



**PRESIDING  
COMMITTEE  
REPORT  
2014/2015**

Foreword	3
Reports	4
Qualifications and demand	14
Research and development	20
Structural data	24
Perspective	28
Imprint	31



# Herzlich Willkommen Welcome



Ihr Standort

- |   |   |
|---|---|
| <p><b>A</b></p> <ul style="list-style-type: none"> <li>• Information</li> <li>• Poststelle</li> <li>• Mensa</li> <li>• Hörsäle, Seminarräume, Labore</li> </ul>   | <ul style="list-style-type: none"> <li>• Elektr.- und Informationstechnik (EIT)</li> <li>• Studierenden - Service - Einrichtung</li> <li>• Mathematik, Naturwissenschaften und Informatik (MNI)</li> </ul>            |
| <p><b>B</b></p> <ul style="list-style-type: none"> <li>• Präsidium</li> <li>• Verwaltung</li> </ul>   | <ul style="list-style-type: none"> <li>• Hörsäle</li> <li>• Seminarräume</li> </ul>   |
| <p><b>C</b></p> <ul style="list-style-type: none"> <li>• Bibliothek</li> <li>• Hörsäle, Seminarräume, Labore</li> <li>• Hochschulzentrum für Weiterbildung (HZW)</li> <li>• Sozial- und Kulturwissenschaften (SoK)</li> </ul> | <ul style="list-style-type: none"> <li>• Krankenhaus- und Medizintechnik, Umwelt- und Biotechnologie (KMUB)</li> <li>• Maschinenbau und Energietechnik (ME)</li> <li>• Wirtschaft (W), THM Business School</li> </ul> |
| <p><b>D</b></p> <ul style="list-style-type: none"> <li>• Krankenhaus- und Medizintechnik, Umwelt- und Biotechnologie (KMUB)</li> <li>• Labore KMUB</li> </ul>   | <ul style="list-style-type: none"> <li>• Labor - Technologie - Zentrum</li> <li>• Anwerdezentrum</li> </ul>   |
| <p><b>E</b></p> <ul style="list-style-type: none"> <li>• Bauwesen (Bau)</li> </ul>  |   |



Bienvenue

The University Pact that was concluded with the State Government in March 2015 manifests a structural development that we already initiated at the TH Mittelhessen some time ago. Our guiding concept is a “new type of university”, as the Science Council has coined it, to recognise the potential of efficient universities of applied sciences, and at the same time open new perspectives to them.

The University Pact 2016-2020 represents such a change for the Universities of Applied Sciences. The State Government is willing to financially support the development of applied research at those universities. They will also provide funds to support cooperative doctoral procedures and inter-disciplinary platforms for doctorates.

Moreover, it is remarkable that the pact has the goal of “sustainably and permanently” increasing the proportion of students at universities of applied sciences. In addition it is dedicated to the extension of dual and extra occupational study courses. This prioritisation also confirms the measures we have already taken.

How much the THM has developed in the various fields since 2013 is documented in this present “Presiding Committee Report”. At the same time, it provides meaningful data about the extension of the infrastructure.

On behalf of the Presiding Committee I would like to thank the many cooperation partners of our University of Applied Sciences as well as all faculty members for their contribution. We would be very happy to continue these productive relationships.

Giessen, 31 March 2015

Dr. Günther Grabatin  
President, Technische Hochschule Mittelhessen





## 2013

### April

The development of an innovative wind turbine, on which THM Professor Dr. Jens Minnert from the Department of Civil Engineering and the Oberhessisches Spannbetonwerk in Nidda are jointly working, is being supported by the State of Hessen with 280,000 euros. By using steel framework the project partners want to realise technical and economical improvements in the hybrid construction method, which combines concrete constructions with a steel tower.

### May

A five-member delegation from Emilia-Romagna visits the TH Mittelhessen. The group is led by Professor Dr. Patrizio Bianchi, Secretary for Education, Vocational Education, Science and Universities. The Northern Italian region is reorganising its educational system and, among other things, wants to establish universities of applied sciences based on the German model. At the THM the guests show interest, for example, in the practical relevance of teachings, for the co-operations between science and enterprises as well as issues of technology transfer.



### June

The "Auto Bild" magazine praises the "THM Motor-sport Efficiency" racing team, whose vehicle drove on one litre of petrol a 1,046 kilometre route during the 29th "Shell Eco Marathon" in Rotterdam, as "the best German Team in this supreme discipline". This result earns the "Streamliner V3" team from Friedberg seventh place in the Prototype Ottomotor category with more than 50 starters from almost 20 countries. The TH team, consisting of students from the Mechanical Engineering, Mechatronics, and Computer Science faculties, is participating for the third time and after 626 kilometres in 2011 and 16th place with 717 kilometres in 2012, managed to increase the mileage by almost 50 percent.



The THM informs the public about the plans to turn the western part of Wiesenstrasse into an open space. Work begins in the same months with the installation of utility lines and drainage pipes. This is followed by the demolition of the derelict three-storey K-building. In accordance with the plans of the Giessen-based landscape architects Sommerlad Haase Kuhli, the site is being paved with beige-coloured, large-format concrete slabs and structured with anthracite-coloured banding. Also scheduled are an oval pavilion, benches and the planting of trees.



**July**

At the architectural design competition for the construction of the new Laboratory and Technology Centre on THM Campus in Gutfleischstrasse in Giessen the jury awarded the first place to the Hascher Jehle Planungsgesellschaft mbH and hutterreimann Landschaftsarchitektur GmbH working group (both from Berlin). Twenty-six teams from architecture and landscaping planning offices entered their designs in a Europe-wide tender.



The Stifterverband für die deutsche Wissenschaft admits StudiumPlus into the "Qualitätsnetzwerk Duales Studium" network. Germany-wide the association selects ten universities out of the 61 applicants. The network partners will present a joint recommendation and a guide for the development of dual studies.



**August**

Dr. Zsusa Breier, State Minister for Integration and Europe in the Hessian Department of Justice visits the THM User Centre for Medical Technology. Since 2011 the centre, which is funded by the European Union and the State of Hessen, has provided laboratories and office space of 1,300 square metres. They are equally used by medical technology start-ups as well as for cooperation projects between the university and the economy.





### September

New methods for the diagnosis and therapy of a widespread lung disease are being researched by a THM team whose project is being funded with 430,000 euros by the Hessian Ministry of Science and the Arts within the scope of the IngenieurNachwuchs 2013 programme. Led by Professor Dr. Volker Gross, the applied physiology team is dealing with the development of technical procedures that make the cause and effect of Chronic Obstructive Pulmonary Disease (COPD) more transparent. According to the World Health Organization, COPD is the fourth most common cause of death. The THM team has the objective of facilitating an earlier diagnosis of COPD, thus increasing the chances of a successful therapy.

### October

Once again a winter semester at the THM begins with new record numbers: 3,231 new students have registered; that is eight percent more than in the previous year. The highest increase is in Giessen, where 1,780 students enrolled -14 percent more than last year. Even Friedberg with 1,002 and Wetzlar with 449 first semester students exceed the peak numbers of the previous winter semester. The total number of students is now 14,785, which is also a peak in the history of the university.



“Today, after the premier, we are in the lucky situation of experiencing a continuation on a significantly increased scale. At the launch of Deutschlandstipendium at the Technische Hochschule Mittelhessen we were able to provide twelve high-achieving students with this support. In this second round there are already 41 scholarships”. This positive stock result is highlighted by THM President Günther Grabatin at the award ceremony. On behalf of all recipients Maedot Desta Hailemichael, an Ethiopian student in the Information and Communication Engineering Master Programme thanks the THM and all the sponsors.



**November**

The State Government promises to support the new LOEWE Centre for Insect Biotechnology with 17.7 million euros for an initial period of three years. A second funding period with a similar volume is intended to follow. Besides the JLU (leading management) the TH Mittelhessen and the Fraunhofer Institut for Molecular Biology and Applied Ecology, Aachen are involved. Giessen-based entomologist, Professor Dr. Andreas Vilcinskas, is responsible for the overall management of the LOEWE Centre. Prof. Dr. Peter Czermak (THM) and Prof. Dr. Holger Zorn (JLU) are co-coordinators.

Professor Dr. Frank Runkel welcomes more than 60 participants at the first interdisciplinary doctoral colloquium at the THM. The vice president for research reports that about 65 young scientists are currently further qualifying themselves with the doctorate. For this the university takes the way of cooperations and focusses particularly on the neighboring universities. TH graduates work, for example, in the "Bio Resources and Bio Technology" graduate college, which the THM and the Justus-Liebig-Universität have jointly established. In the "Bioengineering and Imaging" programme Marburg-based Philipps-Universität is their partner.

**December**

After a six-month construction period, the TH Mittelhessen moves into a new seminar building in Friedberg's Kettlerstrasse. The costs of almost two million euros are being shared by the Federal Government and the State of Hessen within the scope of the "Hochschulpakt-2020-Investigationsprogramm" funding programme. The solid rectangular new building designed by Bad Nauheim-based architect Alfred Möller has a total of 450 square metres floor space. Besides three seminar rooms with 100 square metres each it provides a room for student work groups and four offices. The building was built using the so-called modular wooden construction method. Its energy demands are 50 percent below the requirements of the energy saving decree.



**LOEWE**

Exzellente Forschung für  
Hessens Zukunft





## 2014

### January

The THM Nanoelectronics and Component Modelling working group is dealing with the simulation process for the development of innovative transistor structures. The Federal Ministry for Education and Research (BMBF) is sponsoring this project with 432,000 euros. Project leader is Professor Dr. Alexander Klös, whose team is attached to the Nanotechnology and Photonics Centre of Excellence.



### February

The THM awards the “Ludwig-Schunk” Prize for the first time. Six graduates receive the 1,000 euro award for outstanding academic achievements as well as social commitment. Recipients are Fritz Dollnick from Giessen, Daniel Hanselmann from Gelnhausen, Nathanael Harfst from Hüttenberg, Jonathan Otto from Buseck-Beuern, Anna-Lena Ruppel from Friedberg and Tobias Schniewind from Laubach. Meanwhile, the six award-winning junior employees are either working or undergoing further scientific education. With the prize, the Ludwig-Schunk Foundation wants to reward junior employees who distinguish themselves by commitment and volunteer involvement.



### March

Boris Rhein, Hessian Minister for Science pays his first visit to the THM. At the User Centre for Medical Technology in Giessen, THM President Professor Dr. Günther Grabatin introduces the university as an important economic factor in the region that is characterised by medium-sized companies. As the sole training establishment for engineers in Mittelhessen, the THM is of high importance in the response to the lack of skilled workers in the economy. A tour leads the minister to different laboratories for biotechnology, for example to Thora Tex GmbH, a start up at the User Centre.

**April**

The Landesgartenschau Giessen (Horticultural Show) opens its gates in the Wieseckau near the campus in Wiesenstrasse. Represented by Professor Jürgen Hauck from the Civil Engineering faculty along with some staff and students, the THM was involved in the creation of the “Wissenschaftsachse.” In the Green Lecture Hall, the THM and the Justus-Liebig Universität host lectures and presentations. As a gesture of good neighborhood with the “Scientific Park”, the university covers its Building D in the neighboring Gutfleischstrasse with a natural green cover.



**May**

The “Experimental and Numerical Studies of Windshields under Impact Loads” research project at the THM is designed to improve pedestrian protection in accidents. Professor Dr. Stefan Kolling from the Institute for Mechanics and Material Testing in Giessen is leading the project. Co-operation partners, besides the Forschungsvereinigung Automobiltechnik, are the Rüsselheim Tecosim GmbH and the Dynamore GmbH from Stuttgart, two engineering companies from the automobile industry. The Federal Ministry for Education and Research (BMBF) is funding the project with 286,000 euros.



**June**

The THM issues invitations to the first “Day of Learning” at the Friedberg Campus. The programme provides workshops, discussion groups and presentations. In this way, the university aims to encourage the exchange of questions about teaching and learning. Originators are the “Working Group for Quality in Teaching and Studies” as well as the project team “Klasse in der Masse” (KiM).

The THM is among the five winners of the nationwide competition “Innovative Studiengangphase.” 110 universities participated in the Stifterverband der Deutschen Wirtschaft and the Heinz Nixdorf Stiftung tender. Until the end of 2016, the THM receives 242,000





euros for the “mission:me” project. This successful concept was jointly developed by research assistants Sabine Langkamm and Jan Salge from the Friedberg Mathematics, Natural Science and Data Processing faculty together with Media Informatics students. With “mission:me,” the university aims to support future students in an introductory semester in the search for a study course.

## July

The THM receives funds from a federal and state government programme to create three positions for female professors. Like nine further applicants, the university achieved maximum values as “exemplary role models for equal opportunities universities” in the evaluation. 76 entries were received in this tender round. The THM has already been successful in the previous female professor programme (2010-2015 period). The selection committee for the second round has now confirmed that the THM has successfully implemented and further developed its equality concept.



## August

The THM Racing Team competes at the “Formula Student Germany” contest at Hockenheimring and ranks tenth among 74 starters from Europe and overseas. For the further development of their vehicles, a new quick assembly hall has been available on Giessen Campus to the “THM-Motorsport Racing” student initiative since this summer. The team includes students from the Engineering, Electrical Engineering, Industrial Engineering, Computer Science and Business Administration faculties. With a 599 ccm cylinder capacity and a 70 kW motor performance on the driving wheels the vehicle accelerates in 3.7 seconds from zero to 100 kilometres an hour.



## September

“Schaufenster der Baukultur” is the title of an exhibition in the new THM pavilion in Wiesenstrasse in Giessen. Models and blueprints of the university’s most recent constructional development are displayed.

**October**

The increase in student numbers at the THM continues even in the winter semester 2014/15. In the induction week in October, the university welcomes 3,541 new students. This is the highest number of first semester students in its history and means an increase of eight percent compared to autumn 2013. The THM Friedberg Campus registers a particularly striking plus in entrants. 1,270 new students in October mean an increase of 27 percent in comparison to the previous autumn. In Giessen, 1,849 young people began their studies (+ 4 percent). At StudiumPlus in Wetzlar, the number of 422 first semester students is just slightly below last year's record high. An additional space of 2,500 square metres is now available there for academic education.

For their special merits for the university, the THM honors Ernst Hahn and Professor Dr. Ryszard Rybski with the Hugo-von-Ritgen-Medaille. At the awards ceremony Professor Dr. Grabatin explains the high significance of this accolade, which is named after a builder who taught in the 19th century at the Giessen University. Ernst Hahn, advisor to the Hessen State Ministry of Economics, Energy, Transport and Regional Development and Professor Ryszard Rybski, director of the Institute for Electronic Measurement Technology at our partnering university Zielona Góra are only the fourth and fifth recipients of the Ritgen medal since it was first awarded in 2005.

**November**

What gets some semester openings going also works on an open air stage at night. At "Friedberg leuchtet," the theatre and shopping spectacle in the county town, the "applied sounds" University Orchestra intones its musical mixture in such a perfect way that the "Wetterauer Zeitung" reports: "The THM Orchestra, led by harmonica virtuoso René Giesen, delighted [the audience] with Rock and rap...".

**December**

The "University in a Migratory Society - Intercultural Opening of the THM" project team presents the results





of an empirical study. The report deals with the experiences of foreign students and students with a "migrant background" at the university. It also deals with any discrimination or racism experiences in daily university life. Based on the results, the authors Michaela Zalucki, Rebecca Bahr, Irene Bleicher-Rejditsch and Andrea Härtel give detailed recommendations. This includes the establishment of an anti-discrimination office at the THM.



For a maximum of two years, civil engineering and architecture students can move into a three-storey building that is listed for demolition and provides a total of one hundred personal workstations in Giessen's Aulweg to study there. This temporary study accommodation is made possible by the Depant and Wilma Wohnen Süd companies. They are the owners of the entire area on which the former Regionalverkehr Kurhessen GmbH office building is located, and they plan on redeveloping the area in 2015. These enterprises are letting the offices rent-free to the THM as a field site.



## 2015

### January

Hessian Minister of Economics, Tarek Al-Wasir, pays a visit to the Competence Centre for Energy and Environmental Systems Technology ZEuUS at the THM. Within the scope of a cooperation project, funded by the State with approximately 400,000 euros, they have developed a special fermenting drum for the production of biogas. Project leaders at the university are Professors Ulf Theilen and Harald Weigand. Project partner is the Brunnenhof Composting Facility. "We are expecting a significant increase in the biogas yield from this technology," explains Professor Theilen during the presentation of the fermenting drum in the laboratory.



### February

After nine years in the Vice President's Office, Professor Dr. Axel Schumann resigns from the THM management at the end of the month. Professor Dr. Klaus

Behler, who worked for three years as a Vice President is also leaving the Presiding Committee. Professor Dr. Günther Grabatin informs the members of the university that he will not stay in office for the entire six-year term that is provided by law, and thus will relinquish the leadership at the end of winter semester 2015/16.

The spatial expansion of the THM in Friedberg is progressing. At the former "Housing Area" site, the construction begins of a module building that aims to provide new laboratories, seminar rooms and offices for the Information Technology – Electronics – Mechatronics, Mechanical Engineering, Mechatronics, Material Technology as well as Mathematics, Natural Science and Data Processing faculties.

The building will provide a main usable area of a total of 700 square metres, cost about 5.5 million euros and is expected to be finished in spring 2016. Moreover, an additional 12.5 million euros from the State of Hessen Heureka Programme are available and allocated for the construction of a technology centre that is scheduled to be built next. For this extension the THM has bought an 8,000 square metre section of the former US residential area in Karlsbader Strasse in the immediate neighborhood of the campus.

**March**

In Berlin the "Hochschulallianz für den Mittelstand" is officially presented. Founding members of the association are the THM, the Hochschule Niederrhein, the Hochschule Bonn-Sieg, the Hochschule Koblenz, the TH Nürnberg, the Hochschule Bremerhaven and the Hochschule Magdeburg-Stendal. "The small businesses rarely perceive the Universities of Applied Sciences as strategic partners that offer an ideal environment for application-oriented projects in research and development as well as cooperation for continuing education. This is what this university alliance aims to change", says THM President Professor Dr. Günther Grabatin.



## Development of the student numbers 2009-2015

	WS 09/10	SS 10	WS 10/11	SS 11	WS 11/12	SS 12	WS 12/13	SS 13	WS 13/14	SS 14	WS 14/15
--	-------------	----------	-------------	----------	-------------	----------	-------------	----------	-------------	----------	-------------

### Campus Giessen

New students	1.570	533	1.299	632	1.321	620	1.528	672	1.780	787	1.849
Students in standard course length	5.533	5.551	5.143	5.202	5.266	5.033	5.505	5.243	5.900	5.468	6.161
Total students (incl. those on leave)	7.149	7.106	7.110	7.036	7.433	7.182	7.810	7.679	8.285	8.123	8.689

### Campus Friedberg

New students	1.020	294	926	302	971	294	969	390	1.002	410	1.270
Students in standard course length	3.144	3.109	3.299	3.251	3.304	3.264	3.334	3.141	3.323	3.212	3.810
Total students (incl. those on leave)	4.639	4.467	4.851	4.615	4.927	4.751	5.162	4.993	5.307	4.991	5.636

### Campus Wetzlar\*

New students	/	/	233	/	394	/	433	/	449	/	422
Students in standard course length	/	/	648	643	828	821	1.010	997	1.184	1.170	1.186
Total students (incl. those on leave)	/	/	652	643	838	827	1.028	1.003	1.193	1.174	1.198

### THM total

New students	2.590	827	2.458	934	2.686	914	2.930	1.062	3.231	1.197	3.541
Students in standard course length	8.677	8.660	9.090	9.096	9.398	9.118	9.849	9.381	10.407	9.850	11.157
Total students (incl. those on leave)	11.788	11.573	12.613	12.294	13.198	12.760	14.000	13.675	14.785	14.288	15.523

### Division of students in %

Campus Giessen	61%	61%	56%	57%	56%	56%	56%	56%	56%	57%	56%
Campus Friedberg	39%	39%	38%	38%	37%	37%	37%	37%	36%	35%	36%
Campus Wetzlar*	/	/	5%	5%	6%	6%	7%	7%	8%	8%	8%

### Graduates

Campus Giessen	333	409	394	444	536	510	444	681	584	658	/
Campus Friedberg	258	293	312	357	269	290	337	342	471	275	/
Campus Wetzlar	/	147	/	231	/	227	/	256	5	361	/
THM total	591	849	706	1.032	805	1.027	781	1.279	1.060	1.294	/

### New students, female

Campus Gießen	457	159	380	156	382	183	544	212	564	239	614
Campus Friedberg	188	39	192	26	173	44	201	76	189	67	256
Campus Wetzlar*	/	/	62	/	89	/	109	/	118	/	110
THM total	645	198	634	182	644	227	854	288	871	306	980
Total percentage of new students	41%	37%	49%	29%	49%	37%	56%	43%	49%	39%	53%

### Students total, female

Campus Giessen	1.786	1.812	1.865	1.848	1.993	1.948	2.256	2.239	2.448	2.382	2.623
Campus Friedberg	735	702	814	746	803	777	883	857	923	861	1.014
Campus Wetzlar*	/	/	155	150	203	199	246	240	298	294	317
THM total	2.521	2.514	2.834	2.744	2.999	2.924	3.385	3.336	3.669	3.537	3.954
Total percentage of new students	21%	22%	22%	22%	23%	23%	24%	24%	25%	25%	25%

\* Wetzlar is being statistically recorded as a campus since WS 2010/11.

In the State of Hessen the TH Mittelhessen is currently the most attractive University of Applied Sciences for potential students. The interest of young people in studying at the THM has remained significantly high for years. The recent statistics of the summer semester 2015 also confirm this trend: compared to the summer semester 2014 the number of newly registered students once again increased by 13 percent. In the winter semester 2014/15 we welcomed 3,541 new students in induction week. This is the highest number of first semester students in the history of the university and means an increase of eight percent compared to autumn 2013. A total of 15,523 students were enrolled in the winter semester 2014/15 at the Technische Hochschule Mittelhessen, this is also a new peak.

With the continuous growth of first semester numbers, the THM distinguishes itself from the nationwide trend. According to a notice from the Statistical Office in Wiesbaden from November 2014, the number of new students at Hessian universities has decreased by 3.3 percent to 35,500 compared to the winter semester 2013/14. On the other hand the total number of students in Hessen increased by 4.5 percent in comparison to autumn 2013.

THM Friedberg Campus reports a very distinctive plus in new semester numbers: 1,270 in the winter semester means an increase of 27 percent compared to autumn 2013. In Giessen 1,849 young people began their studies; this is four percent more than in the winter semester 2013/14. StudiumPlus in Wetzlar also remains an attractive place to study, with a total of 422, the number of first semester students is insignificantly below the record number of the previous year.

In the winter semester 2014/15, the most popular courses in Giessen were Business Administration with 263, Mechanical Engineering with 231 and Civil Engineering with 190 new students. In Friedberg, Business Engineering (185), Media Computer Science (157) and Business Informatics and Administration (152) re-



ported the most new enrollments. In Wetzlar the Dual Study Programmes Business Administration with 133, and Engineering with 126 had the highest numbers of first semester students.

In the summer semester 2015, the THM offers 65 study programmes. Thirty-five of those lead to a bachelor's degree and 30 to a master's degree. Newly established in 2014 were, among others, the bachelor study course Railway Engineering in Friedberg, the Dual Study pro-

## Available courses at the Technische Hochschule Mittelhessen

Course	Campus	Degree
Electrical Engineering	Friedberg	Bachelor of Engineering
Architecture	Giessen	Bachelor of Engineering
Architecture (consecutive)	Giessen	Master of Engineering
Railway Engineering	Friedberg	Bachelor of Engineering
Civil Engineering (dual)	Giessen	Bachelor of Engineering
Civil Engineering (consecutive)	Wetzlar	Bachelor of Engineering
Vocational Education and Training	Giessen	Master of Engineering
Business Administration	Cooperation with JLU Giessen	Bachelor of Education
Business Administration (dual)	Giessen	Bachelor of Arts
Business Administration (dual)	Wetzlar	Bachelor of Arts
Business Administration (extra occupational, part-time)	Wetzlar	Bachelor of Arts
Business Administration (advanced education)	Giessen	Master of Business Administration
Biological Information Systems	Giessen	Bachelor of Science
Bioinformatics and Systems Biology	Cooperation with JLU Giessen	Master of Science
Biomechanics-Motor Functions-Human Motion Analysis	Cooperation with JLU Giessen	Master of Science
Biomedical Technology	Giessen	Bachelor of Science
Biotechnology/Biopharmaceutical Technology	Giessen	Bachelor of Science
Biotechnology/Biopharmaceutical Technology (consecutive)	Giessen	Master of Science
Electrical Engineering and Information Technology	Giessen	Bachelor of Engineering
Electrical Engineering and Information Technology (consecutive)	Giessen	Master of Science
Energy Systems	Giessen	Bachelor of Engineering
Facility Management	Friedberg	Bachelor of Science
Facility Management (distance learning)	Friedberg	Master of Science/Certificate
Computer Science	Giessen	Bachelor of Science
Computer Science (consecutive)	Giessen	Master of Science
Information and Communications Engineering (konsekutiv)	Friedberg	Master of Science
Infrastructure Management (consecutive)	Cooperation with FRA-UAS	Master of Engineering
Computational Engineering	Giessen	Bachelor of Science
Engineering (dual)	Wetzlar	Bachelor of Engineering
International Marketing (consecutive)	Giessen	Master of Arts
Hospital Hygiene	Giessen	Bachelor of Science
Hospital Engineering Management	Giessen	Bachelor of Science

Course	Campus	Degree
HospitalPlanningTechnology	Giessen	Master of Science
Logistics Management	Friedberg	Bachelor of Science
Logistics (distance learning)	Friedberg	Master of Science/Certificate
Mechanical Engineering	Friedberg	Bachelor of Engineering
Mechanical Engineering	Giessen	Bachelor of Engineering
Mechanical Engineering and Energy Systems (consecutive)	Giessen	Master of Science
Mechanical Engineering and Mechatronics (consecutive)	Friedberg	Master of Engineering
Mathematics for Finance, Insurance and Management (consecutive)	Cooperation with Hochschule Darmstadt	Master of Science
Mechatronics	Friedberg	Bachelor of Engineering
Media and Computing	Friedberg	Bachelor of Science
Media and Computing (consecutive)	Friedberg	Master of Science
Medical Informatics	Giessen	Bachelor of Science
Medical Informatics (consecutive)	Giessen	Master of Science
Medical Physics (consecutive)	Giessen	Master of Science
Communication Engineering and Computer Network	Friedberg	Bachelor of Engineering
Optotechnic and Image Processing (consecutive)	Cooperation with Hochschule Darmstadt	Master of Science
Organisation Management in the Health Service (dual)	Wetzlar	Bachelor of Arts
Engineering Physics	Friedberg	Bachelor of Science
Process Management (dual, consecutive)	Wetzlar	Master of Science
Systems Engineering (dual, consecutive)	Wetzlar	Master of Engineering
Supply Chain Management (consecutive)	Friedberg	Master of Science
Computer Engineering	Friedberg	Bachelor of Engineering
Technical Editing and Multi Media Documentation (consecutive)	Giessen	Master of Arts
Environmental-, Hygiene-, and Safety-Engineering	Giessen	Bachelor of Science
Environmental-, Hygiene-, and Safety-Engineering (consecutive)	Giessen	Master of Science
Management (consecutive)	Giessen	Master of Arts
Business Information Systems	Friedberg	Bachelor of Science
Business Information Systems (consecutive)	Cooperation with FRA-UAS	Master of Science
Business Administration and Engineering	Friedberg	Bachelor of Science
Business Administration and Engineering (dual)	Wetzlar	Bachelor of Engineering
Business Administration and Engineering (distance learning)	Friedberg	Master of Business Administration and Engineering/Certificate
Business Administration and Engineering (consecutive)	Friedberg	Master of Science
Business Mathematics	Friedberg	Bachelor of Science



gramme Civil Engineering at the Dual Study Centre in Wetzlar and the Master's course Hospital Planning Technology in Giessen. Friedberg included the new Communications Engineering and Computer Networks Bachelor's course in the teaching activities in this current summer semester.

The shortfall in skilled professionals is still a major issue in educational policy. Various surveys and analyses of the labour market show that qualified young professionals in the technology and engineering branches are the most sought after career entrants. Thus the "Ingenieurmonitor," a report that the Verein Deutscher Ingenieure (VDI) and the Institut der deutschen Wirtschaft publish on a regular basis, announces about 57,000 open jobs nationwide as a monthly average in the fourth quarter. Titled "Bottleneck situation" it reads: "Germany-wide the demand for labour in the engineering branch exceeded the supply of labour by 106 percent in the fourth quarter of 2014."

In view of this continuing trend, the constantly increasing numbers of new students at the THM are as much appreciated as the recent development in the numbers of graduates. In the winter semester 2013/14 and the summer semester 2014 a total of 2,354 students completed their studies at the TH Mittelhessen. The majority (about 1,400) qualified as bachelors. Current surveys of graduates prove an approximate 15 percent increase compared to the two previous semesters.

The Presiding Committee also views this increase as a gain for the regional economy. A strong potential of highly-skilled professionals is viewed not only on the national level as a key economic factor. For the development of the local economy it is essential that producers and service providers can fill their vacancies with graduates. That is why the THM, which considers itself the University of the region, wants to offer as many young people as possible a place to study, and to guide them to a qualified degree.

At the THM degrees were awarded to 1,294 graduates in the summer semester 2014, and to 1,060 graduates in the previous semester. The degrees awarded in that time can be divided into almost 60 percent (1,398) for the bachelor's degree, the master's degree (appr. 17 percent) and the diploma (24 percent), which meanwhile is no longer available.

With a total of 207 qualified students, the Business Administration bachelor course at the Giessen-based Business School represents the biggest group of graduates. The dual Business Administration study programme that the THM offers within the scope of the cooperative education programme StudiumPlus records a total of 148 qualified students, which is the highest number at the Wetzlar campus. In Friedberg 100 enrollees took the chance that was offered in the winter semester 2013/14 for the last time to complete studies with the Industrial Engineer diploma. A total of 82 students earned a bachelor's degree in that branch of study.

Due to the THM's strong focus on engineering sciences, men are traditionally in the clear majority among the students. This is confirmed by the recent graduate statistics that calculated for both semesters a male proportion of 72 percent. In the classic engineering science Mechanical Engineering, where a total of

### Foreign students at the TH Mittelhessen\*

Total	1.074
Cameroon	340
Morocco	140
Turkey	45
Tunisia	43
Indonesia	36
Yemen	30
Russian Federation	27
Bulgaria	26
Ukraine	24
India	19

as per: WS 2014/15

\* = Students that have not obtained their higher education entry qualifications in Germany.

### First semester top 10

Business Administration (Gi)	263
Mechanical Engineering (Gi)	231
Civil Engineering (Gi)	190
Business Administration and Engineering (Fb)	185
Media and Computing (Fb)	157
Business Information Systems (Fb)	152
Computer Science (Gi)	151
Biotech./Biopharmaceutical (Gi)	136
Business Administration (Wz)	133
Engineering (Wz)	126

First semester students in the WS 2014/15.  
All listed study courses are bachelor programmes.

294 graduates were registered, it is even higher at 94 percent. There is a remarkable 74 percent majority of women in the Architecture faculty. In the Business Administration and in the biomedical-biotechnological subject areas, 56 percent of the graduation certificates were awarded to women.

The Technische Hochschule Mittelhessen considers providing a large variety of first cycle degree courses not as its only function. Teaching job-related skills through various training formats are also part of our range of services. In order to create synergistic effects and to increase professionalism on this level, the THM, through a Presiding Committee Decision, has transferred the responsibilities of the Centre for Continuing Education, which was shut down at the end of 2014, to the Scientific Centre of Dual Studies in Wetzlar.



The notable success of a Giessen-based research association – the State of Hessen is funding a LOEWE centre for Insect Biotechnology for an initial three-year period, in which, under the leadership of the Justus-Liebig Universität, the TH Mittelhessen Competence Centre for Biotechnology and Biomedical Physics and the Fraunhofer-Institute for Molecular Biology and Applied Ecology are involved – provides the THM with about 3 million euros in research funds for the 2014 to 2016 period. Apart from the financial aspect it is particularly noteworthy that a team from our university can establish its research work and work jointly with partnering universities on an ambitious project of great importance for the entire nation. The goal is the installation of a permanent Fraunhofer Institute for Bioresources in Mittelhessen.

After completion of evaluation, and coordinated and supported by the Centre for Research, Transfer and Young Scientists, seven Competence Centres, in which members of various faculties teamed up for interdisci-

plinary research, began operations. They are engaged in the subject areas:

- Biotechnology and Biomedical Physics
- Information Technology
- Energy and Environment Systems Technology
- Nanotechnology and Photonics
- Optical Technologies and Systems
- Mobility – Transport - Automotive
- Material Science and Material Testing

For some years, the TH Mittelhessen Presiding Committee has been pursuing the strategic objective of providing qualified students in research-intensive branches of study with standardised access to a doctorate. With the establishment of the cooperative post-graduate programme “Bioresources and Biotechnology,” in which the Justus-Liebig-Universität Giessen is our partner, we achieved significant progress in 2012. With the Philipps-Universität Marburg we are also offering a joint doctoral programme. To ensure that those who

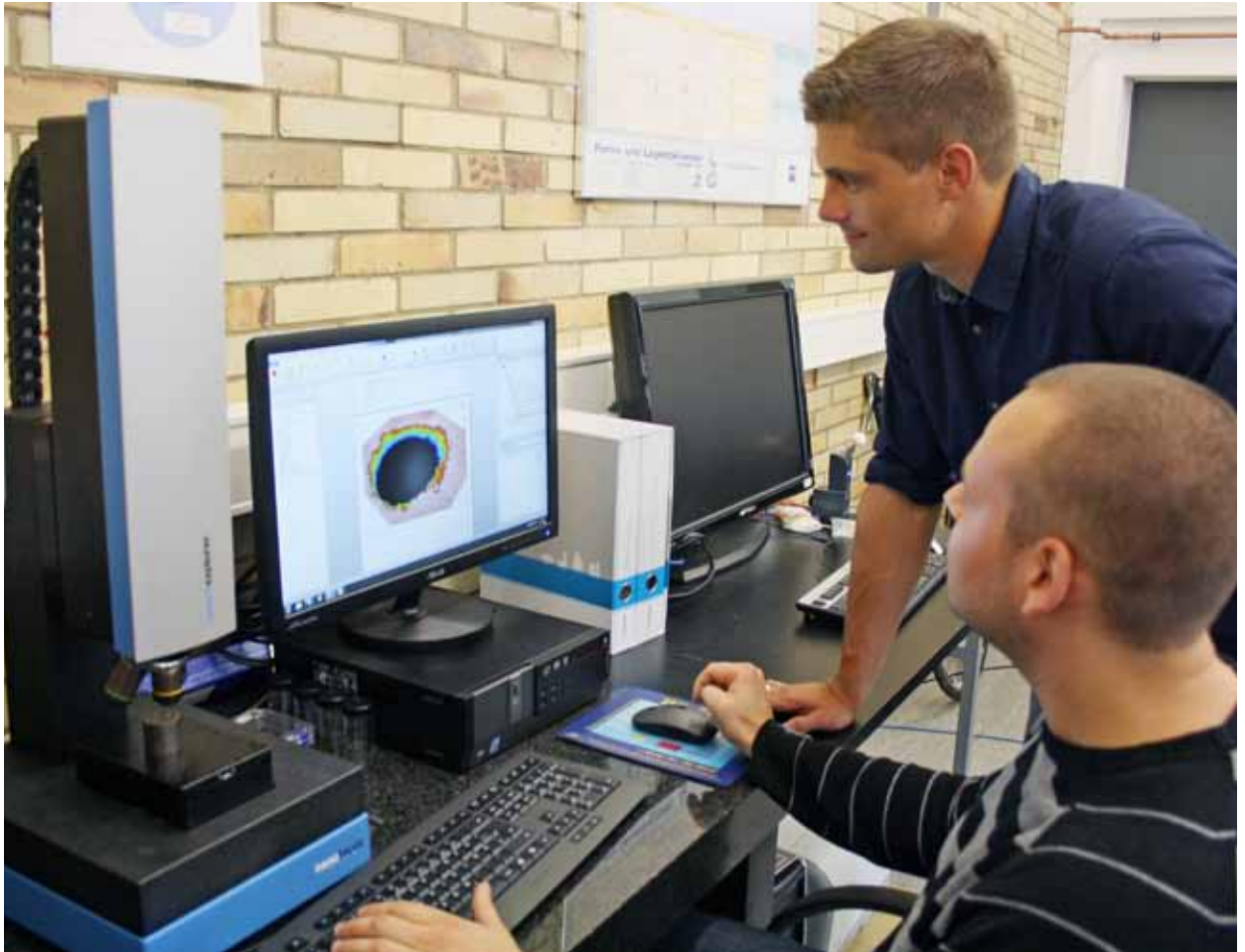
engage in a doctorate can undergo structured doctoral training, the TH Mittelhessen maintains the “Centre for Young Academics.” It provides services and activities in the fields of cooperative doctorates, structured doctoral programmes, professional seminars and support programmes. In the meantime, an interdisciplinary doctoral colloquium has been introduced to provide young scientists at the university with an opportunity to present their project and to discuss it in the plenum. At the second meeting in November 2014, Professor Dr. Frank Runkel, Vice President for Research, stated that 75 postgraduate students are enrolled at the THM. He affirmed the decision to rely on cooperative solutions with the “universities in the neighborhood” and stressed: “The cooperation between the faculties of the Giessen and Marburg universities is well established by now. At the moment, more than half of the cooperative doctorates at the THM are achieved in cooperation with the two middle Hessian universities.”

Even in the recent past, the THM has proven its strong position in the competition for subsidies from the “Hessian Initiative for Scientific and Economic Excellence” (LOEWE). Hessian Minister for Science, Boris Rhein, confirmed this in May 2014, when he awarded the grants for the joint research projects from the LOEWE 3 Programme that supports cooperation between the universities and small and medium sized companies. He referred to the THM, which was the most successful university in the State in this funding line, as a “nationwide flagship in applied research matters.” A total of six new projects at the THM were granted subsidies from the LOEWE-3 funds. They are engaged in developments in the energy technology, medical technology, pharmacology and environmental technology fields. Within the scope of the “Research for Practice” campaign, the Hessian Ministry for Science and the Arts supports research and development projects at universities of applied sciences. This should increase the chance to successfully generate third party funds after completion of the project. In 2014, teams from the Civil Engineering, Information Technology-Electrical



Engineering-Mechatronics, Mathematics, Natural Sciences and Data Processing, as well as the Industrial Engineering faculties received funds.

THM projects that received funding commitments from federal programmes in 2014 are dedicated to tasks in



the Construction Engineering, Energy Technology and Disposal Engineering fields. After receiving research funds from the Federal Government in the previous years, the Nanoelectrics working group was awarded funds in 2014 within the scope of the European Union "Horizon 2020" programme.

In the field of continuing learning, the THM is also carrying out research and development work. Together with the Justus-Liebig Universität and the Philipps-Universität Marburg they again successfully participated in the "Advancement through Education: Open Universities" Federal and State Government competition. The Federal Ministry for Education and Research granted a total of 3.5 million euros for continuing edu-

cation programmes at the three Mittelhessen universities for the April 2015 to September 2017 period. They are dedicated to research and the establishment of concepts for new appropriate selection of extra-occupational study and certificate courses in the context of Lifelong Learning.

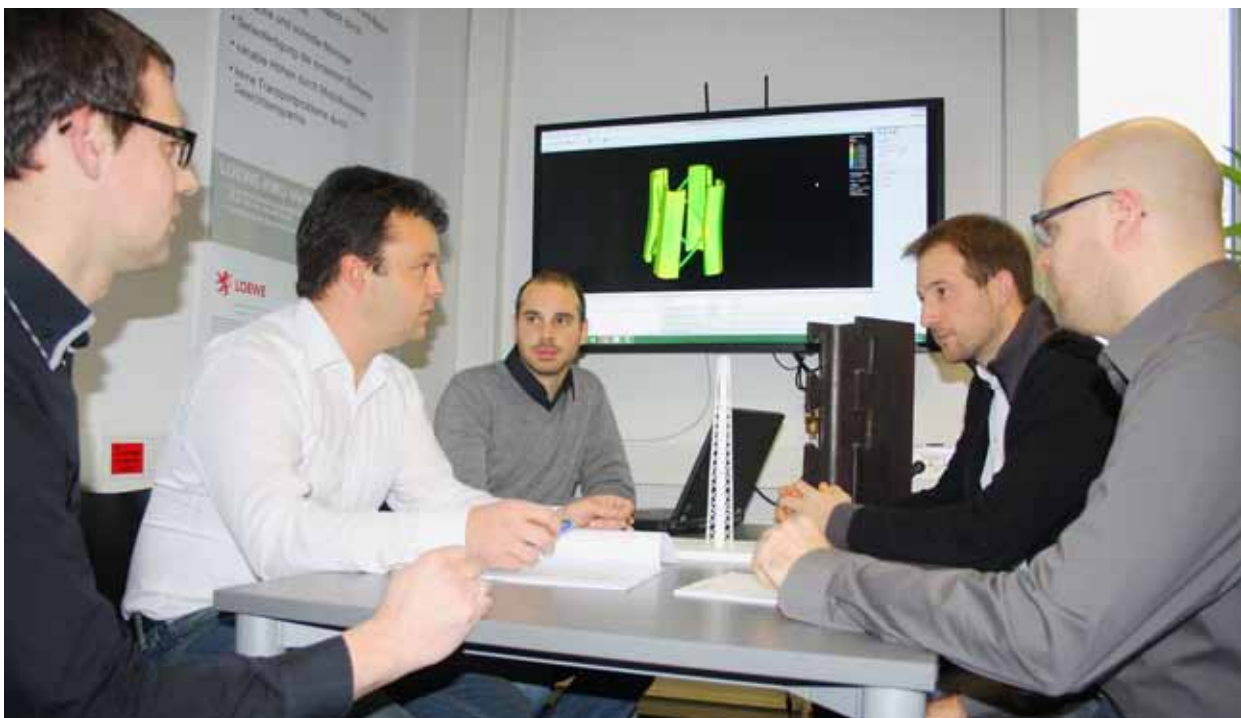
The first funding phase ran from October 2011 to March 2015. In that period the three universities involved received a 4.3 million euro sponsorship for their cooperative "WM<sup>3</sup> Weiterbildung Mittelhessen" project. The goal was the joint development and marketing of demand-oriented academic continuing education programmes. Intended target groups included regional corporations and organisations, bachelor's course



graduates, as well as special groups such as people with family responsibilities, and job returners.



The Technische Hochschule Mittelhessen also successfully participated in a nationwide competition held by the Stifterverband für die Deutsche Wissenschaft and the Heinz-Nixdorf-Stiftung in 2014. As one of the five award-winning universities, the THM receives financial support (242,000 euros) for the implementation of the “mission:me” concept. This provides future students a playfully-conceived orientation phase to support them in choosing study courses.





Financial planning security for the 2016 to 2020 period is the most important result of the University Pact that was concluded in March 2015 with the State Government. A moderate but continuously growing basic budget was agreed upon. Moreover, it is remarkable that the University Pact is committed to the goal of “sustainably and enduringly” increasing the proportion of students at universities of applied sciences. In 2013, the Konferenz Hessischer Hochschulpräsidenten (KHF) had already taken a clear stand in a position paper about the “Importance of universities of applied sciences in and for Hessen.” With a view to the education policy memorandum to increasingly guide students

towards universities of applied sciences, the KHF demanded “additional positions for professors” and “an adjustment of the basic budget to the new distribution of tuition capacities at the universities.”

In regards to staffing and budgeting, a “traditional” funding gap continues to exist at the TH Mittelhessen. It results from the fact that the State Government uses our basic budget as an indicator for the calculation – the statistically averaged number of students who complete their studies within the designated time period – that falls significantly short of the actual numbers. As in previous years, the shortfall is being compensat-

ed by funding from the University Pact 2020, which is jointly supported by Federal and State governments. In 2014 the THM received an additional 22 million euros from these funds that are intended for the improvement of teaching and studies, and partially allocated to investment measures.

In the winter semester 2014/15 the Technische Hochschule Mittelhessen had a total of 1,083 members of staff, 220 among them with a professorship.

The development of the structural infrastructure is among the lasting strategic tasks of the university management. In the period covered by this report we have continued the course of expansion and user-friendly refurbishment of the available buildings. The redesigning of Wiesenstrasse, the central area of Gies-sen Campus, was completed in 2014. Moreover, we were able to complete a quick assembly hall on Gies-sen Campus for the Mechanical Engineering and Energy Technology faculty, which gives the student ini-

## Budget of the Technische Hochschule Mittelhessen

	2010	2011	2012	2013	2014
<b>Total Budget</b>	<b>45.804.581</b>	<b>47.071.777</b>	<b>48.031.198</b>	<b>53.652.254</b>	<b>55.535.350</b>
State Budget grants <sup>1)</sup>	43.761.923	45.156.177	47.166.579	51.578.800	53.460.000
other funds <sup>2)</sup>	2.042.658	1.915.600	864.619	2.073.454	2.075.350
budgeted payroll costs	32.927.592	35.086.495	36.278.847	39.004.116	43.059.501
budgeted material costs	12.876.989	11.985.282	11.752.351	12.574.684	10.400.499
funds for the improvement of the quality of conditions of studying and teaching	6.140.377	6.317.223	5.977.521	6.456.300	6.456.300
Funds from the University Pact 2020	3.605.750	5.820.133	7.087.855	18.500.000	22.000.000

<sup>1)</sup> Governmental subsidies minus funds for the improvement of the quality of conditions of studying and leading; <sup>2)</sup> i.e. administrative fees and revenues, reserves, etc.

## Development of third party funds at the THM

		2012	2013	2014
<b>Third party funds total, based on revenues</b>		8.828.078	8.273.712	9.749.450
<b>Third party funds that are eligible for performance oriented allocation</b>		3.906.016	4.586.305	5.051.095
<b>Third party funds w/o State funding</b>	<b>w/o advanced education</b>	3.564.246	2.679.975	3.633.565
	<b>with advanced education</b>	4.922.062	3.687.407	4.698.355

Data in euros (Research in total, Advanced Education and others)



tiative “THM –Motorsport Racing” some space for the development of the vehicles, with which the team is participating in international competitions. The temporary laboratory building that was built in 2014 in Gutfleischstrasse on Giessen Campus is available to the Hospital- and Medical Technology, Environment- and Bio Technology faculty.

After the THM had already moved into some offices in the “Kinopolis” cinema in Berliner Platz in Giessen as tenants in April 2013, in the summer semester 2014, they began, as scheduled, to use three cinemas that

are equipped as lecture halls. Since the winter semester 2014-15 the university has also been able to use a leased room in the former Roxy cinema, which provides 330 seats.

On Friedberg Campus the Technische Hochschule Mittelhessen leased a former industrial hall complex in Raiffeisenstrasse and redesigned it in 2014 so that the Mechanical Engineering, Mechatronics and Material Technology faculty can give students practical-oriented training and expand research work. The equipment includes a wind tunnel.

## Staff at the Technischen Hochschule Mittelhessen

	Employees in the faculties				Administration	Total
	Professors	Research assistants	Administrativ-technical employees	Total Employees in faculties		
2012	209	69	282	560	353	913
2013	216	117	297	630	423	1.053
2014	220	139	308	667	416	1.083

Indicated is the number of persons, not the position in full time equivalents!

## Development of the main usable area at the Technische Hochschule Mittelhessen

Campus/Year	2008	2009	2010	2011	2012	2013	2014
Giessen	32.982	33.702	34.679	39.456	41.084	41.081	43.132
Friedberg	15.615	15.615	15.406	15.545	15.454	16.414	16.414
<b>THM total</b>	<b>48.597</b>	<b>49.317</b>	<b>50.085</b>	<b>55.001</b>	<b>56.538</b>	<b>57.495</b>	<b>59.546</b>

Within the scope of our biggest infrastructure project in Friedberg, the expansion of the THM to the former "Housing Area," in February 2015 we were able to start with the construction of a module building for the three Information Technology-Electronics-Mechanics, Mechanical Engineering, Mechatronics, Material Technology faculties, which will provide new laboratories as well as seminar rooms and offices. Currently we are preparing the construction of a new Technology Centre with 1,800 square metres of usable area on the Friedberg premises, which is funded by the State of Hessen Heureka Programme. Completion is scheduled for 2019.

Due to these expansion measures, a total of 59,500 square metres of main usable area were available to the university in 2014. In comparison to 2013 this is a gain of about 2,000 square metres





With the President's initial address to the Senate in October 2014, the TH Mittelhessen opened the development planning process for the 2014-2016 period.

With the implementation of new medium-term development targets, we are still adhering to the guiding concept of "a new type of university," which already applied to the wording of our internal target agreements 2011-2015. That means surmounting the previous "binary typology" - "Fachhochschule" on one hand, and "Universität" on the other hand, by manifesting a new university profile that is labelled by linking the scientific character with high application orientation and the unity of research and teaching. The strong network with regional partners through cooperative development projects, as well as knowledge and technology transfer, are significant, too. In terms of scientific character and research orientation, we achieved important progress in the recent past by implementing master's programmes as well as with the initiative to provide graduates with access to doctoral programmes. In doing so, the establishment of the joint post-graduate "Bio resources and Biotechnology" Programme, in which the

Justus-Liebig Universität is our partner, was essential. With the Philipps Universität Marburg, we are also providing a graduate programme. New leeway for our development in this field has become apparent since the draft for the modification of the Higher Education Act includes a passage that provides for the awarding of doctorates to those branches of study at universities of applied sciences that can demonstrate appropriate research performance. However, due to the positive cooperative experiences achieved, we prefer joint solutions with both regional universities in the foreseeable future in order to create an institutionalised, sustainable promotion platform. It is beneficial for the entire Mittelhessen region when we create local opportunities for young scientists in academic engineering and technology science fields to continue their scientific qualification with a doctorate. Last but not least, this counteracts the emigration of competent skilled workers. From the perspective of the THM, there are

many reasons to achieve this cooperation with the three local Mittelhessen universities.

In our recent development planning we put emphasis on the following subjects:

- Teaching and Studies
- Research and Transfer
- Unity of Research and Teaching
- Cross-sectional tasks
- Organisation (structure and processes).

Our understanding of strategic future planning includes recognising the development of our market-oriented subject spectrum as a permanent function. This means updating our study courses according to the requirements and designing new qualification programmes in the engineering sciences, information technology, and business



sciences or in those disciplines that develop from their overlapping subjects. This qualitative development corresponds with the willingness for quantitative growth, which means that the THM will accept additional students and thus release more graduates into the job market.

International networking and intensified solicitation for students from immigrant families are just as important as maintaining regional cooperation. With high-quality, practical study courses, StudiumPlus, our successful dual study programme that combines academic and in-company training, has established a network to which more than 600 partner companies, mainly from the Mittelhessen region, belong. The expansion of the cooperation to the surrounding regions continues: in addition to Bad Hers-

feld, Bad Wildungen, Biedenkopf and Frankenberg, where StudiumPlus is operating besides the Wetzlar Campus, Bad Vilbel will join in 2015 as a further satellite station.

In the target agreements between the TH Mittelhessen and the State Government for the 2011- 2015 period, we already specified the structural development of the university within the scope of a master plan as a main focus. The course of expansion not only extends to the provision of additional rooms for teaching and studies but also to the improvement of spatial infrastructure for research. Two large construction projects scheduled for the near future demonstrate this: the construction of a technology centre in Gutfleischstrasse in Giessen and the extension of Friedberg Campus to the former "Housing Area."





## IMPRINT

### Publisher:

Der Präsident  
der Technischen Hochschule Mittelhessen  
Wiesenstrasse 14, 35390 Giessen

### Editorial Office:

Pressestelle  
Tel.: 06 41-3 09 10 41,  
Pressestelle@thm.de

Statistics on pages 14, 19, 25, 27:  
Referat für hochschulpolitische Fragen

**Translation:** Alexandra Williams

### Photos:

Armin Eikenberg, Kay Herschelmann, Sven Hollmann, Erhard Jakobs, Carina Kraft, Heidrun Losert, Oliver Schepp, Matthew Schoenfelder, Till Schürmann, Lukas Vorbeck

Cover photo: Erhard Jakobs

### Graphics:

Labor für Numerik und Baudiagnostik (S. 4)  
Hascher Jehle Planungsgesellschaft (S. 4 u. 28)  
Till Schürmann (S. 18, 28 u. 32)  
Sabine Langkamm (S. 23)

### Design:

Satz+Druck Böll, Unkel

### Print:

Druckerei Bender, Wettenberg

### Copies:

1,000

### Date:

31 March 2015





Bad Wildungen

Frankenberg

Biedenkopf

Bad Hersfeld

Weizlar

Gießen

Friedberg

Bad Vilbel