

Life Sciences



FH KREMS
UNIVERSITY OF APPLIED
SCIENCES / AUSTRIA

Bachelor

Medical and Pharmaceutical Biotechnology



SPECIAL FEATURES

WHY SHOULD YOU ENROL FOR THE MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY BACHELOR PROGRAMME IN KREMS?

Improving quality of life

Medical and pharmaceutical theory combined with extensive lab work: as a graduate, you have a solid foundation on which to build when embarking on a career in biotechnology. You will play a part in tackling problems, giving you the chance to improve quality of life for people all over the world.

International focus

Opting for a programme with English as the language of instruction makes a significant contribution to developing an international mindset. The international environment at IMC Krems, with teaching staff and students from partner universities all over the world, strengthens your intercultural abilities. Moreover, you can complete your internship abroad.

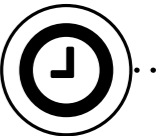
Outstanding career prospects

Because of the practical experiences in leading international and national life science institutions and companies, our graduates have very good career opportunities. 40% are work in biomedical research fields and 60% in the industrial area. More than 150 graduates are in PhD programmes or finished their PhD theses in international research or industrial institutions such as Harvard, Washington, Cambridge, Oxford, London, Dublin, Stockholm, Groningen or with German and Austrian universities. Our alumni lead R&D teams, manage biotech processes, are responsible for quality control or regulatory affairs, scientific marketing or do research in actual life science fields and publish results in leading journals such as "Science", "Blood", "Cancer" or the "Journal of Biomolecular Screening".

Tip

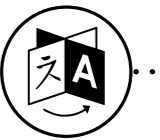
Another highlight: the Institute for Biotechnology organises an annual scientific conference, the Life Science Meeting, which gives students and alumni the chance to network with international speakers from research and industry.

AT A GLANCE



Full-time | Monday – Friday

Courses take place from Monday to Friday between 8.00 a.m. and around 8.00 p.m. (in exceptional cases on Saturdays).



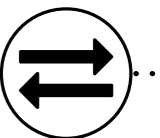
English

The language of instruction is English. This prepares you for a career in a multicultural environment.



Six semesters

The degree programme lasts three years, with a total workload of 180 ECTS. Graduates receive the academic degree of Bachelor of Science in Engineering (BSc).



22-week internship

You can quickly put into practice the expertise you have picked up during your courses. The internship is an obligatory part of the programme.



Study fee

EU/EEA citizens pay a study fee of EUR 363.36 per semester, plus the student union fee.

FACTS AND FIGURES

FACTS PLAY AN ESSENTIAL ROLE NOWADAYS. A FEW FACTS AND FIGURES ABOUT THE MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY PROGRAMME:

Our partners include some **of the top universities worldwide:** the Karolinska Institute, Harvard University, Garvan Institute in Sydney, and a further **300 high-profile** universities and companies where our students have completed internships or started their careers.

95% of our bachelor graduates continue their studies with a master degree in Austria or abroad.

More than 50% of our students complete their internships abroad.

50% of courses are taught by lecturers with research or industry experience. Academics with post-doctoral teaching qualifications and PhDs as well as experience gained at universities, leading research institutions and life science companies in Austria and 22 other countries also contribute to the exceptional standard of teaching on the programme.

RESEARCH – DEVELOP – ANALYSE

Biotechnology is one of the fastest-growing sectors in the world, and there is strong demand for qualified experts, managers and researchers. Biotechnology offers potential solutions to many of the pressing problems currently facing medicine. For example, the development of antibodies for use in cancer and arthritis therapy, and new technologies for skin transplants and cartilage generation have dramatically improved quality of life for millions of patients worldwide.

THE KEY TO SUCCESS: THEORY + PRACTICE

THE COURSE IS BASED ON THREE CORE ELEMENTS

①

The basics
semesters 1-4

The programme has a strong international focus, with an emphasis on fundamental aspects of **natural sciences, biomedicine and technology**, and also includes extensive lab work in small groups.

Specialist subjects cover practical work in research and industry, fundamentals of natural sciences, fundamentals of medicine and biology, analytics, biotechnology, bioprocess technology, quality management, business principles, and communication and social skills.

②

Practical elements
semester 5

The 22-week internship is compulsory in semester 5. Over 50% of our Medical and Pharmaceutical Biotechnology students complete their internships abroad at international companies, research institutes or universities.

We provide you with support before and during your internship: you identify your strengths and evaluate your development potential in the course of one-to-one coaching from our internship coordinator, who then helps you to find a suitable internship place at a company in Austria or abroad.

Looking to gain even more international experience? From 2020, students can spend semester 3 or 4 at a high-profile university such as the Dublin Institute of Technology in Ireland or Linköping University in Sweden.

③

Consolidation
semester 6

During the programme, you will cover the topics of medical and pharmaceutical **biotechnology**. In semester 6 you can choose between two electives: production of therapeutic proteins and drug development management.

The goal of medical biotechnology is to replace damaged cells or organs, not with transplants or artificial systems like dialysis, but with natural body cells. The pharmaceutical biotechnology courses deal with product manufacturing and handling. Traditional biotech products used in pharmaceuticals include antibiotics, which are produced by microorganisms in large fermenters.

Very personal stories

18-year-old **Barbara Brunthaler** decided to take the Medical and Pharmaceutical Biotechnology degree programme straight after completing her final high school exams at Bundesrealgymnasium Krems Ringstrasse. Science really appeals to her.

October 2018

This summer I did two one-month work placements at IMC Krems's Institute of Biotechnology. I'd never worked in a lab before, but this introduction to such an exciting field left me fascinated. I became familiar with lots of complex processes, helped with experiments and then took the decision – biotechnology, here I come!

At school I chose electives with an emphasis on physics, which prepared me well for this degree. I'm passionate about science, and so is my older brother who studies physics at Vienna University of Technology – so there's a bit of a family bias towards science.

What I especially like about studying at IMC Krems is that you have a lot of contact with other members of your group. It's a very international group, which is very cool. English as the language of instruction also makes it easier to get to know people from different countries. I can thoroughly recommend the programme because you get a lot of feedback and everything has a strong practical focus.

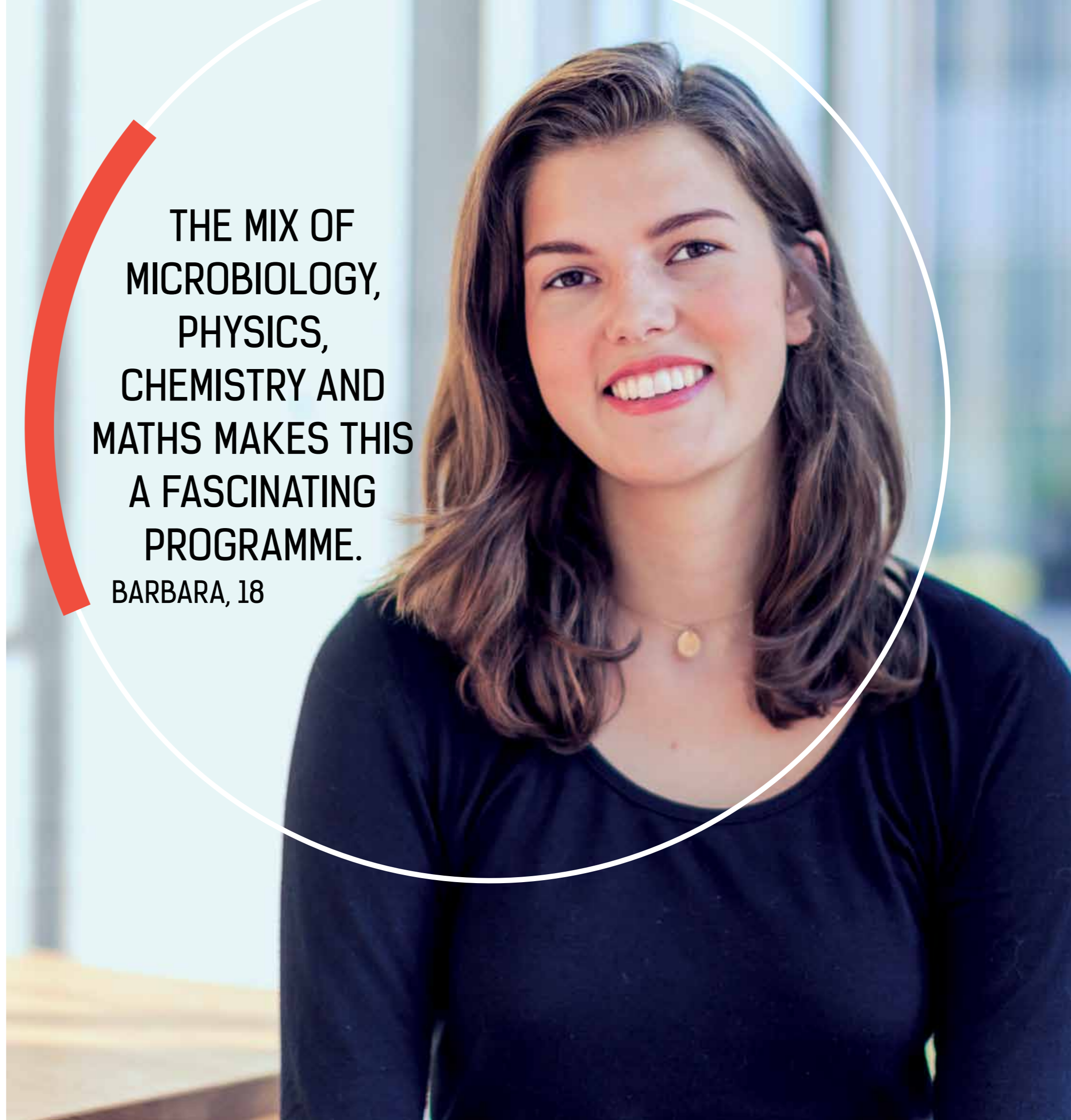
After completing my bachelor degree here at IMC Krems I'd like to do a master programme in Dublin and then work in research – although I'm not really sure where exactly.


Tip

Don't worry that English is the language of instruction because you learn all the vocabulary very quickly. The interview was very relaxed and the atmosphere was friendly. If you know you want to study here and you prepare, then you're sure to do well.

THE MIX OF
MICROBIOLOGY,
PHYSICS,
CHEMISTRY AND
MATHS MAKES THIS
A FASCINATING
PROGRAMME.

BARBARA, 18





I ALWAYS WANTED
TO HELP PEOPLE AND
IN MY OPINION THE
BEST WAY TO DO IT
IS TO FIND OUT HOW
PHARMACEUTICAL
PRODUCTS WORK.

MIGUEL, 21

Very personal stories

21-year-old **Miguel Manago** comes from a Philippine background but was born in Austria and went to the International Christian School of Vienna. What really pushed him towards studying biotechnology was his time as a paramedic during his civilian national service. He really wanted to understand why people were suffering – he wanted to help them.

October 2018

I knew that the Medical and Pharmaceutical Biotechnology programme at IMC Krems has a reputation for being very international. The thing that I was really interested in was the laboratory facilities. I had been to various labs before, but the instruments were not as sophisticated as the ones here at IMC Krems. When I saw them at the open day, I was even more interested. This set in motion a chain reaction, because I then looked into the content of the programme – and there was a really good mix of theory and practice. I was very impressed. Another reason for choosing IMC Krems was the university's reputation. Some of my friends go here, and they only had very positive things to say about it. I looked at a range of universities and went for IMC Krems – a decision I don't regret. I've only been here a short time, but already I feel part of a family on the programme. This is because we are all pushing each other to improve. It's hard work and demanding. You have to put in the hours and it can be stressful. But the people I can rely on around me make it easier. Two courses have stood out for me: Anatomy and Physiology with Prof. Lechner, because he explained the way the body works – how everything is connected; even to things like lifestyle. This opened my eyes as to how complex organisms we are. The other course was Human Genetics with Prof. Hundsberger. Here we went deeper; small components in the body can play such an important role. Changing just the smallest thing can have life-threatening consequences. This blew my mind. I am very motivated to study hard and graduate – even if it takes a bit of blood, sweat and tears!

Tip

At the admissions interview don't worry too much about having to speak English if it's not your first language. If you focus too much on this, you might not pay enough attention to the content of what you are presenting. You have to convince the panel that you are capable of coping with this challenging programme.

Very personal stories

21-year-old **Klavdija Bastl** from Slovenia specialised in chemistry and physics for her high school leaving certificate. She began her volleyball career at the age of 7, then continued semi-professionally for a few years and now she is a coach for Campus Sport. However, she still insists her greatest passion is science.

October 2018

When I got home from school, I used to do chemistry exercises for fun. Sounds weird, but it's true. I always fancied studying abroad and all I wanted was to find a university, where I could best develop my talents. Naturally, I thought studying chemistry would be the way to go. However, I wanted to attend a more innovative study programme. Thus, I decided to turn to the internet for help and there it was, the perfect match, Medical and Pharmaceutical Biotechnology. I came to Krems for the open day and fell in love with the place. There was a wow factor about the campus, and the lecturers were so down to earth – it was incredible. I was swept off my feet by the laboratory visit, where they presented the cancer research they do here. This is what I am passionate about and what I want to dedicate my life to. So, the programme was perfect for me. I didn't expect that there would be so many lectures in the lab. I'm only 21 years old and I've learned how to isolate DNA – something I would never have imagined that I'd be doing a couple of years ago. I have already got the approval to do my internship at Dana-Farber Cancer Institute (Harvard Medical School). I cannot believe what has happened during the past months! Without the IMC Krems, I would not be where I am today. That is why I recently went back to my old high school to talk to the pupils about the programme. I wanted them to have the same opportunity that the IMC has given me. I believe, that in order to really be successful at what you do, you first need to understand and master the basics. I am really convinced that the basic study programme in the field of medical and pharmaceutical biotechnology will give us the knowledge and experience we need to prosper.

Tip

When I look back, I know that there was no need to feel nervous at the start of the programme. You're really well looked after here – there's plenty of supervision and support. It's like I've found a new family here. Just take advantage of all the opportunities, don't be afraid. Go for it!

A portrait of Klavdija Bastl, a young woman with long blonde hair, smiling. She is wearing a white top and a dark blue blazer. The portrait is framed by a white circular border with a red arc on the left side.

**I'VE ALWAYS
BEEN A
SCIENCE FREAK.
KLAVDIJA, 21**

I COULD CHOOSE
BETWEEN SEVERAL
GOOD JOB OFFERS
STRAIGHT AFTER
GRADUATING.

FABIAN

Very personal stories

As a Medical and Pharmaceutical Biotechnology graduate, **Fabian Friedl** from Vienna decided to get a job directly after completing his bachelor's degree. In a couple of years, he plans to take the challenge of working alongside his master's degree studies – at Fresenius Medical Care in Krems. Fabian wants to work in the international biotech industry and his professional experience will stand him in good stead.

October 2018

I'm a very ambitious and inquisitive person. So this programme was perfect for me. Over the three years it had a very positive influence on me, intensified my interests and enabled me to identify a clear direction for my career. I got a job offer straight after completing my bachelor's degree: in a manufacturing unit at Boehringer Ingelheim, specialising in fermentation. This was made possible by the solid foundation in pharmaceutical processes I had gained. My practical know-how and hands-on experience were also crucial in enabling me to quickly take my first steps on the career ladder. During my degree programme, I took an internship in Australia, at the University of Queensland in Brisbane. Since I wasn't sure which direction I will take in the future, I chose a Research Department specialising in drug discovery. It was interesting but not what I wanted to do in the future. It helped me a lot to make the right decision about my future career. The annual Life Science Meeting at IMC Krems brings together professionals from many different fields – from research to industry. The longer you study, the more you understand how everything fits together. You can also use those conferences to get to know successful people in your field of interest over a glass of wine. Things like that are great sources of inspiration. My bachelor's degree gave me an excellent knowledge in medical research and state of the art knowledge of several fields in the pharmaceutical industry. Lecturers and profs with professional experience in either research or industry gave special insights into the "real world" which made it even more exciting. Combined with several labs and their strong practical focus this programme really stood out.

Tip

Get a job after completing your bachelor's degree. The work experience will help you a lot to get a good job, especially in industry. But don't forget to stick to your plans to do a postgraduate degree; because once you start getting good feedback at work, it's tempting to scrap your plans.

KREMS – A UNIVERSITY CITY ON VIENNA'S DOORSTEP

Highest concentration of higher education institutions in Austria

With five universities within an area of 52 km², Krems is the site of the most concentrated higher education cluster in Austria – and some would claim in the whole of Europe. Located in the greater Vienna region, Krems is less than an hour away from the Austrian capital by public transport. It has a population of about 25,000 and around 13,000 students – wherever you go there's a great student feel about the town. A tip for the parents of international students: Krems is a very safe place where you can get almost anywhere on foot or by bike. Our foreign students love the area around the town, its charming Heuriger wine taverns and its large, cosmopolitan student community.

A unique historic town on the Danube

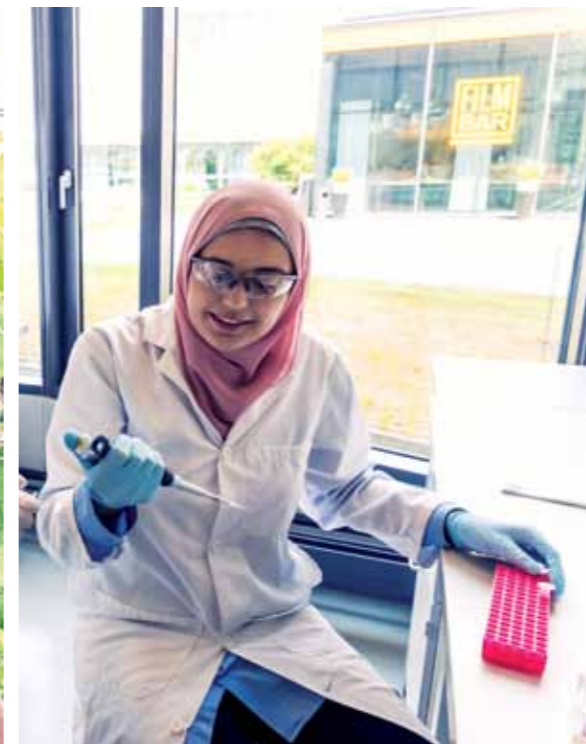
Krems is nestled between the Danube river and hillside vineyards at the gateway to the Wachau valley – within one of the most beautiful cultural landscapes in Austria and a UNESCO World Cultural Heritage Region. With a wide range of options for shopping, sports and outdoor activities, and everything that the historic, pedestrianised old town has to offer, there is plenty to do in your free time. Krems also has a diverse and burgeoning restaurant and café scene.

Young, dynamic and environmentally friendly

Krems is a vibrant university town – friendly and welcoming, yet cosmopolitan thanks to its 13,000 students from 67 different countries. The young people give this charming town a flair all of its own. And Krems is a place where they rightly feel very comfortable and safe. Our students really appreciate being able to get around on foot or by bicycle and without a car or having to use public transport.

IMC Campus Krems – unrivalled in Austria

Courses on IMC Krems' Medical and Pharmaceutical Biotechnology degree programme take place at the ultra-modern Campus Krems site. Practical lab courses are held in the programme's state-of-the-art laboratories – the ideal place to prepare for a future career. Over 10,000 people study at Campus Krems, and well over 2,000 of these are IMC Krems students. This inspirational location offers students outstanding quality of life and provides the perfect conditions for studying, socialising and enjoying a fantastic university experience.



IMC KREMS IN NUMBERS

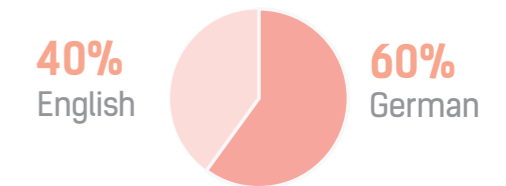


Universum Ranking 2017 amongst Austrian universities of applied sciences

17 Bachelor programmes

11 Master programmes

3 Advanced training courses



7.900+

Graduates



2.700+

Students from

50+

different nations

600+

Lecturers and researchers



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IMC University of Applied Sciences Krems

Prospective Student Advisory Service

T: +43 2732 802 222

E: information@fh-krems.ac.at

I: www.fh-krems.ac.at



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