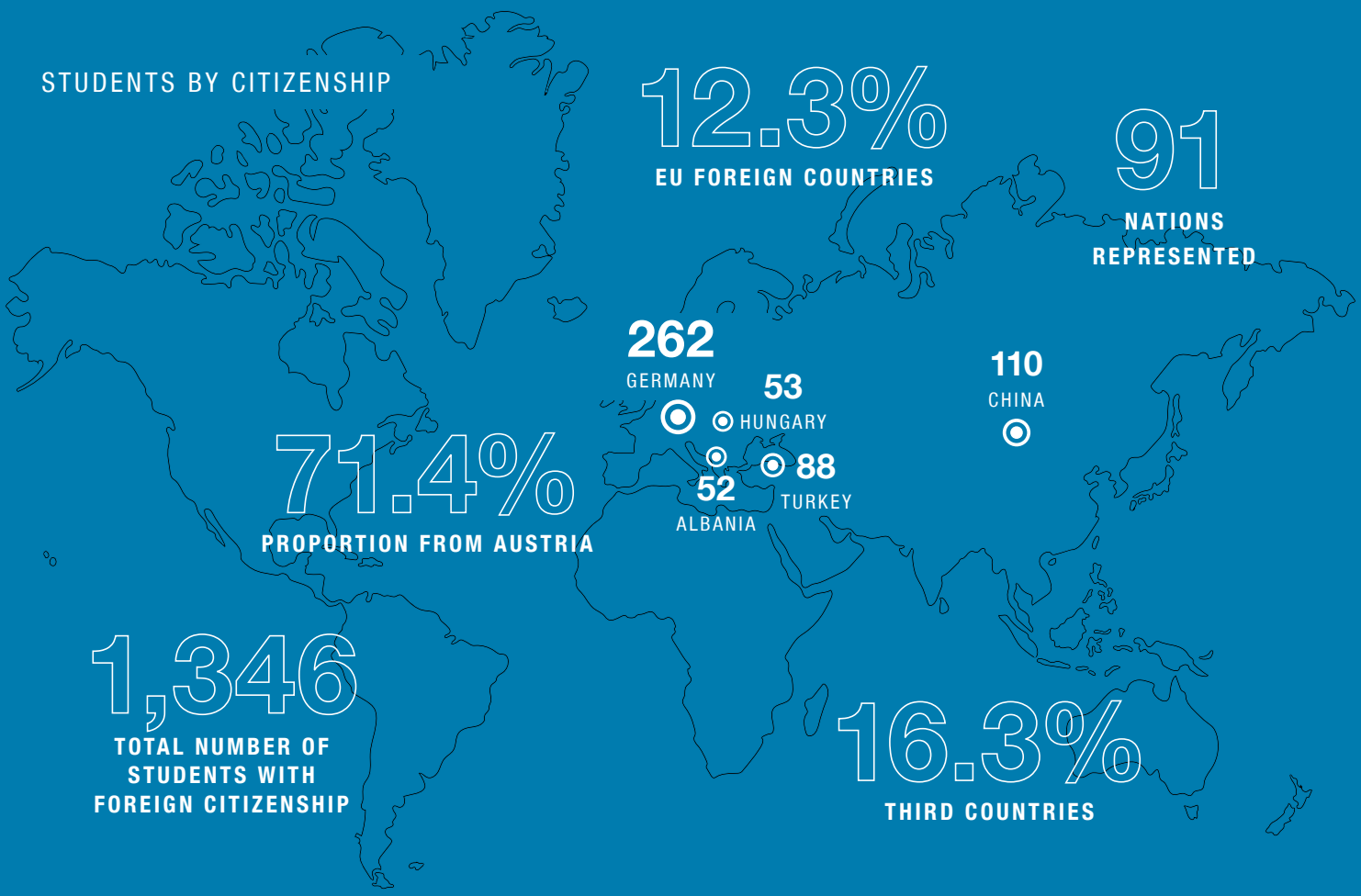
3,658
MALE

1,055
FEMALE

4,713
TOTAL NUMBER OF STUDENTS

DEVELOPMENT IN TOTAL

STUDENTS BY CITIZENSHIP



94

PARTNER UNIVERSITIES

84,354

COURSE HOURS OFFERED

306 INCOMING

350 OUTGOING

STUDENT MOBILITY

90 INCOMING

261 OUTGOING

STAFF MEMBER MOBILITY

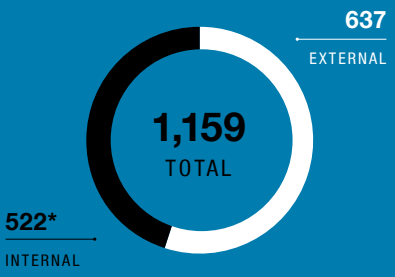
PERSONNEL

1,159
TOTAL EMPLOYEES

812
MALE

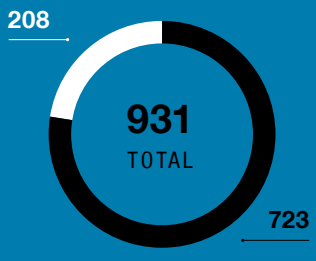
346
FEMALE

1
OTHER

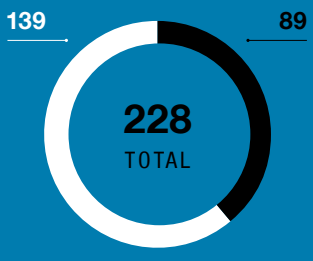


PERMANENT (INTERNAL) AND
PART-TIME (EXTERNAL) EMPLOYEES

* THIS CORRESPONDS TO 386 FULL-TIME EQUIVALENTS



TEACHING AND
RESEARCH*

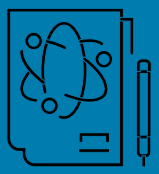


ADMINISTRATION
AND MANAGEMENT

* INCLUDING 637 EXTERNAL LECTURERS

■ MEN ■ WOMEN

RESEARCH & DEVELOPMENT

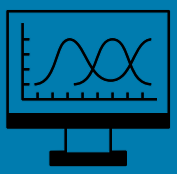


85

ONGOING OR COMPLETED R&D PROJECTS

€4,289,325.56

FUNDED PROJECTS VOLUME UAS TECHNIKUM WIEN SHARE



30

RESEARCH PROJECTS 23/24

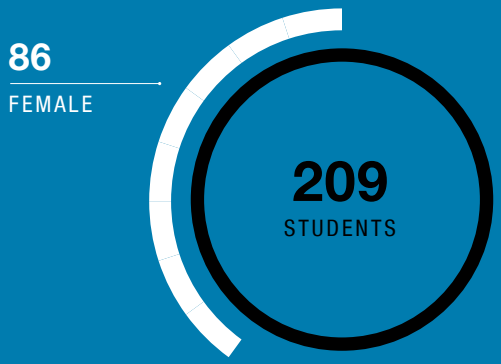
ERASMUS+FUNDING

€1.14 million

THIS MEANS UAS TECHNIKUM WIEN IS IN FIFTH PLACE AMONG UNIVERSITIES IN AUSTRIA AND SECOND PLACE AMONG UNIVERSITIES OF APPLIED SCIENCES IN AUSTRIA.

CONTINUING EDUCATION – TECHNIKUM WIEN ACADEMY

7 MASTER'S PROGRAMS, 1 SHORT COURSE



41%
PROPORTION OF WOMEN

SEMINARS AND CERTIFICATIONS

34%
PROPORTION OF WOMEN

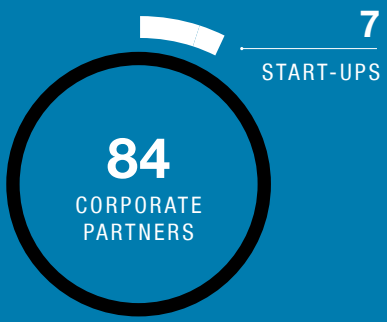
COMPANY FAIR

131
PARTICIPATING COMPANIES WITH

700
STUDENTS OVER 3 DAYS

CORPORATE PARTNERS

AS AT END OF OCTOBER 2024

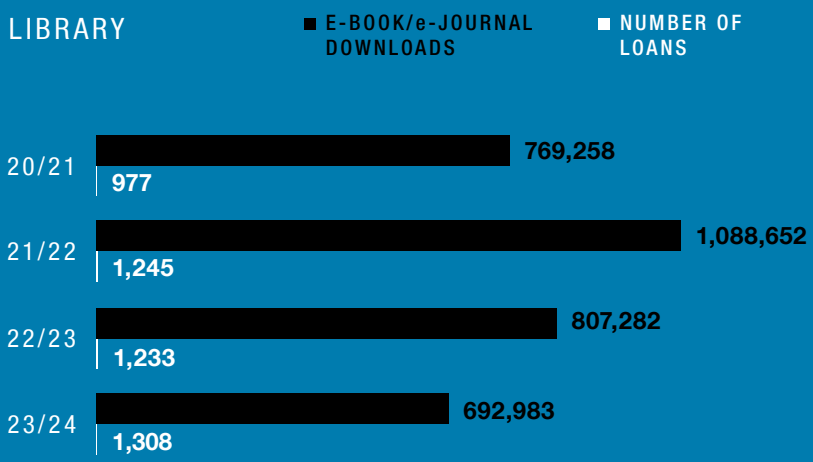


CAREERS LOUNGE

2024

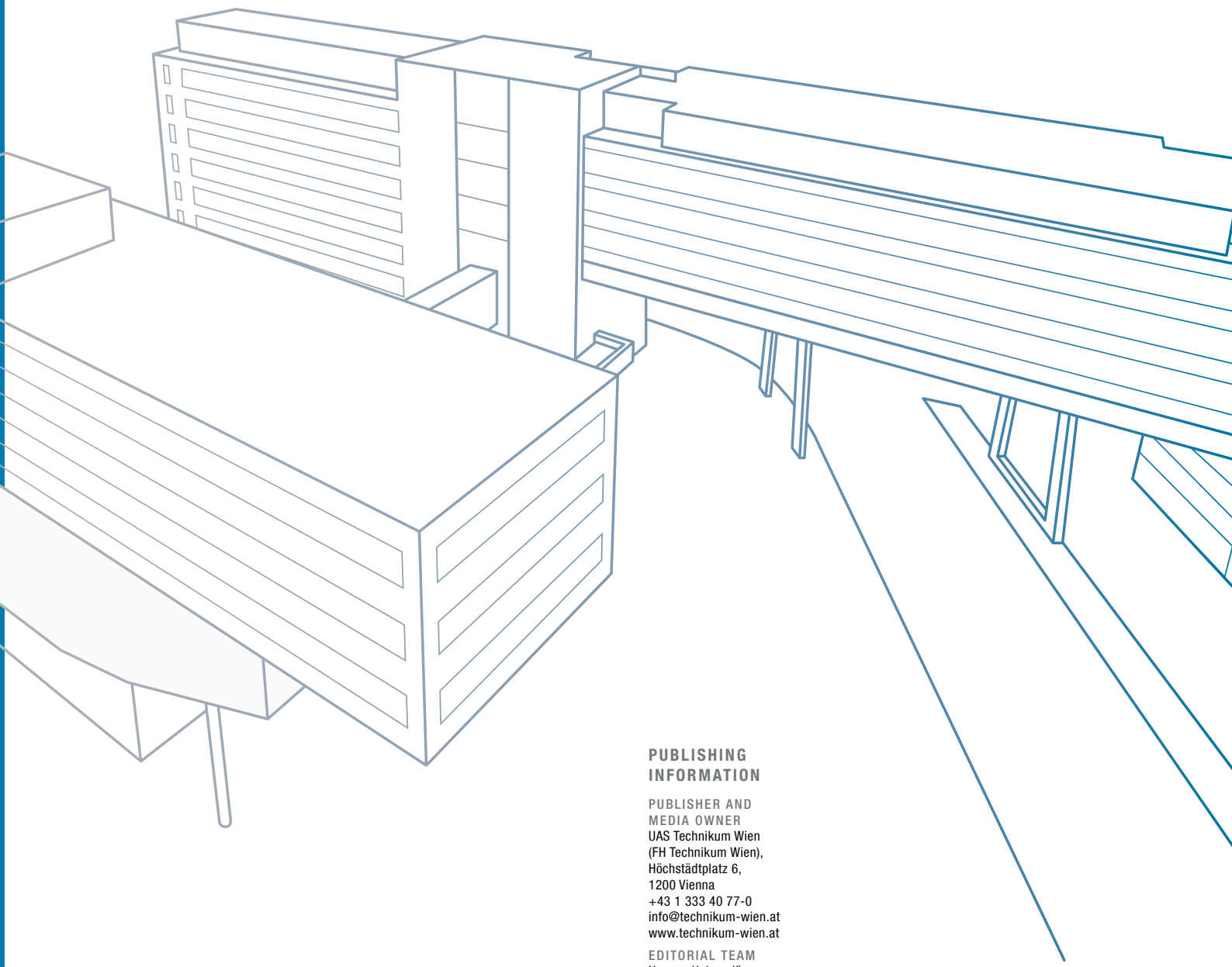
79
PARTICIPATING COMPANIES OVER 2 DAYS

LIBRARY



23,159
TOTAL PRINT MEDIA INVENTORY

~ 33,000
NUMBER OF LICENSED E-BOOKS



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