HECTOR SCHOOL

Technology Business School of the KIT





Executive Education for Engineers Part-Time Master Programs & Certificate Courses

Technology & Management Know-How Holistic approach at one of the best technical universities worldwide*

»Professional development in the sense of lifelong learning, talent management, and human resources development strategies are drivers for the success of globally acting companies in the future. Even highly qualified professionals need to continuously update their know-how, since paradigm shifts in technology develop very frequently.

As we are the first who developed an academic part-time program for professionals in which they can participate in while they continue working in their field, we can assure you that all our experience is integrated to guarantee a successful Master-degree and sustainable achievements in the industry. «

*Current rankings proof the quality of KIT, e.g.:





Dr.-Ing. Judith Elsner Managing Director HECTOR School

Part-Time Academic Programs for Professionals Quality Made by the Karlsruhe Institute of Technology (KIT)

Technology Business School of the KIT

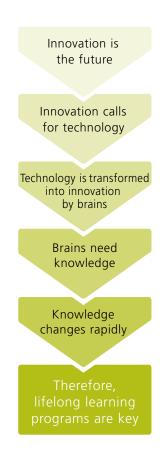
The Karlsruhe Institute of Technology (KIT) is the largest institution for research <u>and</u> education in Germany. Globally known for its technology expertise in German engineering, KIT is famous for its research, excellent scientific education, lifelong learning, comprehensive advanced training, and a sustainable culture of innovation.

Continuous Education on the Highest Academic Level

The HECTOR School is the Technology Business School of the KIT named after Dr. Hans-Werner Hector, one of the co-founders of SAP AG. The school endeavors to provide professionals with state-of-the-art technology expertise and management know-how in part-time education formats. With Executive Master Programs, Certificate Courses, and Customized Partner Programs, the HECTOR School fosters lifelong learning approaches of its industry partners and the executive development of its graduates.

Your Success is Our Vision

The HECTOR School strives for sustainable and continuous education on the highest academic level, building on more than 10 years of experience. The growing need for qualified engineers, computer scientists, and economists demonstrates HECTOR School's vision: sustainable success of our graduates & their companies.



HECTOR School's Vision for Success

Executive Education @ HECTOR School 4 Reasons for the Technology Business School of the KIT

Technology Transfer & Innovation from one of the best engineering universities worldwide, the Karlsruhe Institute of Technology (KIT).

Management & Technology: the combination makes our programs unique. This ensures the sustainable competitiveness of companies.

Power of Networks is supported professionally between academia and industry as well as across industries worldwide.

Part-Time Programs guarantee perfect planning for participants as well as for their companies and enable simultaneous study and work.

A Strong Cooperation with Industry Lifelong Learning Programs Foster Innovation and Competitiveness



Challenges for Industry

Battle for talents, retaining talent, employability, talent management: With the focus on lifelong learning in strategic HR development, companies strengthen their image, address current challenges and gain attractiveness for high potentials and professionals.

Advantages for Industry

According to the first results of the Bologna Process, employers need to be aware that bachelor graduates plan on completing master programs, even after starting their professional careers. By offering clear development structures, companies attract motivated employees and enhance their retaining factor. On the other hand, professionals optimize their competency profile and their employability by participating in continuous education programs. In times of fast changing markets and globally oriented companies, this will be a key factor for personnel career development for companies as well as for the employees.

The advantages of lifelong learning programs in cooperation with universities, given a highly academic yet practical oriented approach, are manifold:



Portrait of the HECTOR School on our YouTube Channel



Technology Transfer & Innovation

Industry benefits from state-of-the-art research findings at KIT. Participants of HECTOR School programs are trained at the highest academic level. They will act as interfaces between their companies and KIT. The master thesis for master programs, for example, is often the start of an intensive cooperation through joint innovation projects.

Management & Technology

Equipped with scientific methods and state-of-the-art knowledge in their field of technology expertise, combined with management know-how, participants increase the creativity and innovative potential of their company. Furthermore, professionals become prepared for future career steps in executive positions.

Power of Networks

In times of global and cross-linked markets, a network of international peers and partners is indispensable. The HECTOR School graduates will not only gain valuable contacts within KIT but also to an extensive professional network of alumni worldwide.

• Part-Time Programs

The HECTOR School programs allow their participants to gain high-level academic further qualification while being able to work at the same time. Due to the part-time approach of all programs, professionals can continue their challenging careers.

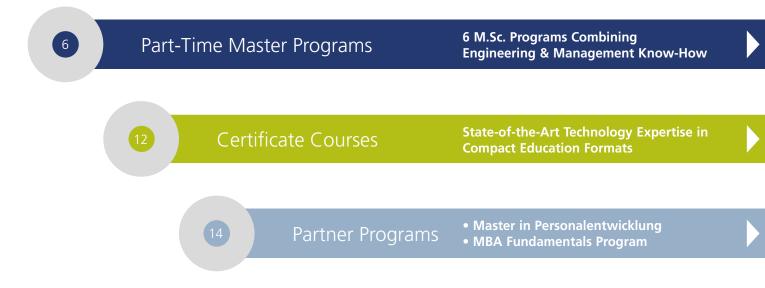
HECTOR School: Strategic Partner for the SIEMENS AG



»The master programs at the HECTOR School are a great opportunity to advance qualified employees. We appreciate especially the fact that our employees gain latest results of research of the KIT. The part-time structure and the modular composition enable us to integrate the participation in our operational work. For this reasons the master programs are an established method to be one-step ahead of our competitors for several years.«

Sebastian Hennig Academic Adivsor & Trainer, Siemens AG

ABB AG • Alcatel Transport Solutions Deutschland GmbH • Alcatel-Lucent Deutschland AG • Audi AG • BASF • BASF Business Services GmbH • BBBank eG • Behr GmbH & Co. KG • Behr-Hella Thermocontrol GmbH • Blohm+Voss Nordseewerke GmbH • BMW Group • Bombardier Transportation GmbH • Robert Bosch GmbH • Brose • Continental AG • DAIMLER AG • DB Fernverkehr AG • DB ProjektBau GmbH • DZ Bank AG • Eisenmann • El-Khayyat • ELO Digital Office GmbH • EnBW • Endress + Hauser GmbH & Co. KG • Enpower Energy Corp. • EUROHYPO AG • Fine Hygienic Paper Co. Ltd/ Nuqul Group • Freescale Semiconductor Inc. • Hikma Pharamceuticals PLC • Howaldtswerke-Deutsche Werft GmbH • IBM • Karl Dungs GmbH & Co. KG • Krones AG • KSB AG • Landesbank Baden-Württemberg (LBBW) • Lufthansatechnik Hamburg • MAG IAS GmbH • MAN Nutzfahrzeuge AG • MBtech Consulting GmbH • MELEC GmbH • Melexis GmbH • MTU UK Ltd. • Navistar International • OBE, Ohnmacht & Baumgärtner GmbH • Reuters AG • Rexroth Star GmbH • Rothe Erde GmbH • SAMARCO Brezil • SAS Automotive Systems • Schaeffler KG • SEW-EURODRIVE GmbH & CoKG • Sictel • Siemens AG • Telekom AG • Thales Transportation Systems GmbH • ThyssenKrupp Marine Systems AG • ThyssenKrupp Technologies AG • TI Automotive • T-Systems • Unilever • Vale • Verband der Deutschen Bahnindustrie (VDB) • Vibracoustic GmbH & Co. KG • XING AG Examples for companies where HECTOR School participants are employed



Part-Time Master of Science Programs (M.Sc.) State-of-the-Art Technology Combined with Management Skills



The HECTOR School offers six part-time master programs designed for professionals in leading positions. The master programs are more than typical MBA programs as they combine management with engineering expertise. The primary goal is to enable professionals to take a holistic approach when managing highly interdependent processes. All programs are completed with a Master of Science degree from the Karlsruhe Institute of Technology (KIT).

Leadership Know-How for Engineers

All programs share five management modules providing the participants with general knowledge in finance, accounting, marketing, international multi-project management, international law, human resource management or innovation management. Therefore, they can consider the commercial implications of project decisions.

Technology Expertise: More Than Just an MBA

In addition to the management modules, five engineering modules in each specialization convey state-of-the-art technology know-how and the methodology necessary to master the scope of new technologies.

Part-Time Structure for Professionals

The academic calendar for the master programs starts annually in October. It consists of 10 modules, each with a duration of 10 days. Intermittent periods of lectures are scheduled to allow participants to continue with their demanding careers whilst acquiring new skills. All master programs are taught in English. They are completed within approximately 20 months. Workshops and case studies provide ample opportunities to explore the direct applications of the module contents simulating a real business environment.

Master Thesis as an Innovation Project

The master thesis allows participants to work independently, reflecting their own company's needs and their specific business environment. Most companies and participants take this opportunity to set up innovation projects as a master thesis and gain outstanding added value through the consultation of such projects by professors from KIT.

International Orientation for Global Success



At HECTOR School, the participants benefit from the vivid intercultural exchange with fellow students from all over the word. The international

orientation is also anchored in the curriculum. All course content is considered in international settings and global contexts. Furthermore, certain modules are taught on-site at one of HECTOR School's international partner institutions, e.g. at the ESADE Business School in Barcelona or the KIT China Branch in Suzhou.



Six Part-Time Master Programs

- Production & Operations Management (POM)
- Management of Product Development (MPD)
- Mobility Systems Engineering & Management (MSEM)
- Energy Engineering & Management (EEM)
- Service Management & Engineering (SME)
- Financial Engineering (FE)

Management Modules within all Master Programs

The six different Master Programs all share five management modules where the latest theories and methods in management are conveyed. Participants from different branches and international locations can exchange their expertise, discuss current technological and commerical challenges from different viewpoints and build up a sustainable network of peers.

Management is becoming increasingly complex and networked in data-driven companies (DATA). Therefore, engineers and managers must obtain a holistic understanding of all corporate divisions to be able to make complex decisions (DECISIONS & RISK) in a future and result-oriented manner (INNOVATION & PROJECTS) from the perspective of the market (MARKETING), the employees (PEOPLE & STRATEGY), and the company (FI-NANCE & VALUE).

Management Modules

- MM 1 Innovation & Projects
- MM 2 Finance & Value
- MM 3 Marketing & Data
- MM 4 Strategy & People
- Corporate Innovation and Entrepreneurship (EEM) 🛞 🛌 MM 5 Decisions & Risk



Prof. Dr. Martin Klarmann Institute of Information Systems and Marketing, KIT Master Programs EEM, MSEM, POM Prof. Dr. Stefan Nickel

Institute of Operations Research, KIT Master Program MPD

Prof. Dr. Martin E. Ruckes Institute of Finance, Banking, and Insurance, KIT Master Programs FE & SME

Co-Program Directors Management Modules

Six Master of Science Programs (M.Sc.) State-of-the-Art Technology Combined with Management Skills



Prof. Dr.-Ing. Kai Furmans Institute for Material Handling & Logistics, KIT Academic Director of the HECTOR School and Program Director POM

Master in Production & Operations Management (POM)

»The design and operation of production systems and supply chains is undergoing a rapid change. Driven by new technology, as reflected by industry 4.0, the education of the past is no longer sufficient to guide companies through the changes. A master in POM equips participants with the necessary competences, bridging the gap between up-to-date theories and advanced technologies.«



Engineering Modules

EM 1 Fundamentals in Production & Operations Management EM 2 IT Support of Production Systems

- EM 3 Methods of Operations Management
- EM 4 Networks of Supply & Production Systems

EM 5 Global Production & Distribution Systems



Prof. Dr.-Ing. Dr. h.c. Albert Albers Institute of Product Engineering, KIT **Program Director MPD**

Master in Management of Product Development (MPD)

»Product Development is the driver of innovation. In MPD, participants learn to manage product development in an efficient, methodical, creative and successoriented way. With the scientifically sound and practice-oriented training program for professionals you will develop the qualification to become the driving force for successful product innovation in your company.«



Engineering Modules

- EM 1 Design/ Validation Process & Information Systems
- EM 2 Integrated Product Development
- EM 3 Product Generation Development
- EM 4 Systems & Cases

Master in Service Management & Engineering (SME)

EM 5 Multi-Technological Systems & Workshops



Prof. Dr. Andreas Oberweis Institute of Applied Informatics & Formal Description Methods, KIT

Program Director SME



Engineering Modules

EM 1 Information & Service Management

»The future will be a service world. The development of successful strategies, business models and processes adapted to this requires a profound understanding and integration of technological, economical, and societal issues. New technologies, such as cloud computing, big data, web 3.0, and mobile networking, are the basis for engineering & managing innovative smart and secure service systems.«

- EM 2 Service Technologies
- **EM 3** Digital Services
- EM 4 Business Processes & Software Engineering
- EM 5 Regulations & Economics of Networks

Master in Mobility Systems Engineering & Management (MSEM)

»The Master Program MSEM, offers a unique combination of courses in emerging technologies & systems engineering. Processes, methods and tools for the challenges of future mobility in e-drive, autonomous driving, communication-over-the-air, and worldwide release & configuration management are introduced on the engineering as well as on the management side.«



Prof. Dr.-Ing. Eric Sax

Program Director MSEM

Institute for Information Processing Technology, KIT



Engineering Modules

EM 1 Processes, Methods & Tools of Systems Engineering
EM 2 Systems Design
EM 3 Systems Integration & Validation
Specialization Advanced Driver Assistance Systems (ADAS)

EM 4 Functions of ADAS EM 5 Components & Technologies of ADAS Specialization e-Mobility

EM 4 E-Mobility: Political & Technical Framework EM 5 E-Mobility: Components & Technology

Master in Energy Engineering & Management (EEM)

»The energy transition is associated with many challenges, such as an increase in efficiency of energy conversion systems based on renewable energies and their integration into future energy systems. This requires e.g. the development of capable energy storage systems and an intelligent demand side management. EEM covers all these aspects and provides the skills to successfully face the challenges.«



Prof. Dr.-Ing. Hans-Jörg Bauer Institute of Thermal Turbomachinery, KIT Prof. Dr.-Ing. Mathias Noe Institute for Technical Physics, KIT **Program Directors EEM**

Engineering Modules EM 1 Renewables

EM 2 Thermal Energy Conversion

- EM 3 Electricity Generation & Energy Storage
- EM 4 Smart Networks & Energy Distribution
- EM 5 Energy Economics

Master in Financial Engineering (FE)

»Fast-evolving financial markets constantly set new challenges while progress in quantitative tools and computer technology open up entirely new opportunities. The finance industry needs people with in-depth knowledge of financial theory, mathematical tools, and information technology as well as adequate methods of engineering and management tools. FE prepares professionals perfectly for these requirements.«





Engineering Modules

EM 1 Information & Service Management
EM 2 Global Financial Markets
EM 3 Valuation & Financial Analytics
EM 4 Advanced Financial Engineering
EM 5 Risk Management

Prof. Dr. Marliese Uhrig-Homburg Institute of Finance, Banking, and Insurance, KIT

Program Director FE

Unique Combination: Management & Engineering

Part-Time, English-Taught, Duration of 20 Months, Engineering & Management

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>> Master Thesis: 6 - 9 months project work, depending on the program

Management Modules MM **Engineering Modules** FM

Exam Days

Curriculum may be subject to change.

Key Facts: Part-Time Master of Science (M.Sc.) Programs

Program Structure

- Part-time, 10 x 2-week modules
- Duration of approx. 20 months
- 5 Engineering and 5 Management Modules
- Master thesis = project work in the company
- Teaching language: English
- Yearly program start: October

Academic Degree

Master of Science (M.Sc.) from the KIT

Admission Requirements

- An academic degree: e.g. Bachelor, Master or Diploma
- 1-2 years work experience (depending on the level of the first degree, recommended > 3 years)
- TOEFL score of at least 230 or 90 iBT

Accreditation

All M.Sc. programs are accredited by ASIIN. ASIIN was acknowledged as the first European continental accreditation agency by the Washington Accord (W.A.) in 2003.



A HECTOR School Master: Leadership Know-How for Demanding Careers.



»I have lively memories of my application interview for the HECTOR School and the promise of Prof. Kai Furmans: "We will make you push your limits." An inspiring international environment, people from different industries and working fields, and the link to a state-of-the-art understanding of production and logistic systems provided me with a solid basis for the progression of my professional career. A challenging and enriching experience – promise kept!«

Stefan Oehmke Master in Production & Operations Management (POM) VP Europe, Business Area Chassis Mounts, TrelleborgVibracoustic

Global Network of Industry Partner & Peers

HECTOR School participants come from all over the globe. This fosters intercultural exchange with other professionals. Due to the holistic approach of the HECTOR School, participants share the management modules with peers from different industries and backgrounds. This will guarantee a worldwide and interdisciplinary network that will last for a lifetime.

International, Diverse, and Sustainable

After graduation, the HECTOR School offers a professional network with alumni activities, reaching from social media channels to alumni meetings in cooperation with exclusive industry partners.





Certificate Courses Technology Know-How in Small Bites



Customized lifelong learning solutions form one of the key competencies of the HECTOR School. Paradigm shifts in technology call for high-end trainings for engineers.

Engineers in all industries need a regular update in state-ofthe-art technology expertise to secure their personal career path as well as the future technology development of their companies. The HECTOR School Certificate Courses from address the need of engineers for specialized lifelong learning elements.



- Smart Manufacturing & Automation with Industry 4.0
- Quality & Supplier Management in China
- Systems & Software Engineering



- Internet of Things: Modern Network Infrastructures
- Information & Knowledge Management
- Digitalization of Service Systems
- Data Science

Compact Part-Time Education Formats



In compact 3- to 5-day seminars, professionals get updated with technology expertise directly derived from the latest KIT research. On a high academic level and yet practically oriented, the Certificate Courses qualify

engineering professionals in current technology issues. The seminars are offered in the following four highly topical fields of technology:



- Renewables Generation & Grid Integration
- Battery Technology



- Technology of Hybrid & Electronic Vehicles
- Digital Signal Processing
- Integrated Photonics
- Charging & Energy Management

The indicated courses serve as examples. The HECTOR School also offers customized seminars upon request and regularly updates the range of courses.

International Certificate Courses

In order to provide first-hand insights into specific technological environments and to foster intercultural exchange, the Certificate Courses are not only offered in Germany, but also at different international locations (e.g. in Suzhou/ China). Organized in cooperation with partner institutions worldwide, HECTOR School equips engineers with high-level special expertise. Current research know-how is conveyed to the participants by using a smart combination of lectures and case studies, either on- or off-site.

Model of an International Certificate Course: Supplier Development & Quality Management in China

Expert know-how about the Chinese market is becoming more and more important for companies that operate globally. Today, China produces nearly one quarter of all global manufacturing output by value. The white heat of China's ascent has forged supply chains that reach deep into South-East Asia. Therefore, global players continually extend their production sites to China. At the same time, the demand for engineers with highly developed technological know-how and the ability to comply with different on-site requirements is rapidly growing.

The Certificate Course in China provides participants with indepth insights into the practical implementations in a Chinese production environment and allows for a valuable exchange with professionals and executives working in Chin

Our Company Offer

Certificate Courses: Customized & in-house Contact us: admissions@hectorschool.com



Quality & Supplier Management in China: Schedule of Topics 2018

Key Facts: Certificate Courses

Program Structure

3- to 5-day seminars, max. 15 participants



Admission Requirements

An academic degree (e.g. bachelor, master, or diploma) and > 5 years of relevant work experience recommended

Academic Degree

Certificate from the Karlsruhe Institute of Technology (KIT), correlation: 1-3 ECTS

Partner Programs Customized Programs for Academia and Industry

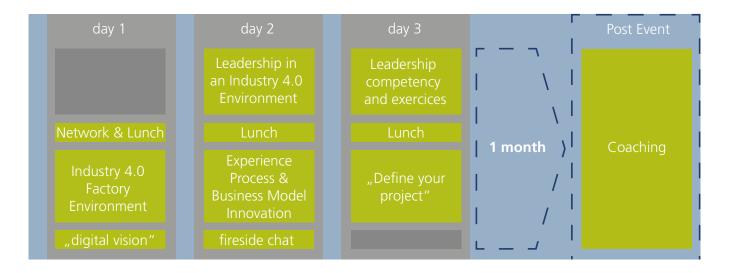


In addition to its executive development programs with a focus on technology expertise, the HECTOR School also fosters innovative continuing education programs in cooperation with its academic partners.

Leadership 4.0 Program



The Leadership 4.0 program was developed in cooperation with the IHK Karlsruhe, the Allianz Industry 4.0 Baden-Württemberg and the Center for Creative Leadership (CCL). The Digital Transformation is one of the most challenging developments for the industry these days. With the Leadership 4.0 program, we equip managers with the knowledge and instruments to encounter the change.



MBA Fundamentals Program

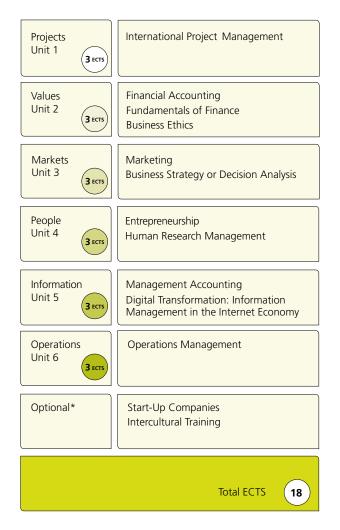


The compact MBA program provides an ideal vehicle for providing management expertise and skills in a range of areas. The six units, each lasting five days, set current management issues in the context of present research and relate them to

accepted business practices and solutions.

Participants of this program are graduates with a Master or Ph.D. degree in engineering or natural sciences or have business experience (e.g. either in specific fields of engineering, in R&D or development departments in the industry), and have started their careers.

In the six units of the MBA Fundamentals Program, participants cover courses in e.g. finance, entrepreneurship, and marketing. The units are designed to be taken parallel to the job. And for those who want to go further, the credit points for the MBA Fundamentals Program can be recognized internationally within full MBA programs.



Schedule of MBA Fundamentals Program 2018

Key Facts: MBA Fundamentals Program

Program Structure

Part-time with 6 units, 5 days each, taught in English



Admission Requirements

Future executives with an engineering background, Master/ Ph.D. Degree

Academic Degree

Certificate from the Karlsruhe Institute of Technology (KIT), correlation: 18 ECTS (recognized in international MBA programs)

Contact us Do you have questions or need assistance? Our competent team is looking forward to help you



HECTOR School of Engineering & Management

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