

Full-time | English

Job & family friendly time model

master.



Medical Technologies

in Zusammenarbeit mit
in cooperation with



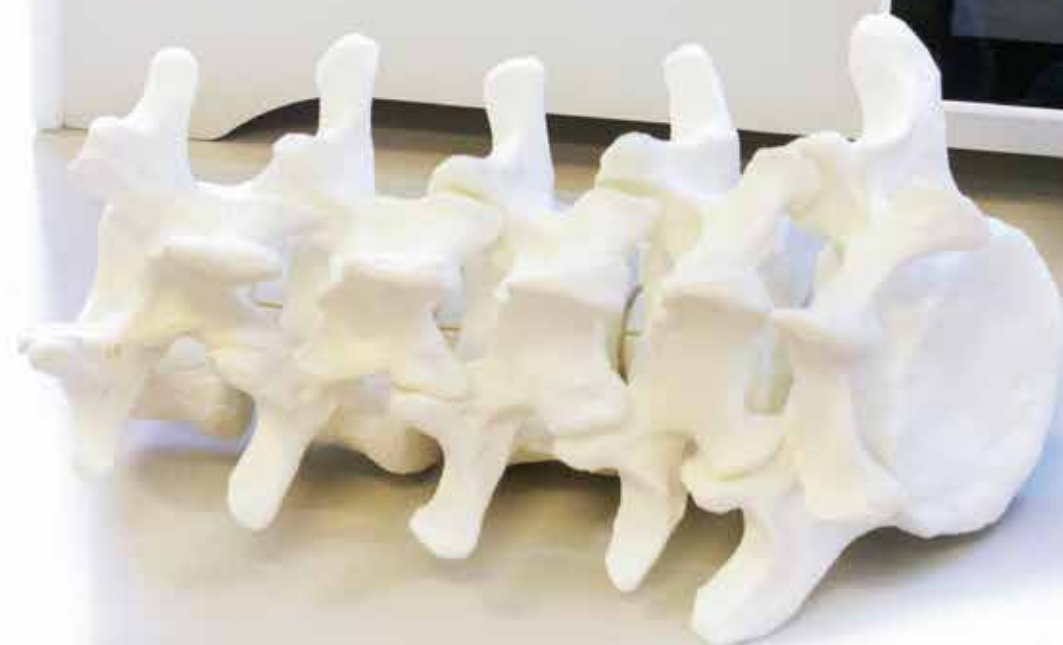
MEDIZINISCHE
UNIVERSITÄT
INNSBRUCK

Jointly creating a
European University



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Preface

Medicine and health related disciplines are among the rising stars in engineering sciences. While other branches are maturing and have already realized most of their potential, technological cross-fertilization and ongoing trends in society promise significant longterm growth and new opportunities. At the same time, there is no better place for a study program in medical technologies than Innsbruck with its long and successful history in science, medicine, health care, sports and leisure.

Therefore, the MCI has developed the highly innovative master program in Medical Technologies. This new program focuses on the technological aspects of medicine and inter-related fields like health, rehabilitation, prevention and sports. The program language is English, the time model job and family friendly.

The new master program Medical Technologies aims at strengthening the existing know-how and resources as well as the region of Tirol as a major player in these fields. It enjoys the support of the Region of Tirol, was developed by a task force including experts from the academia, science and industry, is embedded in the framework of the Health & Life Science Cluster Tyrol (HLSCT) and the Association of Universities of Tirol (Campus Tirol) and will be implemented in close collaboration within this network. Special acknowledgment is given to the Medical University of Innsbruck for their partnership as a strong fundament for the new master program.



Prof. DI Dr. Bernhard Tilg
Member of the Government of Tirol
for Science, Research & Health Care



Günther Platter
former Governor of Tirol



Prof. Dr. Wolfgang Fleischhacker
Rector of the Medical University of Innsbruck



Prof. Dr. Dr. h.c. mult. Tilmann Märk
Rector of the University of Innsbruck
Chairman of the Association of
Universities of Tirol



Mag. Walter Draxl, MSc
Managing Director of
FH Gesundheit Tirol



Prof. Dr. Sabine Schindler
Rector of the Private University for
Health Sciences, Medical Informatics
& Technology



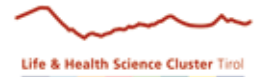
**Asst. Professor Dr. Dipl.- Ing.
Daniel Sieber**
Head of Department & Studies



Prof. Dr. Andreas Altmann
Rector MCI

Overview

TITLE	Master program in Medical Technologies
ACADEMIC DEGREE	Master of Science in Engineering M.Sc. MSc The addendum "MCI" may be added to the academic degree
DURATION	4 semesters including Master thesis and final exam
MAIN FOCUS	High level of practical relevance, international orientation, close collaboration with trade and industry, focus on academic excellence and industry-related skills, interdisciplinary projects, small group sizes.
TIME MODEL	Full-time study program with job & family friendly time model (morning sessions between 9 am and 1 pm from Monday to Friday, occasionally, classes are held in the afternoon, block teaching, project & laboratory work, etc.)
ACADEMIC YEAR	Winter semester: October 1 st (Monday until Friday) – January Summer semester: March 1 st (Monday until Friday) – June
STRUCTURE	1 st – 3 rd semester: Core program 4 th semester: Master thesis
LANGUAGE	English
TUITION FEES	For students from EU & EEA countries: EUR 363 / semester Plus membership fee to the Austrian Student Union (ÖH) Details for students from third countries: www.mci.edu/admission
SCHOLARSHIPS & GRANTS	Overview of sources of financial support available at www.mci.edu/scholarships
ADMISSION REQUIREMENTS	Relevant Bachelor degree or Diploma
APPLICATIONS	Online at www.mci.edu/application . Please consider the indicated deadlines.
SELECTION PROCESS	Online application: CV & motivation Online admission interview



Background & Career Prospects

The master program in Medical Technologies is a four semester program with a total of 120 ECTS.

A semester comprises 15 weeks of lectures, courses and lab-work. The semester schedule goes from the beginning of October until the end of January and from March until the end of June. Classes are entirely taught in English. Attendance is required from Monday to Friday in the morning with additional block classes as well as project and laboratory work.

Students will be well-prepared for an international career in the sector of medical engineering, rehabilitation, health and sports engineering as well as medical imaging. With its technological orientation, hands-on approach to teaching and additional entrepreneurial content this program is addressing future professionals in:

- Research & development
- Product development & design
- Quality assurance
- Product maintenance & service
- Product & project management
- Technology management
- Sales & application consulting
- Start-ups & innovation





Congratulations to your focus on diversity, entrepreneurial spirit and goal to make MCI the best place to work, learn and grow! *Catherine Ladousse, Executive Director of EMEA, Lenovo, Paris*

Medical Technologies

Due to aging societies, medical technologies is a fast growing market in developed countries. Since medical professionals are no longer able to keep up with the rapid development of diagnostic and therapeutic technology, an increased demand for experts with a relevant education, training and background arises alongside with technological advance.

At the same time, tools developed for industrial applications are often inadequate for medical purposes. This is due to the comparatively high complexity of the human body but also to socio-economic factors that are unique to the sector. Therefore, a well-balanced program in medical technologies has to offer much more than just a collection of courses covering important engineering aspects like latest sensor technology and clinical hardware.

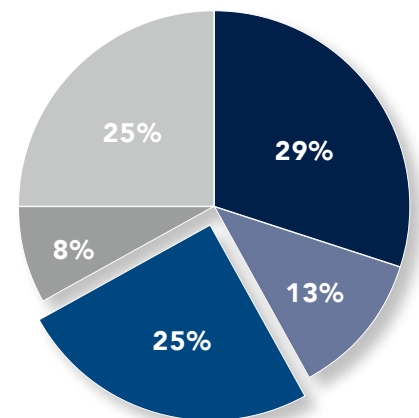
In this program MCI together with its partners combines the latest trends in medical engineering like active prosthetics and implantable devices with current global developments in digitalization. Hence, besides typical contents such as medical imaging, devices and IT, current topics such as app development, augmented reality, medical robotics, personalized medicine and regulatory issues are emphasized. With additional courses in management and business, also economic aspects for potential future entrepreneurs are addressed.

In order to boost professional development, a distinct focus is put on internationalization and practical relevance for the field. Consequently, the educational concept is designed around a mixture of lectures given by standing faculty, international experts and guest lecturers from the industry. This approach is combined with real-life projects, inquiry-based learning and hands-on lab-work to increase and fine-tune the practical knowledge and industry skills in students.

MODULES AT A GLANCE*

■ Medical Imaging, IT & Hardware	29%	(35 ECTS)
■ Projects & Case Studies	13%	(15 ECTS)
■ Medical Engineering	25%	(30 ECTS)
■ Management & Entrepreneurship	8%	(10 ECTS)
■ Master Thesis & Scientific Writing	25%	(30 ECTS)
TOTAL	100%	(120 ECTS)

*all above figures rounded ; ECTS = European Credit Transfer System



Curriculum

	Semester Credit Units ECTS-Credits			
	1	2	3	4
CORE AREA IMAGING, IT & HARDWARE				
App Development for Medical Technologies	4 5			
Advanced Data Analysis & Artificial Intelligence		4 5		
Sensors & Actuators in Medicine	3 5			
Medical Robotics		3 5		
Advanced Biomechanics			3 5	
Virtual & Augmented Reality			4 5	
Advanced Image & Data Processing			4 5	
PROJECT				
Student Project – Concept		2 5		
Student Project – Design & Realization			4 10	
MEDICAL ENGINEERING & CURRENT RESEARCH				
Individualized & Image Guided Medicine	4 5			
Rehabilitation & Assisted Living	3 5			
Product Development, Testing & Approval	4 5			
Advanced Computational Modelling & Simulation		3 5		
Medical Device Safety & Clinical Trials		4 5		
Current Research Areas in MedTech			4 5	
MANAGEMENT & ENTREPRENEURSHIP				
Leadership & Life Cycle Management	4 5			
Entrepreneurship, Innovation Strategy & Business Models		4 5		
THESIS & FINAL EXAM				
Master Seminar				4 5
Master Thesis				0 23
Master Exam				0 2
SEMESTER CREDIT UNITS ECTS-CREDITS	22 30	20 30	19 30	4 30

Faculty

With a mixed faculty comprising the MCI's own lecturers, experts from trade and industry, international visiting lecturers, and recognized experts from the worlds of research, consulting and the liberal professions, the MCI offers an enriching combination of theory and practice. This creates added value for students and enables them to put their new-found knowledge to the test, while the latest findings in theory and practice are integrated in the program with synergistic benefits.

Degree

On completion of the program, students are conferred the degree of a Master of Science in Engineering, in short Master of Science or M.Sc. or MSc; students will receive the relevant academic documentation (Final Certificate, Diploma, International Diploma Supplement etc.) and may use their academic degree in combination with the addendum 'MCI'. Example: MSc (MCI).

Graduates of a master program are entitled to continue their studies towards a PhD.

Tuition Fee

Students from EU & EEA countries are required to pay a tuition fee of currently EUR 363 per semester plus membership fee to the Austrian Student Union. Details & information for students from third countries can be found at www.mci.edu/admission.

To ensure that accepted students take up their places and do not break off their studies without good cause, students are required to pay the tuition fees for two semesters before starting their studies.

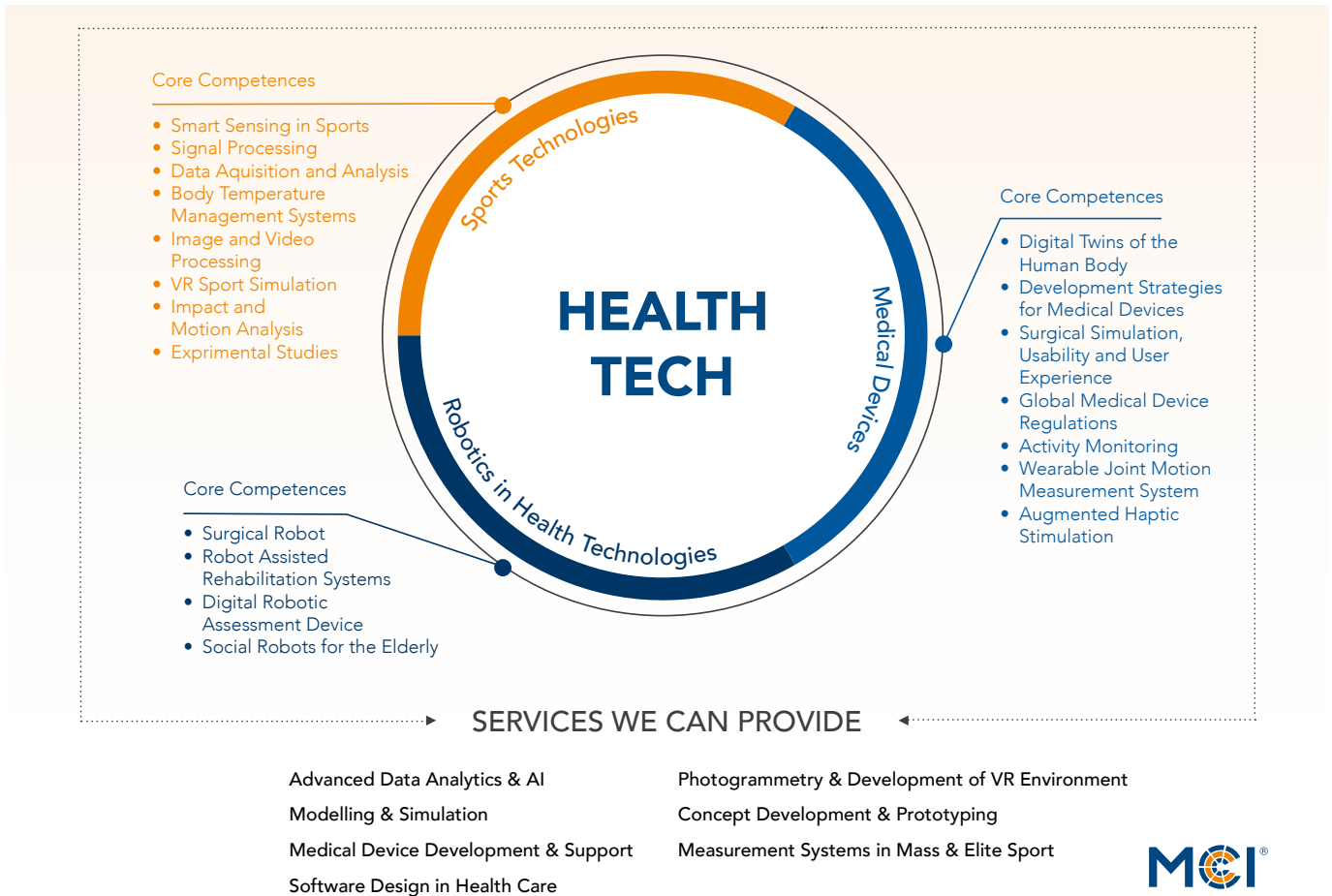


Innsbruck and the MCI are successful brands. Wished we had it in Germany!

Martin Kind, CEO of KIND Group, Hanover / Germany

Research & Development

Research & Development areas in Technology & Life Sciences at MCI



Research in the Medical Technologies Program

The MCI continuously evaluates its research priorities to align with both internally available resources and external conditions. This is done to ensure that socially relevant research can be conducted in a scientifically sound manner. The Medical Technologies degree program imparts knowledge in subject areas that allow various overlaps with the currently existing research foci.

Research Cluster Health Tech

Technology has become an intrinsic part of our lives and increasingly allows holistic, preventive and not least integrative solutions. The focus is on people themselves - not only in their role as patients or athletes. At the same time, the available technological and information technology options have developed rapidly and the acceptance of their use in medicine, health and sports is increasing.

The research focus Health Tech is dedicated to the challenge of combining innovative technologies with trends in medicine, health care, sports and related fields and to develop products and services from them in cooperation with partners from industry and research or to support their further development. The overriding goal is to maintain and/or restore people's health on the one hand, and to promote sport in society through the use of technology and help athletes in top-level sport to achieve first-class performance on the other.

SPORTS TECHNOLOGY

Sport as part of our health is experiencing a technological boom. At the same time, highly monitored athletes are already a reality in elite sports. Data acquisition and data analysis play a central role here and are increasingly being transferred to mass sports. The research focus is already supporting many partners in industry, science and associations both in the application of new technologies in elite sports and in the transfer of these technologies to mass sports. Topics such as artificial intelligence, digital twins or virtual reality play a key role in sports and reflect the competencies of the research fields.

ROBOTICS IN HEALTH

Medicine has relied on the use of robotics and telemanipulators in surgical applications for quite some time. This trend is continuing throughout the healthcare sector, with service and care robots becoming increasingly important. Another growth area is therapy robots, which allow therapy at home and thus enable rehabilitation away from the daily clinical routine.

MEDICAL DEVICES

Medical devices are a fascinating success story at the interface between medical and technological professionals that focuses on improving people's quality of life. One goal of the research focus is to support this field in translational research from the idea to the market-ready product. In particular, the focus is on the development of methods that can improve the efficiency of the development process in this highly regulated field. Digital twins for the product development of technology-based and individualized therapies are as important as technologies for the training of medical professionals and the improved data-driven development of technologies with the involvement of medical professionals in the development process.



Admission

The master program in Medical Technologies is open to graduates of Bachelor and Diploma programs in the fields of engineering / engineering science or natural sciences whose curricula involve at least 50 relevant fundamental ECTS points in the areas of mathematical and scientific, IT, engineering, medicine and medical technologies, and economic aspects in engineering. The decision on the acceptability of prior qualifications is taken by the Program Director.

Provided that the above mentioned prerequisites can be fulfilled, this master program is an ideal follow-on from Bachelor programs in the field of Mechatronics, Medical Engineering, Industrial Engineering, Radiological Technology, Clinical Engineering, Environmental, Process & Energy Engineering.

Details: www.mci.edu/admission

ADMISSION PROCEDURE

The MCI operates an admission process for all study programs. The dates are listed on the individual study program websites, and an overview of the dates for all the programs is available at www.mci.edu/deadlines.

Applications for a place on a study program must be submitted online before the stated deadline and accompanied by the necessary documents.

The places available will be allocated on the basis of the following criteria:

– **Online application: CV & motivation**

The applicant's professional background is considered on the basis of submitted application materials. Particular attention is paid to: education and certificates, academic and professional goals & professional experience.

– **Online admission interview**

The interview is conducted by a commission and gives applicants the opportunity to present themselves personally, to expand on information provided in the application materials and to explain their academic and professional goals. The interview is held in English.

Detailed information on the admission procedures for the individual study programs and can be accessed under "Application" on the webpage of the study program concerned.

RECOGNITION OF PREVIOUS QUALIFICATIONS

Applications for recognition of examinations or credits obtained through other study programs or previous scientific experience must be submitted to the Head of Department & Studies. A decision will only be taken in cases where the application for admission has been approved and accepted. Recognition of credits or previous experience is only granted for individual classes in the program.



Further information

The MCI team is always happy to assist with regard to applications. Advice on all aspects of study at the MCI, including applications and our attractive student services, is available calling in personally, or by phone. For an appointment, please mail to office@mci.edu, call +43 512 2070-0 or contact us via WhatsApp +43 664 88723671.

With a program of sample lectures, study program presentations, project presentations and laboratory visits, the MCI Open House offers an ideal source of guidance for selecting the right study program. For the dates, please go to www.mci.edu/openhouse.

Online info sessions: MCI's online info sessions provide the perfect opportunity to get to know more about the Entrepreneurial School® and its study programs from the comfort of your home: www.mci.edu/onlinelounge.

Follow us on Instagram!

You want to be the first to know all the news and current topics of the master's program Medical Technologies and the Department Medical & Health Technologies? Follow us on Instagram!

On our [mci_medtech](#) account, we regularly post news, interesting information about the study program, study operations, current topics and exciting department news. Just scan the QR code and get started. We are also always happy to be tagged by you!



The complex business environment of our times calls for a rapid exchange of information and decisions. MCI's academic programs exactly hit the spot!

Janina Kugel, Member of the Managing Board, Siemens AG, Munich

Location, campus & services

The MCI offers students an excellent infrastructure with attractive lecture rooms, computer labs, space for group work, and modern research facilities as well as conveniently located student accommodation and car parking, and excellent access by public transport. Students also enjoy a unique university setting, with mountains on the doorstep, unbeatable opportunities for sports and leisure activities, and three other countries – Germany, Switzerland and Italy – just around the corner.

LIBRARY

Thanks to an exemplary cooperation agreement signed with Innsbruck University, students have full access to the international scientific literature and professional library services with generous opening hours. In addition, the MCI has its own smaller reference libraries with a great selection of newspapers, magazines and journals. www.mci.edu/en/library

ACCOMMODATION

As an old university town, Innsbruck offers a wide range of accommodation in dormitories, studios, shared apartments etc. www.mci.edu/en/accommodation

SPORTS & LEISURE

Innsbruck – at the heart of the Alps – is an outstanding tourism destination that has hosted the Winter Olympics twice and as such is the perfect place for year-round sports and leisure activities. The Innsbruck University Sports Institute (USI) is also open to MCI students and offers modern facilities for a wide range of sports and healthy exercise. www.mci.edu/en/sports

ALUMNI & FRIENDS

The MCI's alumni association is a dynamic platform for debate and personal contacts for all MCI graduates, students, faculty and partners. Panel discussions with first-rate international speakers are a stimulating source of motivation and ideas and an enjoyable way to share knowledge and experience. www.mci.edu/en/alumni

CAREER

In keeping with the MCI's motto 'mentoring the motivated', a Career Center with its own international network supports MCI graduates during their first steps and subsequent development in the business world and enables companies to choose their recruitment needs from a pool of excellence. The Career Center offers support and guidance for students and alumni, including internship placements and job opportunities, interview training, career coaching and industry recruitment events. www.mci.edu/en/career

LANGUAGE SKILLS

The MCI's international orientation is underscored by the wide range of foreign languages offered, with a focus on intercultural competence and communication skills in addition to language competence. Extra-curricular language courses are available in Arabic, Chinese, Japanese, and Russian among many others. Experienced language trainers with first-class didactic skills provide a varied and fun learning experience. www.mci.edu/en/languages

STUDENT LIFE

As a university town, Innsbruck is a young-at-heart city that offers MCI students creative interaction in a wide range of fields, and a variety of entertainment and social activities (arts, music, societies, churches, health, shopping, nightlife etc.). www.mci.edu/en/studentlife

START UPS

Entrepreneurial thinking and working are taken seriously at the MCI. The MCI's faculty, students and graduates with the entrepreneurial spirit wishing to set up their own businesses or make commercial use of the results of their research benefit from the in-depth expertise and modern infrastructure. www.mci.edu/en/startup

Study at MCI

For full information, please visit our website at www.mci.edu. We are always happy to advise.

BACHELOR 6 semesters

	Language	Time Model
Management & Society		
Business Administration	GER ENG	ONLINE
Business & Management	GER ENG	FT PT
Management, Communication & IT Management	GER	FT
Media		
Management & Law	GER	FT
Nonprofit, Social & Health Care Management	GER	FT ONLINE
Health Management		
Nonprofit Management		
Social Management		
Social Work	GER	FT
Tourism Business Studies	GER	FT
Technology & Life Sciences		
Biotechnology & Food Engineering	GER	FT
Digital Business & Software Engineering	GER	ONLINE
Environmental, Process & Energy Engineering	GER	FT PT
Industrial Engineering & Management	GER	FT PT
Mechatronics	GER	FT
Electrical Engineering		
Mechanical Engineering		
Medical, Health and Sports Engineering	GER	FT
Medical Engineering		
Health and Sports Engineering		
Smart Building Technologies	GER	DUAL

MASTER 4 semesters

	Language	Time Model
Management & Society		
Corporate Governance & Finance	ENG	ONLINE
Entrepreneurship & Tourism	GER ENG	FT
Marketing Management		
Strategic Management		
European Health Economics & Management	ENG	FT
International Business & Law	ENG	FT
International Business & Management	ENG	FT PT
International Health & Social Management	ENG	FT
Management, Communication & IT	ENG	FT
Social Work, Social Policy & Management	GER	FT
Technology & Life Sciences		
Biotechnology	ENG	FT
Food Technology & Nutrition	GER	FT PT
Environmental, Process & Energy Engineering	GER ENG	FT PT
Chemical Engineering		
Energy Engineering		
Environmental Engineering		
Plant Engineering & Operations		
Industrial Engineering & Management	GER	PT
Mechatronics & Smart Technologies	GER ENG	FT PT
Electrical Engineering		
Mechanical Engineering		
Medical Technologies	ENG	FT

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Executive PhD Program in Management ENG	Certificate Courses	Management Seminars
Executive Master 4 semesters	Controlling & Management	Management
Digital Business MBA GER ENG ONLINE	Corporate Communications	Leadership
Digital Economy & Leadership MSc GER ONLINE	Digital Business Analytics	Communication
Digital Marketing & Analytics MSc GER ONLINE	Family Business	Digital Skills
Executive MBA ENG ONLINE	General Management	Leadership Trainings
LL.M. Digital Business & Tech Law GER ONLINE	Human Resources Management	Programs for universities
Management & Leadership MSc GER PT	Innovation Management	Corporate Programs
	Management, Psychology & Leadership	Technical Trainings
	Marketing	Automation & Control Engineering
	Sales Management	Fundamentals of Process Engineering
	Systemic Leadership Psychology	In-house Energy Management
		Workshop Computational Fluid Dynamics
		International Sessions for Students
		Summer School / Winter School

ENG = English, **GER** = German, **FT** = Full-time, **PT** = Part-time, **ONLINE** = Blended learning (online & attendance modules)

www.mci.edu

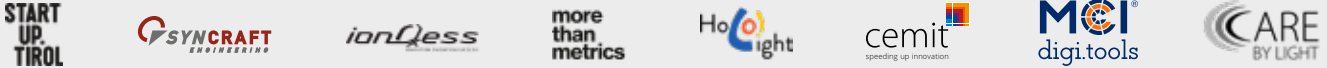
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