

# Creative Diversity

How German universities are making good use of the Bologna Process

*More inspired teaching and studying*

*More successful testing and studying*

*More involved students*

*More international studying*

*More individual studying*







Prof. Dr. Margret Wintermantel  
President of the German Rectors' Conference

## Dear Readers,

The closer we have come to the year 2010, in which the Bologna reforms were to be completed at German higher education institutions, the more urgent several questions have become: Has the reform process succeeded? Have the goals been reached that we all set?

With this publication, we would like to explore the answer to these questions. We embarked on a journey through the German higher education landscape and were able to gain a great deal of insights. I am delighted to see so many examples of the high dedication and creativity that various participants have demonstrated in accomplishing the tasks – from professors and students to heads of institutions and administrative staff. In the following, we would like to present to you what we found.

Obviously, we were not able to visit every German higher education institution along the way. The examples portrayed are thus taken as *pars pro toto*. Accordingly, we made sure to present a representative selection, with small and large as well as young and old universities and universities of applied sciences being included equally. In the course of reading this collection, you may notice the variety of approaches the institutions have taken in the reform process. This constitutes one of the most noteworthy strengths of the Bologna reform: all participants can decide which path is the right one for them. Yet, even though this openness to individuality represents the core of the reform package, it has been largely overlooked during the debates of the past few

years. Indeed, we are striving, not toward creating synchronized, uniform institutions, but rather maintaining our diversity. And, as you will see in the following: this approach is succeeding.

We should not forget at the same time that, long before Bologna, the German higher education landscape had started to change dramatically. Never before in history have there been so many students as today, never before have so many young people had access to higher education. That is a fantastic development – but it is also clear that the higher education institutions need to change in order to adapt to these new demands. It is for this reason that the Bologna reform was initiated at all, as the old higher education structures could no longer meet these new needs.

In light of this, it is for my part the most fascinating aspect of the Bologna Process that the reforms stand for more than a mere adjustment to new circumstances. As part of this process, we have also succeeded at making higher education institutions more international, student friendly and innovative. I consider that a proud achievement.

On that note, I wish you happy reading and a pleasant and surprising journey through the German higher education landscape!

Yours sincerely,

A handwritten signature in black ink, which appears to read 'M. Wintermantel'.



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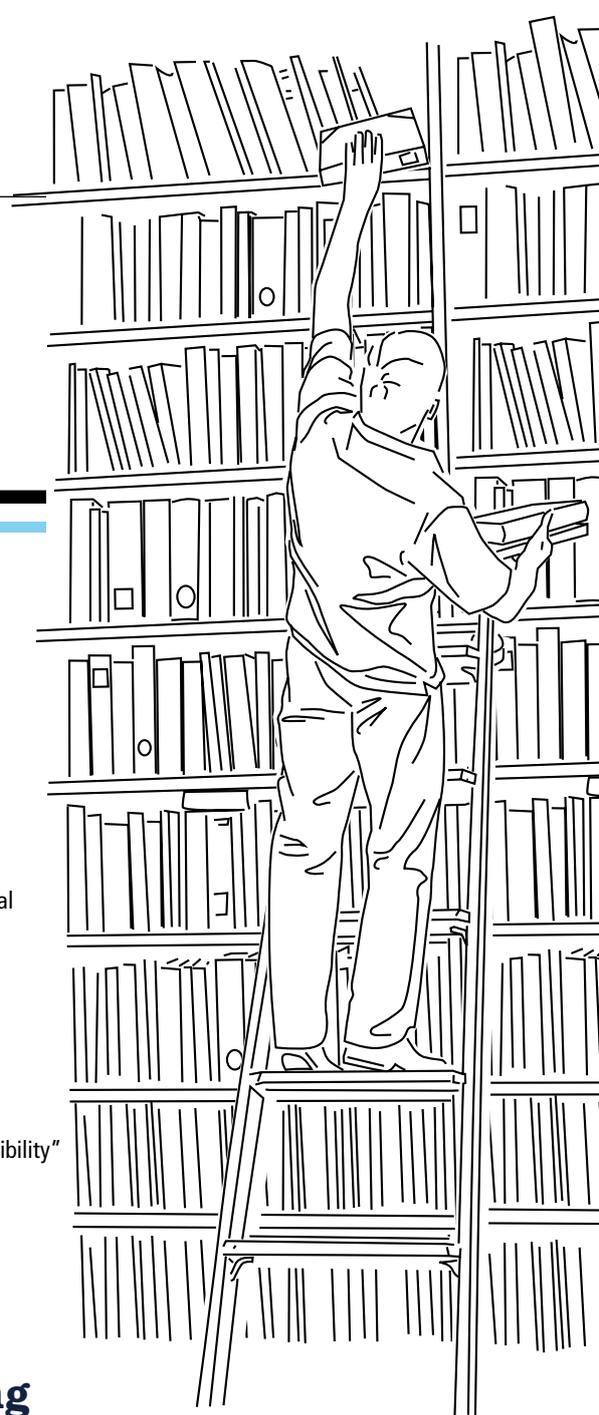
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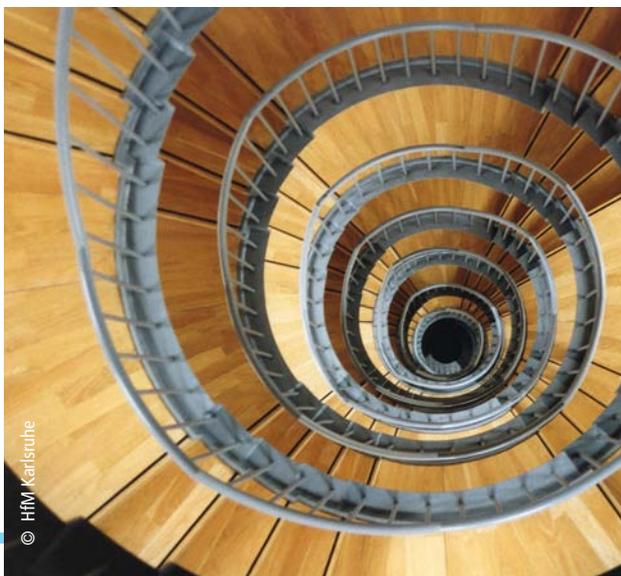
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More freedom instead of centralised guidelines, creativity instead of performance specifications – is that compatible with the Bologna reform? It is, as the University of Konstanz proves. Innovative programmes are emerging there thanks to this new freedom

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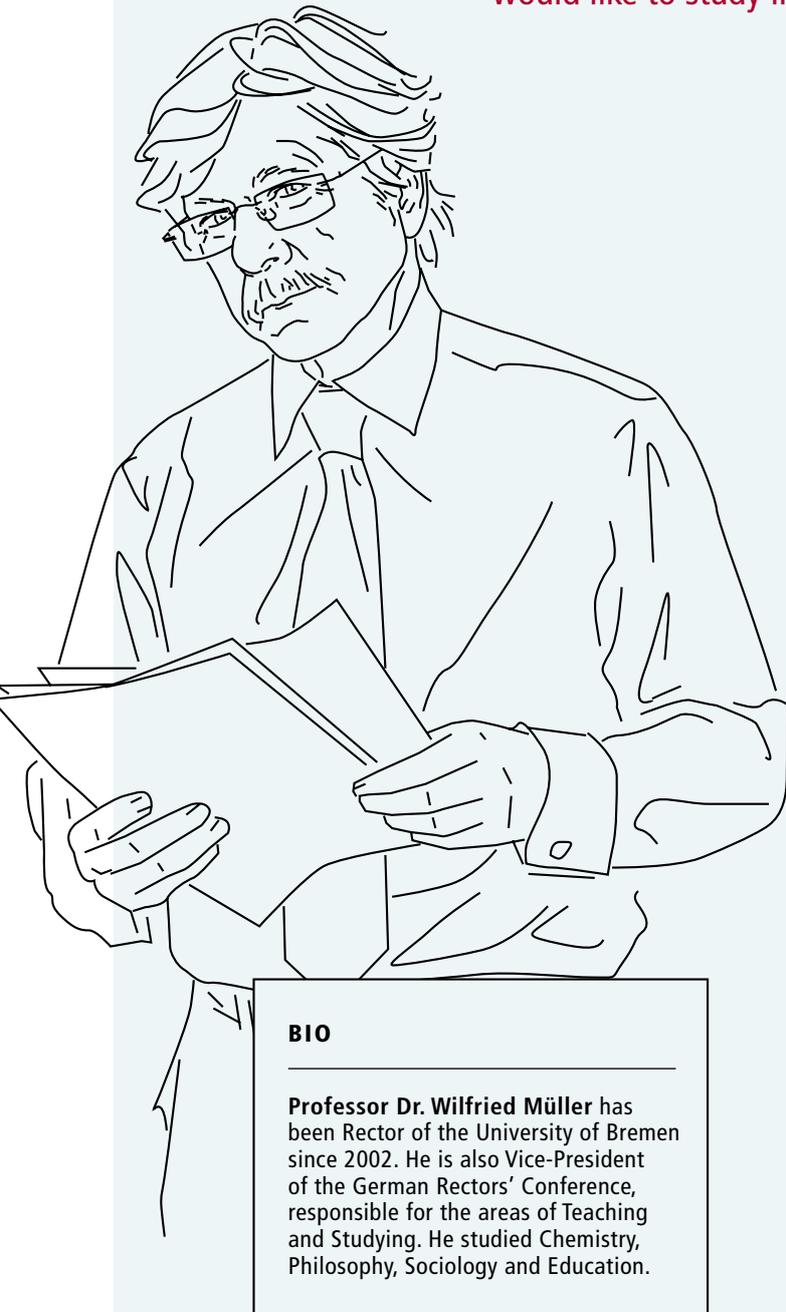
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### BIO

Professor Dr. Wilfried Müller has been Rector of the University of Bremen since 2002. He is also Vice-President of the German Rectors' Conference, responsible for the areas of Teaching and Studying. He studied Chemistry, Philosophy, Sociology and Education.

**Professor Müller, you can be completely honest: If you had the choice now to study again, would you want to study in a Bachelor degree programme?**

I can gladly answer with a view to my own academic experience: Before I went on to study Education, I graduated with a degree in Chemistry. We had dropout rates of 50 percent in the first year, while the first four semesters were rigidly organized with little room for independence. Only after that were we able to choose elective courses. My dream study programme would be one where I have a great deal of freedom, one in which I feel the programme is right. So the answer is: yes: There are a number of Bachelor programmes here in Bremen that I would like to study – Political Science for example.

**There are a lot of people who see things differently and would like nothing more than to return to the old “Diplom” and “Magister” degree programmes.**

You are right: We need to win over the students for the reforms. And we have good reasons and arguments for Bologna. Whoever takes a look around at German higher education institutions will find excellent examples of how one can learn complex subjects in six or seven semesters and gain diverse competences. These skills are in demand on the labour market, they are necessary, and yet, previously they were never taught at German universities prior to the sixth semester. That has changed today, and the first surveys of graduates show that the reformed degrees programmes are performing well. That is why I am convinced that the new system will be here to stay.

**However, precisely this orientation toward the labour market, among other things, is being severely criticized...**

...I beg to differ! We are talking about reflecting on the needs of the labour market, not systematically taking over a specific vocational training for industry and business. And in any case, the latter would not even be possible: In Germany, there are many different employment segments, and the demands change so quickly, we would not be capable at all of preparing students for a particular segment. That is why I find this criticism superficial. By the way, in all sectors, future employers demand that graduates can work independently. And our strength in Germany is in educating graduates who know scientific methods and can approach problems accordingly. For me, it is still true of today's graduates what was said about physicists 100 years ago: you do not have to set tasks for them; they will find the

right ones on their own. That is exactly what labour market relevance means, and that is exactly what Bologna means. And if you take a look at the Bachelor programmes, you'll find that they have a strong methodological orientation and then the additional offering for practical applications.

**Are you being perhaps a bit too idealistic? Particularly concerning the Bachelor programmes, there is a lot of criticism of them being too "schooled", too rigid and schematic. How does that fit with the picture you have just painted?**

I think we need to remember how the situation was in many Social Science and Humanities "Diplom" and "Magister" degree programmes. There was a plethora of subjects with hobby-like variation of content. There would be, on the one hand, a canon of basics to teach, where professors mostly could set their own focus. They offered mandatory seminars in the basic studies phase that dealt with whatever topic interested the professor at the time. And that is not possible anymore in Bachelor programmes because the modularisation leaves the teachers with less room for manoeuvre: it is no longer the norm that students can get the choice of courses on a completely coincidental basis during their studies. Now the path is more structured. Professors must think about which subject-specific knowledge and skills they want to teach and not just about what they are interested in. The latter can be part of the last phase of a degree programme, but not in the initial one. Take the example of our own University of Bremen: each student can look up on any computer which topics will be taught in a module of his or her study programme. We have never had this much transparency.

**However, the mandatory modules still exist.**

Yes, but without required contents, there simply can be no systematic course of study. The Bologna Process bears countless possibilities for rethinking curricula. This kind of opportunity for higher education institutions is one of a kind. Consequently, we in Bremen and many other universities were excited to develop something innovative.

**On the one hand, in many places, now there are dual-subject Bachelors, internationalized programmes and courses of study that open up new academic opportunities for the graduates. On the other hand, are they not just a few individual, positive exceptions among a multitude of other, less innovative study programmes?**

No, we are not talking about individual cases here. But how things develop will, of course, depend on the individual universities and higher education institutions: Whoever has been open for new ideas has likewise been able to make good use of the system for reforms.

**That means that you would matriculate in any Bachelor degree programme without a second thought?**

There are degree programmes that I would rather not study. But they existed beforehand as well. And, again, I am not saying that everything has been perfect with the Bologna reform. The fact is that, to this day, there has not been any large scale study done on the imple-

mentation. Judging by my own experience at least, I would say that we underestimated the time and efforts necessary for the transition. The time was short, just a few years. One must also consider that it was only about forming a new organization. We have carried out a paradigm shift, "from teaching to learning", as it says in the Bologna documents. At the heart of higher education is no longer teaching, but rather learning. I consider that to be the right development – but we underestimated the intellectual, emotional and organizational effort necessary for making this transition.

**New study programmes have been developed at numerous higher education institutions. Materials Science, for example, was not offered as its own major subject previously, nor was Environmental Physics. Do you consider this expanded offering a step forward or are traditional disciplines simply being watered down?**

That is perhaps, to my mind, the greatest opportunity that Bologna has to offer us. Allow me to use your examples in order to illustrate: Today, you can give Bachelor graduates from various subjects – Chemistry or Physics – the chance to realise their academic interest in studying a Master programme in Environmental Physics. Or Production Engineers and Physicists can decide to pursue graduate studies in computer-based material research. That is an incredible opportunity. Thus it is no coincidence that many higher education institutions have taken this path. That also applies to the Humanities and Social Sciences. In Bremen, we offer Integrated European Studies, a mixture of cultural and political sciences. The programme enables students to work in the political and cultural institutions of Europe. For the programme, we use the modules of various disciplines. Prior to the reform, that kind of joint programme would not have been conceivable, and there are many similar examples in Germany. And what I would also like to emphasize: We can contribute to the professionalization of semi-academic occupations with these shorter Bachelor degree programmes and the opening of our higher education institutions to applicants who have already completed vocational training. Think about, for example, elderly care or early childhood education – the Bachelor offers new pathways here that were, most unfortunately, almost completely neglected in the public discussion on the Bologna reform. The Bachelor has been rather disregarded in Germany, although it actually makes up the core of the reform.

**How long will it take until the new degree programmes gain wider acceptance?**

One thing is definitely important: we can not allow the financial situation of our higher education institutions to get any worse. If, at the same time of implementing reforms, the budget gets tighter and tighter as we have experienced, then we can not expect more acceptance because everyone will ultimately equate the Bologna Process with budget cuts. As a next step, we need to simplify the organization of the new degree programmes; the higher education institutions need fewer tasks and more flexibility. I am certain that the Bachelor will be widely accepted when the disciplines enhance the students' independence. And here, we are already headed in the right direction.



On the way up: Students in the Old Main Building of Technical University of Darmstadt

# I. More inspired teaching and studying

The Bologna Process shifts the focus toward teaching: How can students benefit more from the knowledge of their professors, how can seminars and lectures be more motivating? In the past few years, there has been much improvement and efforts in teaching at higher education institutions. Research-oriented learning has gained a higher acceptance and status. Every higher education institution, every teacher has own ideas on how studying can be more interesting and how to connect research and teaching even closer with one another.



## Humboldt through the Backdoor

The Ruhr-University Bochum adjusted early to Bologna – and has long reaped the benefits of the reform. Openness, dedication and a well-designed modularisation have made the new approaches a model of success

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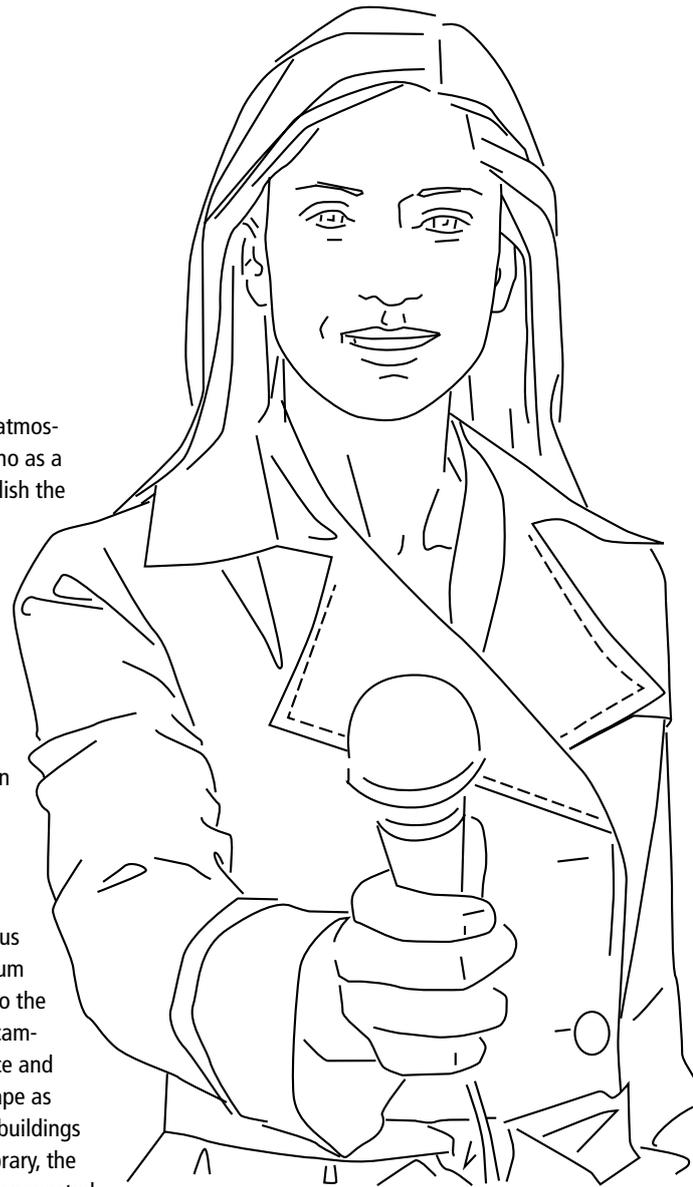
he sessions were turbulent: the students came together three times to debate which aspects of the university were of the most benefit to them. Motivational seminars, good advising, close contact and rapport with teachers? They considered the arguments for days until they finally completed a small compendium. "Ideas on the issue of successful learning", they wrote on the cover page of the eight-page paper that has since been the foundation for trainings at the University of Bochum.

"We have the students as experts for successful learning, right here at the university," said Anja Tillmann, who is responsible for continuous training and education in Bochum. "And we should use their knowledge so that all can benefit." Tillmann was the initiator of the workshop in which students debated their ideas. Learning Expert Team was the catchy name the group gave itself, with twelve participants from various disciplines ranging from Business and Geography to Theology. The ideas they collected are now included by Anja Tillmann and her colleagues in all continuous training sessions for teachers at the university.

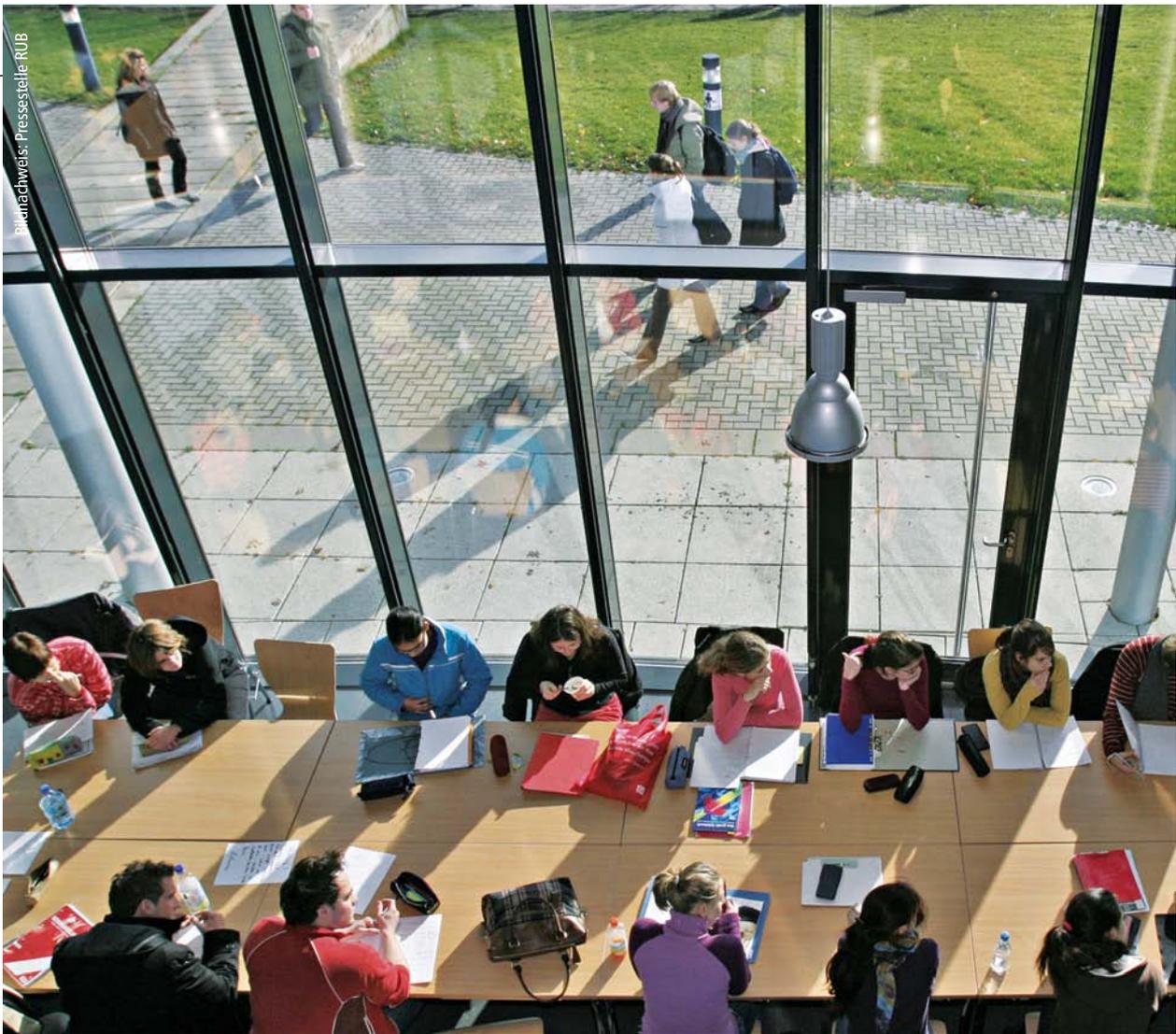
The Learning Experts is one approach that is typical for the Bochum university. To work together with the students has long been the declared goal of the higher education institution. "We work

to maintain an open, discursive atmosphere," said Susanne Lippold, who as a Bologna advisor helped to establish the new structures and the reform university. "We never cease to get pleasantly surprised ourselves at how dedicated the students are here!" Lippold has her office in the administrative area of the university, a building right at the entrance to the gigantic campus. The university in Bochum is among the youngest in Germany and, at the same time, the biggest: it was opened in 1965 and has nearly 33,000 students matriculated. The campus is situated just outside the Bochum city centre, and the tram heads to the campus every five minutes. The campus is visible from a long distance and seems to stick out of the landscape as its own part of town. Dozens of buildings are spread around the central library, the impressive lecture hall complex, connected by paths with roofs over them. This space of academics and science is so expansive and branched out that students in their first semester need a few weeks until they can find their way around campus.

Perhaps thanks precisely to the relative short history, the university has been always open for changes, always at the



*Career preparation: the elective course area includes offerings even for aspiring reporters*



Bildnachweis: Pressestelle RUB

Transparent studies: tutorial programme at the Ruhr-University

forefront of reforms. That is attested by outsiders as well, and with the Bologna Process, the Ruhr-University Bochum confirmed this reputation. Long before many of the ideas for the European reform were being discussed, Bochum had introduced tiered study structures. Students in Teacher Education were the first to profit from this early transition. And the RU Bochum also turned its focus toward key competences already as of 1993 – at a time when the significance of these additional offerings were only beginning to be noticed.

“When the Bologna Declaration was signed, we were already in the midst of planning for the transition,” says Susanne Lippold, who experienced the changes directly while serving on the staff of the Teaching Section of the university’s administration and as a Bologna Advisor of the German Rectors’ Conference (HRK). In the social and natural sciences, the shift was completed already as of 2001 and 2002; simultaneously, the old “Diplom”

and “Magister” degree programmes were discontinued entirely. “Consequently, we concentrated our resources on the new programmes and were able to launch a comprehensive course offering from the outset,” says Lippold. Moreover, success was immediately visible – the higher education statistics show fewer dropouts and simultaneously more graduates, but also more students attaining their degrees within the prescribed period of study. “We passed with flying colours in adapting to the Bologna reforms”, concludes Susanne Lippold: “The success is without a doubt.”

Among the students, the dual-subject Bachelor is especially popular. The idea could not be simpler: matriculated students can combine any two subjects of their choice for their Bachelor degrees – History and Theology for example or Mathematics and Physics; dozens of subject combinations are possible. As a result, students can pursue their broad interests and can understand contexts and co-relations

beyond the limits of one discipline. During their studies the students have unlimited choice: how they combine their subjects is completely up to them – whether they study both simultaneously or concentrate one semester fully on Mathematics and the other on Philosophy is their own decision. After the Bachelor degree, they can pursue a Master in one of the two subjects or in both again. The prospects on the labour market, as indicated by the initial surveys from Bochum, have even increased noticeably due to the dual qualification.

Behind the scenes, however, the apparently simple rule demands a complex organisation. Though each discipline has its own guidelines and regulations, the examination regulations apply uniformly for all subjects that are offered in the dual-subject model.

That means there are common rules and guidelines regarding the requirements to be fulfilled in a study programme, how many seminars a student must attend >>



*Math office hour: student tutors help their co-students*

## **A Service Team for Mathematics**

A clever trick has reduced the dropout rate in Engineering and Natural Sciences in Bochum: It is used for those students who throw in the towel due to the difficult math seminars that are traditionally held at the beginning of studies. A remedy is being provided by a new centre at the Faculty of Mathematics that assists students with individual support and better service.

The person behind the new centre is Professor Herold Dehling. The mathematician heads the Math and Applications Service Centre that operates as a service provider for the Engineering and Natural Science math seminars. In the past, Dehling and his colleagues were conducting these seminars, but back then, communication between the various professors was essentially non-existent. "The professors from different faculties organised any additional tutoring by themselves," says Dehling – that is, until the idea came to centralise it.

The advantages, of course, are obvious: Now, effective methods can be transferred from one seminar to the next since the teachers are in contact with one another. And they can take targeted advantage of the synergy effects. For instance, they have set up office hours specifically for students having difficulties with mathematics, every afternoon from 1 to 4 pm, always in the same room at the Faculty for Mathematics and with no registration required. Here, math students provide free tutoring, explaining the trickiest equations and theorems for their fellow students, helping them solve the problems they are stuck on. Meanwhile, the office

hours have been continued into the semester breaks and are being used to capacity. "When the students leave," says Dehling, "they have solved the problem together with our tutors."

The numbers alone attest to this centralised approach: In a typical winter semester, the Faculty of Mathematics teaches 3000 students from other faculties and only 600 of its own students – that is how large the demand for mathematics courses is in other subject areas. To ensure that the organisational tasks do not become too excessive, the Mathematics faculty has established an advisory board in which all "customers" are represented, i.e. the Engineering and Natural Sciences study programmes. In cases of complications or problems, now the paths of communication are much shorter thanks to the coordinated contact than was previously the case, when problems often took years to get resolved.

For students having an especially difficult time, a concept has been developed that is being sponsored by the association of German scientific foundations, Stifterverband für die Deutsche Wissenschaft. Mechanical Engineering or Physics students who are at risk of failing after the first mock examination can receive additional training sessions. This is based on an exchange: the teachers offer intensive support in a small group of students, while the participants agree in exchange to participate regularly and to do homework. "With this kind of support and with their dedication," says Herold Dehling, "even students who have the hardest time with math can pass the exams."



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Open and bright: the cafeteria in Bochum

and how the final exams are designed to ensure that subjects can be combined as smoothly as possible. To steer and coordinate this, the RU Bochum has established "Common Decision Committees" in which all faculties and students are represented. The delegates have the full support of their faculties so that all decisions can be taken efficiently in the committees. This helps to save otherwise time-consuming consultations with and within the faculties. "At first, our idea was dismissed," remembers Susanne Lippold. Meanwhile though, the concept has proven itself and even helped to initiate unusual cooperative efforts. On account of the close contact, areas of the university, otherwise separated, have grown together so much that nowadays there are even joint-events and courses being provided by biologists and historians.

A special feature of the dual-subject Bachelor is the optional or elective area: "We provide the students with the tools to create an individual profile," says Klemens Störtkuhl. "The overarching question is: How do I prepare myself for the working world?" Störtkuhl is Professor for Neurobiology and as Dean of Studies, responsible for the electives area. He emphasises, the fact that the university established a cen-

tral position responsible for elective area of studies illustrates its particular value. Indeed, the electives area as part of studies has become a signature of the university and has been awarded multiple times, most recently from the association of German scientific foundations, Stifterverband für die Deutsche Wissenschaft and the Mercator Foundation. In the course of the Bachelor study programme, each student is required to attend a number of courses outside of the students' major subject. The course offering in the elective area encompasses several hundred modules – the printed version of the programme is as thick as a telephone book. Foreign language courses and seminars on presentation techniques are included, but also internships and interdisciplinary studies.

"We can show students here paths that they were not aware of beforehand," says Astrid Steger. She heads the Office for the Electives Area and has been working on the programme since its inception. She advises students and has office hours to answer their questions directly. "I advise the students to look for new horizons and to do things that could help them later," says Steger. For aspiring teachers, for example, she recommends them to get insight into other professional groups,

and by now, many of her discussions have taken on the character of full-fledged career advising. "Many are not familiar at all with how to get to the aspired educational goal," she says. She can help in such cases – and reveal interesting possibilities for Bachelor students. With the opportunities offered in the elective area, they can gain targeted insight into a particular professional or career field.

"For my part, I enjoyed immensely the academic freedom of my studies," says Professor Klemens Störtkuhl, the Dean of Studies for the Electives Area. "As a fixed part of a course, we discussed with a professor about whether the fruit fly possesses free will – a fascinating experience. We were sitting in the professor's office and could philosophize at ease." He sees in the elective area a continuation of his previous experiences: to think about things beyond one's own subject-specific studies, to follow one's own ideas or to discuss bioethics for instance – all of this is possible in the offerings in the elective area that are counted fully for the students. "That is Humboldt through the backdoor", Störtkuhl says, smiling. ■

## Save the Theatre!

With practice-oriented assignments, a foundation semester and a “College System”, the Leuphana University Lüneburg has turned studies at its institution around

# F

or Annika Weinert, studying began at the theatre: she was led behind the scenes, through the audience rows and to the offices. She discussed with artists and the theatre directors. And then she received her assignment: “Save the theatre” – it involved a fictitious city and getting its nearly bankrupt theatre to operate profitably again. There she stood, a recent school graduate and aspiring Cultural Sciences academic, and was supposed to solve a problem that she had no idea about up to then.

Students matriculating at the Leuphana University Lüneburg need to be prepared for this kind of surprise. After the introductory week with its difficult assignment, things continued unconventionally as well: The whole first semester is conceived as a foundation programme and students from all subject areas go through it together. Topics include the mind and body in Descartes’ metaphysics, the evolution of modern Chemistry or films and aesthetic perceptions. This openness to other disciplines is particularly appealing for the students: up to their graduation from a Bachelor programme, the students will regularly attend lectures and seminars that are not directly related to their own major subject. This concept aspires to ensure more academic breadth at the university.

For Annika Weinert and her fellow students, the first week was already a

surprising experience: they were divided into working groups of 15 students from across all disciplines with the task of finding a joint solution to saving the fictitious theatre. “We were provided with a list of interesting interview partners from around the city,” says Annika Weinert – in addition to experts from the actual theatre, they met staff from the city administration as well as from cultural organisations and institutes. At the same time, the students, many of whom come from other cities, of course got to know Lüneburg much better – and they gained deeper knowledge of their project topic. “Already before our studies began,” says Annika Weinert, enthused, “we could get an insight into how different people from different disciplines approach a problem.” The Business students in her group, for example, proposed to close the traditional theatre altogether and to concentrate on musicals. “For me as an aspiring Culture Sciences academic, that was naturally a hair-raising suggestion,” says Annika Weinert. Thus, the team looked for compromises between high culture and commerce – and at the end of the week presented their result to an assembly of their fellow first-semester students.

“I’m still friends today with people from other disciplines, whom I probably would not have gotten to know otherwise in normal, everyday life at university,” says Renke Schumacher. The 21-year old is studying Business Psychology in his third semester and was a bit perplexed at the beginning of his studies: the numerous interdisciplinary lectures, which did not have much to do with his actual study programme, did not quite seem to fit with

*From Lüneburg into  
the wider world:  
Leuphana student*



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**“We view  
studying, not  
as a collection  
of courses and  
lectures, but  
rather as a  
phase of life”**

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how he had pictured life at university.

That sort of confusion is familiar territory for Dr. Karin Beck. She is Director of Leuphana Colleges and hence responsible for coordinating the entire Bachelor course offering in Lüneburg. “During their first semester, a lot of students come to me, saying they want to learn more in their own subject area. But when they look back after a few semesters at that first half year with the interdisciplinary approach, they are thrilled.” Karin Beck worked for ten years in the USA and completed her doctorate in New York. It was the Lüneburg concept that drew her back to Germany. “I saw that something was really developing here at the university,” she says. “And my wish was to combine the best parts of the American and German university systems.”

Once on campus, she immediately noticed that things were taking off in Lüneburg: an old barracks was made into the hub of the university, located a few minutes by bicycle from the historic city centre and just around the corner from the expansive arboretum. The former austerity of military life has completely vanished from the premises; the students have taken over the grounds, turning the former horse-riding hall into a party room and the mess hall into a modern, glassy cafeteria for students. The Rector’s Office is situated directly at the entrance to the spacious campus, where officers previously quartered. This new spirit is already evident in these exterior features: Instead of cool, leather-upholstered doors, the rooms open up with glass sliding doors to the hallways, and the university has done away with the imposing waiting-rooms with secretaries and assistants. >>

Even University President Sascha Spoun has a glass office, literally – a symbol for the new transparency at the Leuphana University. “We view studying, not as a collection of courses and lectures, but rather as a phase of life,” he explains. “Courses and seminars are an essential part, no doubt, but there is definitely more to it.”

Organising that is Karen Beck’s job, Director of Leuphana Colleges. She has been able to build up in Lüneburg what impressed her most in the United States: setting the focus of a university on students and bringing them in direct contact with teachers. “When I think back to my studies in Germany, I recall how I finally saw my professor sometime after five semesters. And the first thing he shared with us Slavic Studies students was: ‘there is nothing you can do with this field of study anyway.’” In Lüneburg, they are finally responding to students’ curiosity – with a General Studies programme at the start and complementary studies during the entire Bachelor programme. And with outstanding events: recently, a series of lectures was held a semester long on the “Nature of

the Mind” – viewed from Neuroscientists and Philosophers, dealing with the issue of free will while shopping to steering robots and the physiology of the mind. Scientists and researchers from multiple countries visited to present their perspectives on the topic during the lecture series.

This interdisciplinary approach is also a key feature of the Master degree programmes in Lüneburg. “We have positioned ourselves to be able to offer an interesting programme for the best Bachelor graduates from other higher education institutions as well,” says Professor Ferdinand Müller-Rommel, who is responsible for the Graduate School. The Master study programmes will also be divided into majors. “Public Economics, Law and Politics” is one major area that is typical for Lüneburg’s study structure: the programme admits Bachelor graduates with Economics, Law or Political Science backgrounds. It consists of three areas – and there are preparatory courses in which Political Science students can catch up on Law or Bachelor graduates from Law can prepare in Economics. “For decades, we taught the same material, semester for se-

mester,” says political scientist Müller-Rommel – “but the world has changed in the meantime. Don’t we need to discuss globalisation much more in Political Science? And do we not also need more perspectives than just the political science outlook?”

Indeed, interdisciplinary methods are characteristic of all Master programmes at Leuphana University. Cultural Studies, Sustainability Sciences, or Management & Engineering are offered for instance along with numerous Teacher Education programmes. The Graduate School has adopted the Anglo-American model of consecutive Master and Doctoral studies; determined students can accordingly attain their doctorate in a much shorter timeframe compared with the traditional route in Germany. Another typical feature is the use of English as the language of instruction in many courses – as is the fact that numerous international students come to Germany for the programmes in Lüneburg. “A fellow student of mine comes from Brazil, where she studied Law,” says Nora Stetzler: “And she contributes examples from her home country in our class discussions.” Nora Stetzler is 23 years old and switched from another university to Leuphana University after graduating with her Bachelor degree. She studied Political Science and is enthusiastic about the combination of subjects in her Master programme. The supplement courses helped her to close her gaps in knowledge – “and we tutor each other: sometimes the Law students have me explain political issues and help me in turn to understand legal texts.”

Whether she will continue toward a doctorate after her Master is still uncertain for Nora Stetzler. It is still too early to decide, she says – and for now she has much different plans anyway: she is going to a partner university in the USA for the summer semester; her application has already been approved. ■

### A Successful Model Project

The Leuphana University Lüneburg emerged out of a large educational ‘construction site’: originally, there was both a university and a university of applied sciences in the city, offering altogether at times up to 50 study programmes. The Bologna Process served as an occasion to create a completely new structure as part of a model project of the State of Lower Saxony: the two higher education institutions were merged – and in order for the new entity to run smoothly, members from both former institutions embarked on a search for a new concept. Their creed: a higher education institution can benefit tremendously if the reforms are viewed as an opportunity to fundamentally restructure.

In Lüneburg, they positioned their entire higher education institution anew. In the development phase, more than 100 working groups were discussing about the possible direction of the new university. The result: inspired by higher education models from the English-speaking world, the Leuphana University consists of a College for Undergraduate education and a Graduate School for Master and Doctoral study programmes. In 2007, the first Bachelor applicants were admitted to study according to this principle. They go through the first semester together, and in the following five semesters, they divide their time between a major and minor subject of their choice; in addition, they participate in comprehensive studies that offer topics presented from a multiplicity of disciplines. In 2008, the Graduate School was launched.



*Brilliant perspectives:  
one of the new buildings on  
the Lüneburg campus*

## More Choice for Mechanical Engineers

The TU Darmstadt has expanded curricula to include project assignments and philosophy courses for engineers – with outstanding results for the students

# W

hen Professor Manfred Hampe looks up from his desk, the first thing he sees is a framed picture on the wall of his office. Graduates from an American university can be seen at their graduation ceremony, all wearing a mortarboard on their heads, the typical academic cap with the square brim. Manfred Hampe cannot hold back a proud smile when he glances at the picture: those are his students who have left Darmstadt to discover the world. His goal is to not only educate good academics and scientists, but also to stimulate curiosity.

Students coming to the Technical University of Darmstadt commence their studies in mechanical engineering with field work – and a tricky assignment. “Can we develop a remote-controlled way to destroy illegal opium fields in Afghanistan”, the question Hampe and his colleagues recently posed to first-semester students. The students had one week to find a suitable answer. They divided up into small teams, composed of students from three disciplines: the mechanical engineers were responsible for the drones and pump sprays that distribute a biological agent. The biologists have to find an appropriate fungus that destroys the poppy in a targeted fashion without harming the surrounding vegetation. And the political scientists are assigned with

analysing the effects of such measures on the local political structures and the inhabitants in surrounding villages.

“The students run off to the libraries and to experts they found in Darmstadt. And they felt like researchers from day one. That is a true initiation rite,” says Manfred Hampe. He has seldom seen students motivated so much – and Hampe is an “old school” professor, 58 years old and active at the university and in the private sector for decades. The mechanical engineers in Darmstadt took advantage of the transition to Bachelor and Master in order to thoroughly go through its old “Diplom” degree programme. “We’re no longer asking what we want to teach, but rather what the students have to be capable of doing

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**“The students have felt like researchers from day one”**

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after graduation,” says Hampe. At once, the path to the knowledge is no longer the deciding factor – “and that is where true academic freedom, choice, opens up, where students regain autonomy over their studies.” Less lecture-style teaching and more research-oriented learning is one of the maxims that apply now in Darmstadt. Not just memorising formulas, but rather getting to see right away why mechanical engineering is important.

No longer moving in large groups from one lecture hall to the next, but rather

learning in smaller groups with a professor as mentor. “We have not reduced the academic level, but rather simply changed our teaching approach,” says Manfred Hampe. That the idea is working in practice is confirmed by the dropout rate: in the old degree programmes, the rate was higher than 50 percent, the notorious level typical nearly everywhere in the discipline of engineering. Now, a few years later, it has sunk to approximately ten percent. “In the Diplom study programmes, a lot of students quickly gave up as they were being overloaded with theory and did not see anything but formulas for a couple of semesters,” as several mechanical engineers in Darmstadt recall.

In converting the degree programmes, the Darmstadt university took an utmost pragmatic approach: to offer a six-semester Bachelor in general Mechanical Engineering, doing without specialised study programmes; a more diverse offering is then possible starting at the Master level. But it took a lot of effort to design the Bachelor programme. They removed a great deal of curricular deadweight and placed motivated teaching at the forefront. “Well into the 1960s, the steam engine was an integral part of studies,” says Hampe with a grin. “At some point, you just have to draw the line.” And together with his colleagues, he opened a new chapter – a Philosophy seminar for mechanical engineers, for example, dealing with philosophy of science, critical questioning of subject-specific methods as well as ethical issues. Meanwhile, the seminar has become one of the most popular courses in the entire curriculum. With regard to subject material, not much has changed in the orientation



© Katrin Bimmer

Aiming high: students at the TU Darmstadt on a ropes course

toward basic principles in the mechanical engineering study programme.

"Our graduates are at least just as proficient in their tools of the trade as earlier students. And probably they are even better engineers because they do not limit their horizon to their own discipline only," says Manfred Hampe. In these kinds of moments, he thinks back to his own time in school: nine years of Latin and six years of Greek – an experience he still benefits from today. That is why he wants to open up academic studies to students' individual interests, and precisely that has been made possible through the Bologna Process. "We want to establish research-oriented, exploratory learning, a community of teachers and learners, just like Humboldt had called for," says Manfred Hampe. He points to a gold-framed picture on the wall of his office which shows Wilhelm von Humboldt's castle in the town of Ottmachau. "This spirit, everything else follows from there."

One person who is feeling the effects of this sea change is Barbara Seifert. She has built up the MechCenter, where

study counselling, international office, internship placement and numerous other tasks are consolidated under one roof.

In the past years, she has experienced a change in mentality among students: they are more goal-oriented and they are increasingly interested in programmes abroad. "The tiered Bachelor and Master structure has opened up new opportunities for us with our contacts abroad," she says. A dual-degree programme with the American university, Virginia Tech, has been established that is attracting prospective students from around Germany to Darmstadt. And the numerous exchange programmes with Spain, France, Brazil and multiple other countries have gained a much higher demand than in the past. "We have more and more students interested in going abroad," says Seifert.

For the students, the international partnerships represent one of the strongest arguments for choosing the TU Darmstadt, not to mention a great opportunity for their future entry into the professional world. "We are preparing our students for the European labour market – and, with

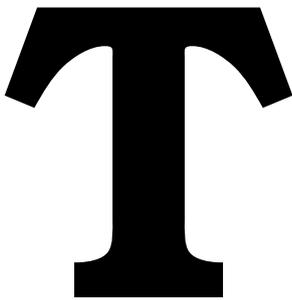
the old Diplom degrees, that is far more difficult to do!", says Manfred Hampe.

Only about 20 percent of his students used to go abroad for a few semesters, but after the introduction of the Bachelor, the rate has suddenly tripled. "A German Vordiplom, essentially the intermediate exam in a Diplom programme, is only seldom recognised at universities in other countries. Often students used to have to take additional tests or submit additional certificates and documentation," says Manfred Hampe. All of that is no longer an issue thanks to the Bachelor.

"We mechanical engineers have transformed from opponents of the Bologna Process to its strongest supporters," says Manfred Hampe – "even if that has still gone widely unnoticed." He admits though that the transition to an innovative Bachelor degree programme has meant a load of work and great effort. Then he glances over to the Humboldt picture in his office and then the picture of his students with the American mortarboards. But all that work, he says, has been well worth it. ■

## Guugle for Better Learning

Two professors at the Bremerhaven University of Applied Sciences are working towards improving attitudes towards teaching and learning. With their initiative they are inspiring colleagues and students alike



The students' attention is guaranteed when Professor Michael Vogel talks about personal experiences and anecdotes: Vogel worked many years for a tourism company in London and then in Paris. He travelled around the world with his job and had a successful career that many of his students are dreaming of. "They love to hear practice-related stories. These personal experiences are a great

Bremerhaven university after years in the professional field, it was a difficult and big step at first: Looking back, he says, "In the industry, you would present your information in fifteen minutes with a veritable PowerPoint extravaganza. That, of course, won't work in courses lasting one-and-a-half hours." "I could talk about practical examples and anecdotes, but as soon as the material got more abstract, I found

his Financial Management course in 2008: the American real estate crisis, the collapse of Bear Stearns Bank and the increasing spill-over to Europe. Since the issues were being widely discussed, the students were able to research on their own in depth. Vogel's teaching then dealt with forms of debt and securities derived from it, the relationship between risk and profit, investment principles and corporate evaluation, how real-estate financing works and the network of global financial markets. "It motivates students immensely to be able to sense the relevance of these otherwise dry, everyday issues," says Michael Vogel.

Now Vogel hopes to share his experiences on a broader scale in Bremerhaven. He initiated a university-wide teaching and learning project together with his colleague Wolfgang Lukas. They named their concept "Guugle", short for learning and teaching well and eagerly (or Gut und gerne lernen und lehren). The Conference of German Education Ministers and the Stifterverband provide 500,000 euros to support the Guugle project. The Bremerhaven University of Applied Sciences is confident that, "at such a small institution like ours, change is best achieved when we take up ideas and measures put forth

**"This isn't about showcasing a flashy entertainment programme!"**

addition for teaching," says Vogel. He has developed a teaching strategy around this concept, for which he received the 2008 Ars-legendi Prize of the German Rectors' Conference (HRK) and the association of German scientific foundations, Stifterverband für die Deutsche Wissenschaft.

The business economist heads the study programme in Cruise Industry Management at the Bremerhaven University of Applied Sciences, a business programme oriented towards maritime tourism. When he was appointed to a professorship at the

myself looking at bored faces." Michael Vogel delved into didactic methods, spoke with colleagues and then experimented in his courses. The method of problem-based learning impressed him in particular – and has been his main approach ever since. "Judging by my experience, learning with the help of appropriate problems is very effective. Therefore, I set my focus on problems and not solutions," says Vogel.

A large number of his examples are taken from the press. One example is the financial crisis, around which he designed



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Immersed in a challenge, even outside of class: students in Bremerhaven

by our colleagues.” The Google project is at the crossroads between professional and organisational development, inviting teachers just as much as students to participate. The first principle is voluntariness:

Professors form small groups and work together for a year on their own teaching-related challenges – e.g. on coaching students, the systematic development of new teaching concepts or the inclusion of experiments in teaching. Students, on the other hand, address for one semester a question or issue related to their own studies, their learning or their teachers’ teaching. To encourage participation, students receive credits for their work, while professors can reduce their teaching load.

The background to the project is that, due to its relatively small size, the Bremerhaven University of Applied Science does not have its own staff development department. Individually booked teacher training seminars were able to achieve, at most, rather scattered successes. With Google, the higher education institution is set to be changed.

“This isn’t about showcasing a flashy entertainment programme,” says Michael Vogel. He argues that it is much more effective to reflect exemplarily on the material and to work together with students on a problem. Or to dive straight into a specific topic: Vogel recently conducted a project dealing with the compatibility

of coastal tourism with land-based wind farms. The students interviewed tourists in eleven communities between Cuxhaven and the Dutch border, with more than 800 conversations taking place. This type of teaching goes far beyond the limits of classic academic subjects. “It encourages cross-disciplinary thinking,” says Vogel. The wind farm study addressed tourism management, market research – and also statistics since the data collected had to be analysed by the students afterwards. The result, says Michael Vogel, was astounding for him: “Even with statistics, the students were enthusiastic in their work – that’s something I had never experienced before!” ■

## The Art of Questioning

Bielefeld University does not want to teach key skills in extra seminars, but rather directly as part of the regular courses. And the students are gaining new insights into science and research along the way

# I

t had been a long time since the main lecture hall had been as crowded as it was at this event organised by the rector's office and the student union: The future direction of the university and, above all, teaching were the topics of discussion. In attendance was Wiebke Esdar, who simultaneously graduated from a Bachelor and a Diplom study programme. Esdar is a student senator in the Bielefeld student union and a young individual unafraid to debate. "I do not approve of everything that is happening with the Bachelor programmes," she says. "But that they are here is a good thing – as is the way that we are organis-

time, it is the most popular meeting place for students. The cafeteria, the Café West-end and a coffee bar are all located along the hall, but also shops and various service departments for students are here. Underground is a stop for the tram that connects the campus to the Bielefeld city centre.

"The university is making a good deal of consistency possible, while everyone gets to be heard – and for direct contacts and talks with colleagues, the distances are at most five minutes, no matter where their offices are," says Dr. Andrea Frank. She heads the department of "Teaching, Learning, and Student Counselling" with

competences would mean that additional courses would suddenly need to be churned out, presentation and rhetoric seminars, Power Point instructions and so forth," she says. Instead, she is pursuing with her department a different approach: "We wanted to make the implied explicit," she says. Acquiring competences, learning how to do things as an academic has always been a part of academic study. The Center for Teaching and Learning is now supporting the study programmes in teaching competences, not isolated from the usual course of studies, but rather as an integrated part of the curriculum. With their concept, the Bielefeld staff wants to continue strengthening the academic components of the study programmes while imparting students with necessary competences simultaneously. Meanwhile, even the association of German scientific foundations, Stifterverband für die Deutsche Wissenschaft, has described the concept as exemplary.

The core of the Bielefeld system is the "Schreiblabor"; the writing centre, established in 1993, was the first of its kind at a German university. A team of writing experts conducts seminars in which students learn to organise the working process for writing academic papers, but still in contrast to classic preparatory courses. "We don't give guidelines on what a paper should look like," says one of the writing center staff Stefanie Haacke. "We help students to organize the process of writing and to clarify disciplinary standards and requirements."

**"Never before has the issue of good teaching been discussed so much at our university as nowadays"**

ing studies here in Bielefeld." Primarily, she expects big dedication and good teaching from her university, and precisely that is what teachers, students and the rector's office are working intensively on together.

Bielefeld University is located a few kilometres from the city centre, its campus protruding massively in the landscape. A long extended hall in the middle of campus provides access to all offices, laboratories and lecture rooms of the university; at the same

the "Center for Teaching and Learning" – a center that is playing a key role in the current changes. From here, the process of improvement to teaching is being steered and the Bologna Process brought to life. "Never before has the issue of good teaching been discussed so much at our university as nowadays," says Andrea Frank.

"Just a few years ago, everyone thought that the requirement to teach students not only disciplinary knowledge but also



All departments and institutes at one location: the main entrance to Bielefeld University

Students attending a writing seminar will be working on an actual assignment from their study programme. "Ideally, students will be in the process of planning the focus and content of their papers," says Haacke. The writing centre staffs' service is more akin to facilitators than classic teachers. The student participants work under their guidance on the specific issue of their papers, which helps familiarise them with academic practice and methods. "A lot of students do not know that they are supposed to develop their own research question or thesis, which actually is a requirement in most student writing at German universities. They are totally surprised when they hear that they are supposed to work like real researchers," Stefanie Haacke has observed.

"The students should learn to question what they are actually doing," says Haacke and refers to the basic principle at Bielefeld,

to make the implied explicit. "Often the students come with questions on the surface, on rules of citation for instance. During the conversation it becomes clear that they are unaware of why and for what purpose they have to cite and provide evidence – and that this concerns an important thing, namely the relationship between own results and other people's findings." Knowledge of this background will help, in turn, to prevent plagiarism in the end.

A concept similar to the writing centre is the underlying idea to numerous higher education didactic seminars for continuous education in Bielefeld. Even doctoral and post-doc students question their work in these seminars, dealing with subject-specific doctrines. "As a result, many of them get a reflective perspective on their subject area for the first time," says Andrea Frank – and that flows into the future courses of the up-

coming scholars. They can also place themselves better in the position of the students and explain material more clearly. The idea behind this: the young teaching staff should be able to not only teach subject-related knowledge, but also academic methods at the same time. Therefore, they develop in the workshops on teaching a series of exercises for the next course they will be conducting – many of them requiring a good deal of writing from the students.

"We trust that the message will spread out," says Andrea Frank. The students are delighted about that: Wiebke Esdar, for example, the student senator senses a truly new and exciting beginning. "I am just ending my studies now and thus can compare the developments at the university over a few years time," she says. "And it is inspiring to see that so much is currently being committed to teaching." ■

## Didactic Tools for Professionals

Universities of Applied Sciences in North-Rhine Westphalia have established their own centre for continuing education. Here professors learn how they can teach better – and they connect with their colleagues from other regions

# I

t almost reads like a complete course catalogue, the programme that Professor Tobina Brinker composes annually: the continuing education course offering for teachers at universities of applied sciences with about 100 courses and seminars per year is exceptionally sizeable. This is made possible by a network of higher education institutions that is committed to offering these courses: all 19 universities of applied sciences in the State of North-Rhine Westphalia are included

in this network that pools its resources for didactic continuing education.

“Per year, we reach on average one of every two teachers at universities of applied sciences in North-Rhine Westphalia,” says Tobina Brinker. The professor from Bielefeld is director of the network, which has set the “Future of Teaching and Learning in Higher Education” as its noble motto. For last year, Brinker counts 1,600 participant days – a new record for her and her colleagues, who make up a solid core of four staff

members in the director’s office coordinating all activities. The network is called “hdw nrw”, an abbreviation for higher education didactic continuous education (hochschuldidaktische Weiterbildung, hdw) in North-Rhine Westphalia.

Ten years ago, the universities of applied sciences were the first to pool their efforts. Today, there are comparable networks in other States, though only a few are concentrated directly on the universities of applied sciences. And another speciality belongs to the NRW consortium: Since completing the initial pilot phase, which was financed by the respective ministry, the participating institutions now finance the costs through their own budgets. For them, the common programme is worth it nonetheless, especially since now they do not need their own didactic centres. At each participating institution, however, there is a specific contact person responsible for representing the network on site.

For many newly appointed professors, the service provided by the didactic network has proved to be a true support for their beginning semesters. There is a coaching programme, in which teachers are supported over a period of several months; a basics seminar takes place in the second semester. “Most of the new teachers have just come from professional practice, prior to which they

### Certified Teaching and Learning

The members of the higher education didactic network in North-Rhine Westphalia are considering a type of tutor system: the seminar participants could become themselves contact partners for their colleagues. Accordingly, participants in continuing education seminars could be awarded certificates; this would involve a four-step system. Participants would reach the basic level upon completing 120 learning units, after 200 units comes the next certificate. After completing 400 units, professors can offer higher education didactic courses in the hdw nrw network themselves, while 600 completed units would qualify them to serve as workshop leaders in the basic-level seminars, in which their newly appointed colleagues are trained. This highest level corresponds with the level of a trainer course for professional continuing educators, says the higher education network.



Professor at an hdw seminar: the number of participants is increasing by the year

were educated at a classic university," says Tobina Brinker. "That's why we show them how a university of applied sciences generally ticks – and of course how to set up a successful course." The professors, who bring along profound knowledge in their respective areas, appreciate such pedagogical support. Good teaching is not just a good presentation, according to the network – and therefore, the network's higher educa-

tion didactic experts work together with the new teachers to develop exemplary courses. "It is important for us to not only offer workshops, but also to assist and support professors," says Brinker.

The network's programme is also geared toward experienced higher education teachers: innovative didactic approaches are taught; there are language courses to enable teaching English-language seminars as well as courses

on time-management – given the many new tasks that professors are taking on, the latter has become particularly popular. Numerous teachers have come to see clearly how helpful these seminars actually are in their everyday work. "Our offering is continuously growing in acceptance," says Tobina Brinker – when she started ten years ago, only 400 participants registered for the courses per year. By now, that number has quadrupled. ■

## The Practical Charm

At the Bonn-Rhine-Sieg University of Applied Sciences, students rotate between practical weeks and theoretical units – this enhances learning and increases motivation. Even former sceptics are convinced

# B

y the end of the week, the diodes have to light up, as required by the assignment that students are brooding over. They are supposed to connect a circuit board to a computer via USB-cable and program a chip to control a chain of light-emitting diodes. In the previous weeks, students have learned theoretical material on electronic components, and now they should put their new knowledge to practice right away.

This close connection is the core of a new learning concept at the Bonn-Rhine-Sieg University of Applied Sciences. Professor Marco Winzker has named it "block-weeks", and the professor for Digital Technology got the idea while thinking about what the ideal course of study would be. "When we had the old Diplom, we had positive experience with hands-on lab work, prepared experiments and larger group assignments," he says. He wanted to transfer these elements to the new Bachelor and Master structure – and solve some problems at the same time that have long concerned him.

"It was always difficult for the students in group work to settle on times to meet since somebody always has a lecture or seminar," Winzker recalls. And when a group finally met up again after a two-week interruption, the participants often had to go through the results of the previous meeting again in order to remember the details," says one of the participants.

With block-weeks, Marco Winzker and his colleagues have circumnavigated these obstacles: they have divided the course of study into smaller sections. Every semester has three lecture phases of four weeks each – and a practical week immediately after. Practical knowledge is learned intensively in that time. "This way, we were able to include independent learning phases and allot time for projects in the new Bachelor degree programmes," says Professor Winzker. This block-week is obligatory for

the tasks among each other and complete by a certain deadline," says Winzker. How the block-week is specifically designed is determined by the respective professors. They are also available during that week in case questions or problems arise. Here applies as well: the more advanced the students are, the less help they receive for the assignments. At the end of the week, the small working groups present their results to their fellow students. This additional training in presentation skills is also a de-

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### Along the way students become professionals in time management

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the entire subject areas of Electrical Engineering, Mechanical Engineering and Technical Journalism. All students participate from the first semester up to graduation.

In the first two semesters, the block-weeks allow for repetition and deeper study of the material. As of the third semester, students receive larger assignments to be solved independently – and the complexity increases with each semester. "We familiarize them gradually with project management since they have to divide the assignments into small steps, distribute

the tasks among each other and complete by a certain deadline," says Winzker.

Often individual tasks take several weeks. If the students develop a circuit board, for example, in the first block-week, they have to compile an exact list of all the necessary parts by that Friday. The parts are ordered during the four-week lecture period – and can be tested immediately in the following block-week.

"With these assignments, sometimes even a small mistake made near the beginning can lead to the concept failing," says Marco Winzker. But that is also part of



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Putting heads together: teamwork is the key in the practical phase – professionals in project management

the practical phase since troubleshooting often helps students to learn the most.

Therefore, teachers at Bonn-Rhine-Sieg University of Applied Sciences do not award marks for the practical exercises. Instead, Winzker for instance invites the students individually to his office to discuss their work and their individual contributions to the group's result. "That way I can assess fairly quickly if someone was more of a free rider without much of a contribution," and in those cases, he can deem the participation as failed.

The professors have been convinced by the block-week concept. They find particularly convenient the possibility to use their time flexibly for the assignments and adjust to the needs of the particular study programme. Technical Journalism students can simulate a realistic workday, including article and editorial deadlines and cancelled interview appointments.

Consequently, students are introduced to aspects of their later professional life and learn not only how to write in an eloquent style, but also how to deal with unusual situations. The climax of this degree programme is the last block-week, in which students develop in groups their own concept for a popular magazine. Topics include "inventions" or "mobility" and, within a few days, the groups design an entire journal. Each team consists of 15 students, and the four teams enter a sort of competition with each other. At the end, a jury decides according to technical and journalistic criteria on the winning concept.

When the Bonn-Rhine-Sieg University of Applied Sciences introduced the block-weeks, the professors faced the biggest challenge of finding enough time in the curriculum for the projects. Already they had to reduce the amount of

material for the shorter Bachelor degree programmes, and now the practical phases would mean reducing even more the amount of time for classic lectures by a few weeks. "It was not very easy," Winzker recalls. But he is convinced that his students are learning more intensely than ever thanks to their hands-on experience during the block-weeks and absorb the material much differently than in the classic lecture format. Therefore, the time allotted for these phases is more than justified. What is more, the students' motivation has increased substantially. "They really look forward to the block-week every time. For most, this experimentation was ultimately one of the reasons why they chose to study Electric Engineering here in the first place." ■



Inspiring design: foyer of the new Physics and Astronomy building at University of Potsdam

## II. More involved studying

One of the most important principles of the Bologna Process is that students are taking an active role in the reform. A new culture of participation is emerging in higher education: students have more opportunities than ever to make a contribution at their Alma Mater and to become active in matters of their studies and beyond. For example, where computer scientists programme a website for a workshop for disabled persons or social scientists collaborate with a retirement home. Along these lines, students can learn to lead their own projects and solve problems independently. All of this benefits not only personality development, but also a research spirit from the outset, which is precisely one of the main objectives of higher education.



## **The Action Takers**

A group of students in Freiburg want an optimal Bachelor degree – and are showing that with their commitment they can move a lot of students at their university

# L

ukas Bischof had his moment of epiphany in Spain. He was there as a student for a year abroad and was sitting in the seminar of a professor who was enthusiastic about the Bologna Process. "The professor took full advantage of the opportunities presented by the reform. There I experienced a course in which I learned more than ever before," says Lukas Bischof. He has been back in Freiburg for a few years now at his Alma Mater, the Albert-Ludwigs-University – and is fighting together with a group of

students to improve academic studies.

In the Psychology degree programme, the group meets regularly with professors, initiates changes and calls repeatedly for good teaching. "Many students complain about their studies and about the university being resistant to change," says the 26-year old Lukas Bischof: "But we have started to get involved concretely and have generally encountered open ears."

The Bologna Process has convinced Lukas Bischof – though under certain con-

ditions: "You can mess a lot of things up in the process of transferring to Bachelor and Master. But if the higher education institutions do this right, the reform will be to the students' benefit," he says. Quickly he was able to win over like-minded students with whom he founded an initiative. Their declared goal: to contribute their own ideas in the process of converting Psychology to the Bachelor and Master programmes, to stimulate a dialogue about the programmes' goals and to develop an optimal curriculum together with the professors.

His first "eureka" moment came right at the beginning: When he and his cohorts were working on a newspaper, they conducted interviews with their professors. He asked them how they picture the ideal way of studying Psychology. More flexibility, more case studies, fewer overfilled lectures and a better teacher-student ratio – all of these goals were mentioned by the professors. "There I realised for the first time," says Lukas Bischof, "that we actually had the same goals."

After distributing the newspaper with its initial 600 copies, Bischof and his partners set up bulletin boards at the entrance of their institute.

There students could write down their comments and wishes, while Lukas Bischof was also able to converse with many fellow students. Soon thereafter,

### **Award-winning Initiative**

The students in Freiburg have made waves with their initiative beyond their university as well. They have travelled as far as Vilnius in Lithuania to present their project at the annual conference of the European Association for Institutional Research. The topic of the conference happened to fit exactly with their project: "Fighting for Harmony – Students, the Academy and Society in Tune". The students from Freiburg presented their initiative in a paper they composed themselves reporting on their experiences. The students' commitment was so well received that an international jury selected their paper out of a total 18 competitors for the "Best Paper Award" in the under 35 year-old category. "It was particularly rewarding that we not only received a great deal of recognition for our work, but also because there were a lot of interested inquiries from the conference participants," says Lukas Bischof. The students' dedication, it would seem, has struck a nerve.



© Bachelor Gemeinsam Gestalten, Lukas Bischof

Achieving more together – in Freiburg, student participation is worth it

out of the loose collection of friends was formed an initiative that a solid core of 30 students belong to by now. And they are dedicated in their work: they formed three working groups responsible for practical competences, diversity in studies as well as study plans and qualification goals. "Developing Bachelor together" is the name of the Freiburg initiative.

At the heart of the initiative is the students' vision of optimal conditions for

the Bachelor – committed to realising the freedom that the new study structures allow for new ideas. They wish for personality development during academic study, opportunities for community and social service, flexibility for students with children, personal tutors for each student, more references to professional practice of psychologists and also (supposedly) minor issues such as a block seminar on group processes in the Black Forest.

In order to reach an equal footing when meeting with professors, they read intensively on the Bologna Process, its goals and provisions. And then they got started: The members of the working group on study plans for instance surveyed professors on which skills are essential for their professional field. "And even here students face a lack of overview," says Bischof – so, he and his fellow students surveyed numerous practising >>

psychologists on which knowledge and skills they needed in their everyday work.

Based on their results, the Freiburg students wrote a so-called "Qualification Goal Paper" together that they presented

to their Dean of Students. Now the teachers are preparing their own paper in which they plan to integrate the students' wish list. The results will then be discussed in a joint working group and are set to

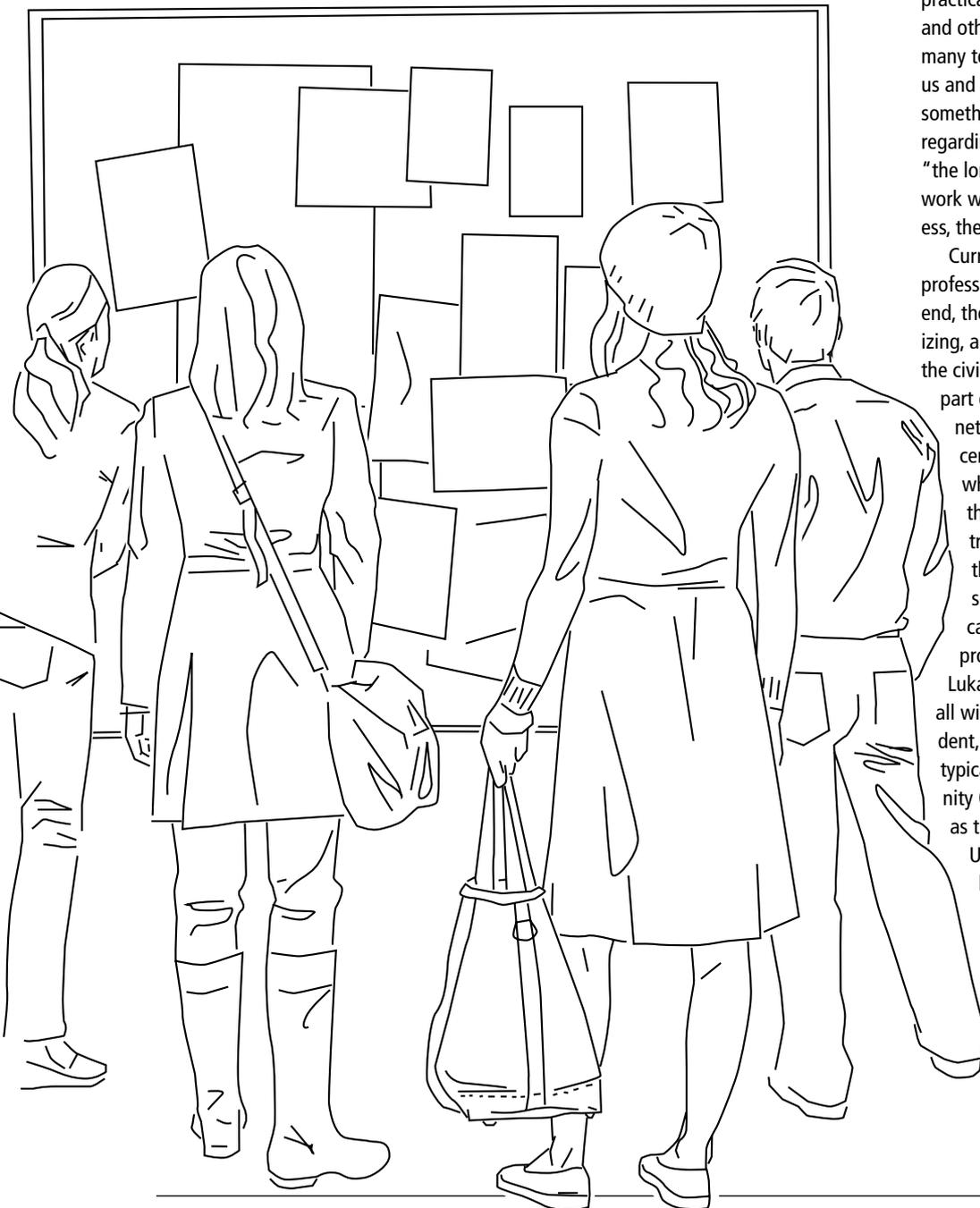
be included in the study programme.

The working group on diversity interviewed advanced students on the seminars in which they learned the most – were they courses parallel to a lecture or advanced courses, are papers or exams more beneficial, do they find reports by fellow students or a more prominent role of the course instructor better? The results of this smaller study will also be considered in curricular development.

Meanwhile the student initiative has entered the next phase. The active members have taken on new issues: mobility, better integration of international students, practical relevance in studies, E-Learning and other topics. "We have observed that many teachers are happy to work with us and are open and that we can move something", concludes Lukas Bischof regarding their activities up to now – and: "the longer and more constructive we work with them on the reform process, the more seriously we are taken."

Currently the students are working on professionalising their initiative. To this end, they are relying on Community Organizing, an approach that has its origins in the civil rights movement of the USA. A part of this approach is to reach a better network among the actors. At the centre of this approach is an organizer, who coordinates and holds together the various concerned groups and tries at the same time to include further key figures in their work. "Consequently, a citizen organization can build up enough power to set processes of change in motion," says Lukas Bischof. He associates this above all with the campaign of the U.S. president, Barack Obama, who represents a typical example for successful Community Organizing. If everything goes well, as the students of the Albert-Ludwigs-University of Freiburg hope, they can hire on one day a full-time organizer and thus provide their activities with even more momentum. ■

**"If the higher education institutions do this right, the reform will be to the students' benefit"**



*On target: the Psychology students in Freiburg aspire to set up their group according to the principles of Community Organizing*



## **More than just Soft Skills**

At the University of Potsdam, students are teaching their younger fellow students – and both sides are learning a lot

“S

ometimes the son of a Latin teacher in me comes out,” says Professor Norbert Franz with a smile. This affinity is noticeable in his favorite project: Docendo Discimus is the title, which means “through teaching we learn.” Behind these two Latin words is a project at the University of Potsdam where students refine their key skills while providing their younger fellow students with effective start-up assistance.

Having students in Potsdam work on key skills is not an entirely new thing: since the association of German scientific foundations, Stifterverband für die Deutsche Wissenschaft, took up this issue a few years ago, students and teachers in Potsdam have been working on concrete projects. Out of this, their own consortium has developed. It’s called Studyplus; everything comes together here that transcends the borders of purely subject-related academic studies. “We strive for a mix of key competences that are relevant during studying and in later professional life as well as a sort of General Studies for expanding horizons,” says Norbert Franz, who heads the Studyplus programme.

The study guidelines in Potsdam require that all students attain a total of 30 credit points in the electives area. In doing so, they can complement their academic perspectives, expand their outlooks and learn new skills – all of which are defined goals of the univer-

sity. The Studyplus consortium’s offering encompasses seminars and courses, from which students compile their own programme; a compulsory area for all study programmes that are not preparatory, e.g. in contrast to Teacher Education, to a specific professional field.

The chief attraction is that students in the Docendo Discimus programme prepare an aspect from their own field of study and plan their own courses on that. This develops then into a type of tutorial that anyone can benefit from. The students review material intensively and train their rhetoric, presentation and teaching skills in their own seminars – and the younger students receive an additional overview on complex issues in their subject area.

In order to ensure they can meet this challenge, the student teachers can refine their techniques beforehand: seminars on work organisation, academic writing or targeted communication are some of the classics in the continuing education curriculum of the University of Potsdam. For some of these courses, professional actors are even hired to help the students improve their confidence in public presentations and elocution.

There is an underlying system to the seminars that they refer to as the Cafeteria Principle: everybody chooses workshops on their own from the areas where

they are “hungry” for improvement. At the same time, there is intensive support that allows for regular feedback to the students on their learning progress. Whoever goes through these preparatory steps will then be able to stand before their fellow students and train them in the Docendo Discimus programme.

“We want to go above and beyond the mere teaching of soft skills,” says programme initiator Norbert Franz. “The students should have the chance to experiment; that is an essential part of personality development.” The students, as Franz recalls, were downright excited when he developed the details of the Docendo Discimus programme together with the student union and a special ad-hoc committee. The enthusiasm continues to this day, with the number of interested participants surpassing seminar capacity. Making it a win-win situation is the fact that the university has an additional pool of tutors – while the student teachers comprise a supplemental tutorial opportunity without replacing any existing job positions.

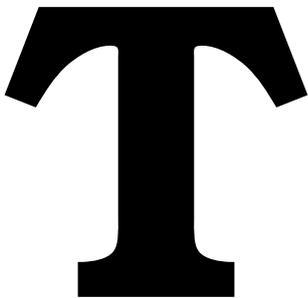
“We are creating an arrangement where involvement is rewarded,” says Norbert Franz. For him personally though, there is one overarching goal: nobody should have to say after studying that they simply did not have any time to get involved. ■



*Learning independence – in higher education as well as here on the university climbing wall in Potsdam*

## **Do Good and Learn at the Same Time**

Students develop a navigation system for the blind or a PR-Concept for an art house cinema – the higher education network “Education through Responsibility” combines academic material with charity activities



The assignment was no easy task: the students of Business Informatics were to programme a communication platform on the internet. They had one semester to complete the task; the customer was the Political Salon Essen, an initiative that conducts dialogue on an array of Globalisation related issues. The group jumped in to the assignment, the project was finished in time – not least thanks to the professional guidance provided by professors at the University of Duisburg-Essen.

Multiple higher education institutions in Germany have similar concepts: students work on a project for a non-profit organisation, guided by a researcher from their subject area and with informational support from their “customer”. A new PR-concept for a small art house cinema, a pedestrian navigation system for an association of the blind – all are typical assignments where students have proven themselves. Service Learning is the name of the concept, which has a long tradition in the United States, but that has caught on in Germany now as well. Do good and learn at the same time – and you get credit points toward your degree for it. That is, in short, the idea behind Service Learning.

“For us, the Bologna Process came just at the right time,” says Jörg Miller. The

educator is head of the UniAktiv Office at the University of Duisburg-Essen. Now that students are not only supposed to accumulate subject-related knowledge, but also practice with project-oriented work, Service Learning has become a popular concept – and one that counteracts the common complaint about the new study programmes being too similar to schoolwork. Miller’s project in Duisburg-Essen was one of the first of its kind in Germany, starting in 2005, but by now, similar approaches have been introduced at many universities. Numerous higher education institutions are part of the

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**“There is a long tradition of ‘Service Learning’ in the United States”**

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nation-wide network “Education through Responsibility”: in addition to Duisburg-Essen, other members include Erfurt, Luneburg, Mannheim, Osnabruck, Saarbrucken and Wurzburg, with the University of Halle-Wittenberg recently joining. Coordinators meet semi-annually to exchange experiences and discuss new ideas. And with nearly every meeting there is a new representative joining from another university. “Serving Learning is on the advance,” concludes Jörg Miller: “That is a big plus for the students, and it offers higher education institutions strategic possibilities for development.”

At a lot of places, a dense network has emerged between the university and local non-profit organisations. They work together project for project – the students can apply their knowledge in a meaningful way, the charity and community organisations receive a professional service, the teachers can present their subject area to a wider audience – given that the local press often covers these activities – and the universities themselves can shed their ivory-tower image and open up to the public. After a few years experience, the members of the national network are convinced that this presents a situation where everybody wins. “Fortunately, graduating from university no longer means simply attaining a lot of theoretical knowledge,” says Jörg Miller. It has become also about one’s own involvement and insights. And this is precisely what a project like UniAktiv facilitates.

At the University of Duisburg-Essen, there are now seven disciplines offering up to 15 seminars per semester in the area of Service Learning. The UniAktiv office informs on the didactic concept, sets up contacts to the respective organisations and helps in cases of difficulties, while teachers and students have a wide scope of latitude for carrying out the projects. Consequently, the assignments can be designed precisely to fit the various study programmes – so that computer scientists for example develop complex websites, business students help with setting a business plan and communication scientists develop a public relations strategy. Students participating in these seminars receive credit points, which advances them in their studies. And, it is a good feeling for



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Encouraging curiosity: Students at the Service Learning seminar “Art meets Science”

the participants to be involved in these projects: and nearly all projects are still bearing fruit after the end of the semester and the organisations continue them. A few years ago though, it was not all that easy for Jörg Miller and his team to get other teachers interested in Service Learning.

“But when they are interested in a topic, then they are glad to get involved,” he observed – and: “those who have been involved in a project almost always join up for further ones.”

In addition to the education-oriented approach, there is a second method in the Service Learning network: some higher education institutions aim for social competences and send their students to retirement homes or disability workshops so they can mix right in with the everyday work. “Basically any organisation is appropriate for these cooperative projects as long as they have sufficient capacity in order to provide students guidance, at least at first,” says Gabriele Bartsch. She is managing director at Mehrwert (lit: “Value Added”), a company in Stuttgart that advises higher

education institutions on their Service Learning concepts. The associations responsible for the Mehrwert agency include several Protestant charity organisations. Thus, Bartsch is familiar with the inner workings of social organisations that the universities cooperate with and she and her co-workers serve as an interface between the partners.

A number of universities encourage their students to find their project place on their own. Having to present oneself at a hospital or youth centre is an opportunity to experience a situation akin to applying for a job. And many students end up finding a contact point for their later careers. “I remember an Athletics student who specialised in working with seniors after her project in a retirement home,” says Gabriele Bartsch. And she tells the story of an architecture student: she worked in a residential community for dementia patients and experienced how the home had to be renovated because the open building turned out to be inappropriate for the residents. She received the assignment to document the renovation. For many, the experiences in the Service Learning project

provide the first exposure to social work. And this impetus, as hoped by the initiators of the network, remains after graduation.

“We reach people with our projects that were not involved previously,” Jörg Miller has observed. He has seen how aspiring business persons suddenly drop their original career goals of top-management and instead seek a career with a non-profit organization.

At the next semi-annual conference of the German higher education network “Education through Responsibility,” as usual, the acceptance of new applications by other universities for membership in the network will be discussed. In the meantime, network members have introduced an important criterion to their statutes: the application must be signed by the president’s office and not just one interested department. “Service Learning can be most effectively carried out,” says Jörg Miller, “when the entire higher education institution is on the same page.” ■



Openness as matter of a principle: the Central Forum at the University of Regensburg

# III.

## More international studying

It is one of the most important goals of the Bologna reforms: a European Higher Education Area should be created in which students can learn everywhere without being limited by national borders. The common system of Bachelor and Master degrees, the easier recognition of academic work done abroad, better inclusion of partner institutions in joint degree programmes – these reforms constitute milestones on the way to a truly open academic world. And the German higher education institutions are taking advantage of these freedoms to explore new pathways creatively.



## **Back to the Roots**

The University of Regensburg is actively recruiting the children of immigrants – and sending them on an exchange to the home country of their parents. The graduates benefit in turn from the dual cultural background

### **The Path to Europe**

The Secondos programme at the University of Regensburg involves a concerted internationalisation strategy. A particular focus is set on the countries of Central and Eastern Europe – for a number of years now as well, students have been able to attain an additional qualification in special programmes on several countries. In Bohemicum, there are language, cultural and socio-historical courses on the Czech Republic, in Slovaticum on Slovakia and on Hungary in Hungary Compact. Similar programmes are being planned for other countries as well. Also part of the higher education strategy is the nomination of Internationalisation Partners at each faculty who, for example, serve as the main contact person for the Secondos programme.

# E

ven before she entered university, Stefanie Dolvig knew that she wanted to have something to do with her previous home country. Her parents immigrated to Stuttgart from Romania, where they had belonged to the German minority, the Banat Swabians. "When I got the offer from the University of Regensburg, I knew right away that it would be my dream study programme," says the 21 year-old. She soon packed her suitcases and headed for Bavaria.

The programme, "Secondos" is unique in Germany. It is geared toward students from families that have a native connection to countries in Central and Eastern Europe – whether their parents were part of the German minority there or because they immigrated to Germany for other reasons. "These students have a special potential given their dual cultural background," says Lisa Unger-Fischer, who oversees the programme. "We want to help in utilising this potential." The concept was developed in Switzerland and, as the title suggests, is aimed at children of immigrants; for those living in a new country in the second generation.

The Regensburg concept of the programme is exceptionally simple for students: They spend their first academic year in Regensburg, the second at a partner institution abroad, and then the third year back at their Alma Mater – complet-

ing the three-year Bachelor programme. Moreover, the programme applies for all subject areas that have the tiered study structure. Natural sciences, social sciences and humanities students are equally eligible for the Secondos programme.

During their first year, the students participate in supplemental seminars. These seminars are designed to prepare them for their year abroad – the topics include social and cultural studies of the particular countries as well as intensive language training. "Many of the students have spoken their parents' native language at home, but they often have little to no experience in writing and reading. Therefore, thorough preparation is decisive for a successful stay abroad," says Lisa Unger-Fischer.

To implement its programme, the University of Regensburg is able to draw from an abundance of resources. For years it has been specialising in the countries of Central and Eastern Europe and has built up an exemplary competence centre with teachers and researchers, libraries and language courses. These years of experience come to full benefit for the Secondos students. "We can fall back quite efficiently on the know-how here," says study programme coordinator Unger-Fischer. Support is provided by professors from every discipline at the university. At the same time, the location of Regensburg also has its advantage: almost all the faculties have been maintaining close contacts to Central Eastern European countries already and thus were open for the Secondos programme from the outset.

As of now, the students can choose between two universities for their year abroad, thanks to agreements between Cluj in Romania and Pécs in Hungary. "A number of professors took part in the negotiations on our joint study programme. They were enthusiastic about



## To Allow More Room in Bachelor Studies

The University of Tübingen is extending the first study tier by two semesters – and thus providing students with more room for going abroad and deepening their studies

“W

e wanted to allow more room within the study programmes,” says Professor Stefanie Gropper. She is the Vice-Rector for Academic Affairs at the Eberhard Karls University of Tübingen and supports an innovation that has already stood the test at her university: it will be possible to extend the Bachelor programmes by a year, i.e. students will be graduating after four years. They can use the additional time at their discretion – for studying abroad, for practical experiences and internships or for further courses either in their special field or in other fields.

Extended Bachelor programmes already exist in Physics and Psychology. “It is important for us that each discipline can decide on its own on the duration of the Bachelor study programme,” says Gropper. “The fourth year represents an advantage for a number of programmes, while other disciplines are satisfied with the three-year practice.” A change in the statutes paved the way for this new flexibility. The idea emerged through talks with the faculties and with students – at the suggestion of all participants, as Stefanie Gropper emphasises. “I strongly believe that this solution benefits everyone.”

What triggered the efforts to extend Bachelor study programmes was a dent in the statistics: fewer and fewer students were applying for the Erasmus

programme, the demand for exchange spots with partner universities was sinking rapidly and participation in elective university courses and events was decreasing. It was a low point that many higher education institutions shared directly after the transition to Bachelor and Master because the students were highly concerned that they would not be able to finish their programme in the prescribed time. “We decided to actively address this problem,” says Stefanie Gropper.

Among students, the extended Bachelor cycle has met with wide acceptance. They are free to choose how to use the additional year. The study guidelines refer to the two semesters as a window of mobility, and this mobility can be understood in many ways.

The classic example is a period of study abroad. Students who would like

**“The additional year strengthens our profile as a research university”**

to study at a foreign university for two semesters no longer have to worry about “losing” that time since the credits attained abroad are generously recognised. Most students go to another higher education institution through the Erasmus programme or choose from one of the partner universities for their stay abroad.

Another possibility for using the window of mobility is an internship. “We have often heard potential employers criticising

that a six-semester Bachelor programme left no room for gaining relevant practical experiences,” says Stefanie Gropper. And particularly for the Natural Sciences, internships commonly have been an opportunity for students to find their thesis topics. For the Physics department in Tübingen, that was the decisive reason for extending the duration of their study programme. Now a five-week professional internship can be integrated into the Bachelor programme without a problem.

In addition to studying abroad and internships, a third option is to use the additional year for further academic study. That can take place at another German university with an area of concentration not offered in Tübingen. But many students also take the opportunity to delve into topics from a different field. “We offer the possibility to develop one’s own interdisciplinarity,” says Professor Gropper. This room for personal choice is made possible by the regulation that all subject areas involved in the window of mobility recognise credit points from the other areas mutually. For 60 credit points – the target amount for two semesters – there are no subject-specific requirements.

The initial experience has pleasantly surprised the teachers at the University of Tübingen: the students are using their new room creatively and are building their own individual programmes – some choose a combination of academic study abroad with a subsequent internship in another country, while others combine an academic specialisation in Germany before taking a semester abroad.

This diversity has enabled a number of students to enter a Master programme in a different area after graduating with a Bachelor degree. Hence, they choose a different subject that they were already able to be-

come familiar with in interdisciplinary seminars taken during their window of mobility.

"The additional year, as part of the Bachelor programme, strengthens our profile as a research university," according to the University of Tübingen. Thanks to the possibilities for deeper academic study, students can delve into scientific work already during the Bachelor phase. As a result, the position of the Bachelor has received a boost, and there is a clearer signal that it is a full-fledged, valuable degree. "At the same time, it by no means calls the tiered structure of Bachelor and Master into question," Stefanie Gropper underlines. "Instead, we are avoiding the organisational difficulties that emerged here especially in the beginning."

The extended Bachelor programme has had direct effects on the consecutive Master phase: instead of four, there are now two semesters required to achieve the second degree. That also necessitates a new concept for the Master programmes. Students coming to Tübingen from another higher education institution after graduating from a three-year Bachelor programme also have to be integrated. The Psychology and Physics departments have addressed this issue by offering a wide range of courses to help the new students catch up to the Tübingen graduates, who have studied one year longer in their respective discipline.

All of the participants in Tübingen have confirmed that their experience with the extended Bachelor phase has been highly positive. Currently, it looks as if the example set by Psychology and Physics is making its way across the university: The American Studies, Jewish Studies, Computer Linguists and Media and Communication Science programmes are in the midst of preparing for their shift from three to four year Bachelor degrees. ■



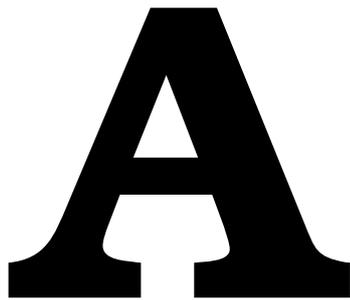
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Learning under the sun: student life in Tübingen



## The Dream of Studying in Burkina Faso

The Free University in Berlin has long been international oriented – and it feels even more so the effects of the Bologna reforms. Exchanges have become easier to manage, but students' expectations are growing continuously



At the beginning of his career, Günter Schepker was barnstorming through America. "From university to university, college to college I would go, promoting our university. But it failed to help much: A partnership with a German higher education institution, that wasn't of much interest to a lot of schools." Schepker heads the International Office of the Free University Berlin (FU); he has been director for 30 years – and has digested those early experiences well in the meantime. "Nowadays, we can hardly handle all of the inquiries we receive from around the world."

Over the last few decades, the Free University has been working intensely on building international partnerships – a particularly important commitment with Berlin being the German capital. For the university staff though, adjusting to Bologna presented a big challenge: "We had numerous existing exchange programmes that consequently had to be adapted to the new measures," says Professor Christine Keitel-Kreith, Vice-President for Academic Affairs at the FU. "That meant a lot of additional work for us at first." Meanwhile, however, it has become clear how the reforms have facilitated cooperation with foreign universities in many ways.

Professor Matthias Hüning can attest to that personally. He holds a Chair

in Dutch Philology and was Dean of Humanities for a number of years. His faculty has long had the goal of setting up a joint study programme with a Dutch higher education institution. The Bologna reform provided the impetus: "We decided to take an assertive approach. We wanted to try to use the changes to our advantage," says Hüning. He and his colleagues contacted the university in Amsterdam – and the negotiations on a double degree master programme commenced. Students of the programme spend part of their studies in Berlin and part in Amsterdam and receive a degree from both universities. "We had long and tenacious talks for half a year until we finally coordinated

### **"Exceptional advantages for exchanges with universities outside Europe"**

the programme in all details," Hüning remembers. Over and over, various specifications called for by both universities protracted the coordination process.

When Dr. Sabine von Oppeln hears this or similar stories, she cannot help but grin. She teaches at the Otto-Suhr-Institute of the FU and is an expert on academic partnership with France. In the 1980s, the political scientists had the same idea, to start a double degree

programme with the renowned Institut d'études politiques de Paris (Sciences Po). "I would have dreamed back then of being able to complete these talks within half a year," she says. For her, the process took much longer: In 1987 the negotiations began and the first students were able to matriculate in the programme in 1991. "We had an absolute pilot role in starting a dual degree programme," von Oppeln recalls: "During those talks, we were even haggling about which clothes students had to wear in France, that's how detailed the specifications were." After all, the exchange programme has stood the test and today, the joint degree programme continues and has been adapted to the Bologna structural reforms – "and the Sciences Po," von Oppeln emphasises, "is now pursuing a resolute internationalisation strategy with a large number of double degree programmes." Sabine von Oppeln has also seen firsthand how much easier it has become to establish this sort of bilateral agreement thanks to the new, international rules: she directs a joint programme of the FU with the Paris management school HEC that has recently started up – and this time, the preparations were completed much more quickly than with the mammoth, four-year negotiations around their first cooperative project in the late 80s. Already in the first months, the programme has been successful: the amount of applicants substantially exceeds the student capacity. "We continually see," says von Oppeln, "students from across Germany coming to study with us at the Free University because of this programme specifically."



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### Wide open perspectives: the Philology library of the Free University Berlin

Similar projects with double degree programmes are not only in place in Political Science or Dutch Philology, but rather across the university in all subject areas. And, the exchanges work not only with neighbouring countries, but also many others. The university in Berlin has close relations, for example with Moscow universities, and there are scholarship programmes with Australia, Taiwan, Canada, the USA, Peru and numerous other countries. "Especially for exchanges with countries outside of Europe, the Bologna Process has brought a lot of advantages," says Günter Schepker, head of the International Office. It is not always a dual degree programme that has been agreed on with these countries, but rather often "classic" study abroad arrangements. Internationally, the Bachelor and Master

structure is more readily comprehensible than the old system, and the recognition of academic work is no longer a problem; in most cases, professors are flexible in allotting full credit points for students' academic work done abroad.

"In the past few years, the exchange programmes have really expanded geographically," says Günter Schepker. Not only a small number of trendsetters, but rather an ever larger group of students are going abroad – even when only for a semester. Schepker and his colleagues have also adapted to these ever more common shorter abroad periods: many programmes are designed specially to fit these students' requests to go abroad for one semester. "We notice often that the interested students nowadays know what they want, much

more precisely," says Schepker. "They pay more attention to what a stay abroad will mean for them academically and practically; they want to be certain beforehand, which seminars and lectures abroad will help them and count toward their future study in Germany."

Students who would rather not go abroad on such a structured programme are also in good hands with Günter Schepker and his colleagues. For those who want to get to know academic life in a certain country, there are exchange spots without a detailed programme at universities abroad. "We don't want to limit students – that would go against the purpose of the Bologna Process," says Schepker: "Anyone can go to Burkina Faso if that is his or her dream. Our job is to help them get there." ■



## **A Strategic Location**

Aachen University of Applied Sciences plays out its strengths of being located near the international tri-point of Germany, Belgium and the Netherlands. There is even a triple study programme in which students get to know three countries and three higher education institutions



When Nathalie Kanj gets ready to drive from her office, she would not have to drive more than eight kilometres south-west before reaching Belgium. If she drives to the northwest, she would cross the Dutch border after five kilometres. "The location here in this tri-country region means a commitment for us," says Kanj, the Assistant Director of the Academic International Office of Aachen University of Applied Sciences. Agreements with universities abroad have a long tradition in Aachen's study offerings.

"The students that come to us for advice are planning for a semester abroad, as if it were a patently obvious thing to do," says Nathalie Kanj. She is certain that the numerous partnership programmes have contributed to that: the Mechanical Engineering department at the university for example already had double diploma programmes in place long before the Bologna Process – one programme with France and one with the Netherlands. For the economists, there is even a long-standing programme in which students study three languages in three countries within three years and receive two academic degrees at the end. "We are constantly making efforts

to find new cooperative possibilities and thus make it easier for our students to go abroad," says Kanj. Just last December, a double Master agreement was signed with the renowned HEC Management School of the Université de Liège.

As of recent there are also doctoral study programmes with foreign higher education institutions – a new endeavour for a German university of applied sciences. The Belgian universities in Hasselt and Limbourg are partners with Aachen and award doctoral titles, which the Aachen University of Applied Sciences could not grant alone. Similar agreements have been made with the universities in Bologna and Brussels. Often students arrive at the Academic International Office with special wishes. "I have noticed that, repeatedly, Design students have asked about studying in Eindhoven in the Netherlands," says Nathalie Kanj. Aachen however didn't have a cooperative programme with the higher education institution there. Because of the numerous requests though, Kanj within a team organised a programme with the Dutch school in a short amount of time: she spoke with the professors in the Design department

in Aachen, contacted colleagues in Eindhoven – and soon a mutual agreement was reached. "More and more, we have been able to find these sorts of prompt, non-bureaucratic solutions," she says.

The Bologna Process has facilitated her work considerably. The common standards such as ECTS credit points and the Diploma Supplement – the international certificate that students receive in addition to their degree – have made networking with universities abroad an easy routine. Cooperation with countries outside of Europe has become not only possible, but also uncomplicated thanks to the Bachelor and Master structure: consequently, Aachen has cooperative arrangements in Australia, Namibia, Jordan and many other countries. And students who discuss their study plans with a professor prior to their study abroad can make their semester abroad even easier. "A lack of will to acknowledge students' work," says Nathalie Kanj, "is not a problem here."

The visible achievements of the internationalisation strategy are particularly gratifying for Professor Helmut Jakobs, the Vice-Rector for Academic Affairs at Aachen University of Applied Sciences. >>



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*Representative: art installation  
at Aachen University of Applied  
Sciences*

An Annual International Day has started in 2010, generating even more interest in study abroad. And the university is preparing itself for more international applicants to come to Germany: to that end, Aachen University of Applied Sciences has founded its own Freshman Institute at its satellite campus in Jülich. "In doing so, we are striving to appeal to and recruit international students, especially from China, South East Asia and India," says Jakobs. "And, of course, we'll be

preparing them during a Freshman Year for their studies at our university."

In Aachen, they were open to the Bologna reforms from the outset. The departments started with modularisation early on and participated in model projects on implementing the reforms. The know-how gained has laid the foundation for the successful internationalisation strategy and many other areas where the Aachen higher education institution had to adapt. The Bologna specialist in Aachen is Margret Schermutzki, who has been following the process since 1999. "Of course, we had a lot of problems to deal with at first since no one really knew much about the reforms then," admits Schermutzki. But the efforts have been well worth it: "Our institution has changed noticeably meanwhile. Everyone is focusing more on the students and

## Investing in Good Teaching

"What is good about Bologna, but is itself nothing new, is the orientation toward skills!" Dr. Michael Heger is sitting in his office at Aachen University of Applied Sciences; looking from his desk, he has a screen in view with large diagrams and statistics projected on it. The screen suits him better than a simple monitor as he can illustrate his point this way much more vividly. The numbers on the screen are related to higher education didactics, the field in which Michael Heger has been working and researching for over thirty years.

Skills orientation – this key word is important to him: it is the core of a philosophy he has been pursuing for decades and has attempted to realise at his university. Making students the point of focus, more lively teaching and including participants in seminars are his recurrent themes. He spreads the concepts at continuing education seminars for professors and academic staff, at conferences and planning meetings at his university.

Mostly the teachers are sitting in front of the projector in Michael Heger's office. Professors that have been recently appointed receive an introduction on the subtleties of higher education didactics and work with him on an exemplary seminar. And they evaluate the student feedback received given on their first course taught. This evaluation is one of the most important tools for Michael Heger. "That is applied higher education didactics," he says – and browses through his computer for old statistics. For each seminar, for each teacher he has been archiving the results of the evaluations for years. Special software converts the data into diagrams and makes improvements or declines observable in minute detail. "If a course is evaluated lower than previously or a teacher receives no satisfactory feedback from the students, then these teachers are sent to me by the respective departments for an advisory session," says Michael Heger. He recalls a teacher who was evaluated poorly by first semester students, but received very positive feedback for a similar course among third semester students. "We sat together and it turned out that she was requiring too much of her younger students, with material that wouldn't be taught until modules in later semesters," says Heger – a problem that was quickly resolved.

Recently, Aachen University of Applied Sciences started awarding the best courses with a prize, involving a teaching bonus. To be in the top group was well worth it for professors: last year the university distributed 100,000 euros for the top five percent of teachers.

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**Today, everyone is focusing more on good conditions for students**

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making sure there are good conditions for the study programmes," she says. Today, Schermutzki is head of the area of Accreditation and Bologna within the central office for Quality Development at Aachen University of Applied Sciences.

She is continuing the reforms with two new approaches. In a joint project, RWTH Aachen University and Aachen University of Applied Sciences developed the platform "StOEhN" – (lit: "moan"), an abbreviation for Student Online Workload-Evaluation of the Aachen Higher Education Institutions: after the Bologna reform, the amount of work a student needs to do per semester is decisive for how many points he or she receives toward a degree. Until now, the workload was mostly estimated in advance. However, online with StOEhN, the students can report how much time they actually need for their study workload, from seminar and course hours



© FH Aachen / Prof. Baumann

Firsthand experiences: aspiring bio-technologists from Aachen on an excursion

to time spent at home preparing and reviewing. If it turns out that the actual workload differs from the estimated, this can be corrected thanks to StOEHN.

In addition, Aachen University of Applied Sciences introduced a professional complaint management service a few semesters ago, also dedicated to improving the study programmes. Schermutzki and her team serve as mediators between the departments and the students – and their services are gladly utilised. “We even found a complaint note once, wait-

ing under the door when we arrived to work in the morning,” says Schermutzki. But she underlines the importance of anonymity for complainants who, after all, would rather not be on bad terms with university staff. The service’s track record, she adds, speaks for itself: “Most problems are quickly resolved through a collegial talk with the departments or a certain teacher.” In any case, many complaints tend not to concern a seminar or lecture, but are rather of a more general nature: noise from construction going

on in front of a lecture hall or a price increase in the cafeteria represent some of the objects of complaint up to now.

These several years of experience with Bologna reforms at Aachen University of Applied Sciences have been getting around internationally. As part of a Twinning Project, Margret Schermutzki is now advising colleagues abroad on converting to the European study system. In the past few months she visited Georgia frequently, and her next project is taking her to Albania. ■



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Good perspectives: staircase at University of Bremen

# IV.

## More successful testing and studying

One of the most important goals of the Bologna Process is employability. This involves preparing students for the labour market and professional life – not in the strict sense of vocational training, but rather as an improved embedding of academic knowledge in practical skills and abilities. Fewer university dropouts, higher motivation and better prospects are already some of the noticeable results of these efforts.



## In Praise of Diversity

More freedom instead of centralised guidelines, creativity instead of performance specifications – is that compatible with the Bologna reforms? It is, as the University of Konstanz proves. Innovative programmes are emerging there thanks to this new freedom

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or his master degree, he would change to Konstanz – that was certain for Hanno Degner. He received his Bachelor degree in Political Science in northern Germany and is continuing with a Master programme in Political and Administrative Sciences. It is an international programme, and next year Degner will study in Grenoble, France and will ultimately finish with a German and French degree. "I would like to work for the European Union in Brussels," he says, "and this programme is an excellent preparation for that."

Most of Degner's co-students in Konstanz have a similar story. They come from across Germany, some from even abroad. "I receive inquiries from prospective students everyday," says Werner Palz, who advises students. With the wind of the reform in their sails, the University of Konstanz has created a programme that could be a model for future study programmes: nearly all students go abroad for a longer period, the academic approach is interdisciplinary, and both students and teachers are enthusiastically on board. Under the old "Magister" system, applicants had to choose between Political Science and Administrative Sciences, but now they learn methods and approaches from both areas.

Similar models have developed across all subject areas in Konstanz. Everywhere,

the reform was a trigger to realign study programmes – in all subject areas and optimally coordinated with their respective needs. "Our idea was to allow professors the most freedom possible," says Dr. Nikolaus Zahnen. He came to Konstanz in 2005 as a Bologna advisor and followed first-hand the conversion to the new degree programmes. When he talks about the internationalisation of the university, his eyes drift to his office window toward Lake Constance at the foot of the hills where the university is located in the midst of thick forest. On the other shore lie the Vorarlberg Mountains, while to the right he has a view of the peak on the Swiss side.

"When I arrived, there was a recent, central decision to convert all study programmes to Bachelor and Master. All the

distances have always been short and hierarchies flat. "There were times," Zahnen says with a grin, "when there were no academic titles on the door or name plates. Even the rector could only be found by first and last name." These external signals were indicative of the communication culture for decades – and ultimately have allowed for the Bologna reform to be implemented in a unique way without numerous guidelines and with a lot of freedom for individual design, and nonetheless successful. The rector's office always provided solid support for the transition, a support he also demonstrated for the departments and their own concepts. "Now and then they gave a gentle shove, if things were moving at an extremely slow pace," says a staff member actively involved

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**"With the Master programme, studying has become truly dynamic for me"**

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rest, though, was up to the departments to decide." There were no university-wide framework guidelines on exams, no binding study guidelines, no requisite portion of key skills, no mandatory window of mobility, nothing. "At first, I was terribly shocked by that and I feared that this could not go well at all," says Nikolaus Zahnen. Meanwhile, he sees the special model of success in Konstanz in this freedom. "You need to view this in light of the university's tradition," he explains: since its founding in the 1960s, the university has been open for innovation; thanks to the compact campus structure,

in the implementation process then.

At the core of this special approach in Konstanz is the conviction that the professors will know best on how to create optimal conditions for their subject areas. Instead of top-down guidelines, the university relies on participation and co-decision: students and teachers often sat together in hour-long conferences to develop the best possible curriculum. "Our ideas always fell upon open ears," according to the students. And the results speak for themselves.

How the departments have used that liberty is clearly visible across the >>



*Futuristic: roof landscape at the University of Konstanz*

© Universität Konstanz / Michael Latz

university: the Humanities passed a joint set of exam guidelines, setting forth mandatory internships and a certain number of credit points in the area of key qualifications. As a result, cross-over between subject areas can be facilitated so that students can easily switch subjects and select a new combination of majors and minors. The Mathematics department on the other hand decided to forgo awarding additional, separate credit points for an area of key skills and

instead included them as part of the academic studies. "This freedom to design the programmes allows us to maintain the tried and tested components without having to reinvent the wheel," says Zahnen. In Physics for example, the compulsory laboratory internships continue to be part of the curriculum as was the case in the Diplom programme. According to Zahnen, "if we had kept a university-wide framework of guidelines, this would have hardly been possible."

This sort of freedom, however, has its flipside: it is not that easy, if multiple study programmes from various disciplines want to work together. In the early stages, for instance, there was one or the other clever student from British-American Studies who took the introductory course from the German Literature programme – and received more credit points there than in the corresponding course offered in his own subject area. And for some lectures, major students received more credit points than those students taking the same lecture as a minor. "Those are 'childhood disorders'," says Dr. Nikolaus Zahnen, "and in order to cure them, my job as a Bologna advisor was particularly important in this early phase – it helps when these sorts of things are examined by an outsider since the persons responsible within the separate subject areas can easily overlook them."

The Sociologists in Konstanz are also a group who have used the Bologna Process to their advantage. They are quite proud of their Bachelor programme, which serves as an interface between many other subject areas, but also their Master programme, which they gave a decidedly stronger research orientation. "Because much of the transition process was decentralised, we were able to complete it quickly and include our own ideas," says Dr. Thilo Raufer. He advises, among other things, on the study programme in Sociology; whoever has questions concerning studies can come to him. "The need for good advisory service has really increased since we introduced Bachelor and Master. A lot of students are aware that the guidelines have become stricter and that they can't let things slide too much," he says. That this should

## Off to Study Abroad!

The University of Konstanz is a completely different place when the annual International Day takes place: a commotion of info-booths stretches under the colourful roof of the foyer, along the hallways up to the cafeteria. Almost all of the partner universities of Konstanz are represented at an elaborate stand and international students answer an array of questions. But there is more than just advice and information: a lot of tables offer national cuisine specialties; the New Zealand stand for example is densely surrounded – they're serving "spider", a typical mixture of vanilla ice cream and cola. "We want to encourage and excite students to study abroad, and this certainly includes more than just the academic parts," says Christina Fritz, Assistant Director of the International Office in Konstanz.

The effort that goes into putting on the International Day is enormous, but also worth it. In contrast to many other German higher education institutions, the number of applicants for the Erasmus programme did not decrease upon the introduction of the Bachelor and Master degrees. Quite the opposite: for years, there has been a continuously increasing trend, says Christina Fritz: "When an applicant would like to study for, say, one semester at a higher education institution abroad, that is usually no problem to organise in Europe and word of that has spread."

Here is precisely one of the reasons for the high study abroad rate at the University of Konstanz: they manage to keep the hurdles as low as possible. The goal to offer each student a study abroad spot is matched by an appropriately staffed International Office that has specialists for German students going abroad and international students coming to Konstanz. Even the rector's office has illustrated this new internationalisation strategy; as of recent it has established the position of Vice-Rector for International Affairs.

To generate even more interest in study abroad, the university holds a lecture series on international mobility and a central information centre on the partner universities. An internal list has proven helpful, which lists courses at the partner universities that have been acknowledged for full credit at Konstanz. Students going abroad can thus compile a study plan in advance with little effort.

The international orientation is positively complemented by numerous double degree programmes at the University of Konstanz, where students study a fixed part of the curriculum in Konstanz and another part at a partner higher education institution. And partnerships are not limited to European Union countries: with Shanghai or Moscow for instance, the students have a wide variety to choose from.

somehow be considered a drawback, however, is incomprehensible to him:

The average duration of studies up to graduation used to be 13.4 semesters, and at times, there would be students making no academic progress for over four semesters. "For the students, it is clearer what the study goals are and what counts," says Raufer. Then he smiles briefly: the period of study has indeed decreased, though the average is still slightly above the prescribed study duration. "We deliberately

**"Many of our combinations of subjects were hardly possible under the old system"**

choose not to overload the semesters with required courses so that the students still have their freedom."

As part of the Bologna reform, the teachers have also used their new freedoms. A new study programme that began in winter 2008 attests to this: Cultural Foundations of Europe, which consists equally of sociologists, cultural scientists and historians. The Master programme is so innovative that it belongs to the Excellence Cluster of the University of Konstanz – and is a hit among students and teachers alike. "These kinds of combinations," according to the university, "were hardly possible under the old system." The specialities of the new Master programme include the sophisticated international strategy: in order to truly observe and recognise the cultural foundations of Europe, students complete a part of their studies outside of the EU. With the view from outside, students can become more aware of special features of European cultures as well as the overarching commonalities that emerged above the differences between the countries. In India, Argentina, the USA and a series of other countries, Konstanz

has won over numerous partner universities to participate in the programme.

Part of these success stories is a certain flexibility that the university has maintained, even after the study programmes have made the transition. There is room for adaptation to make necessary changes to the exam guidelines. If a rule proves to be problematic, it can be changed right away for the next class of

To this end, Konstanz has arranged a special accreditation procedure: they have five years time until they need to have their study programmes scrutinised and accredited; after that, changing the programmes will become more difficult. "Therefore, we were able to optimise the structures and procedures in the early phase," says Nikolaus Zahnen.

The students are satisfied with the



Leisure athletics on Lake Constance: climbing wall at the university campus

students. Some study programmes have already amended their guidelines four times in a couple years, says Zahnen. In Konstanz, that is viewed as a good sign. "In Political and Administrative Sciences, for example, there was the issue of scaling back the exam phase and the amount of seminars per semester to a realistic workload," says study advisor Werner Palz. Prompt procedures in various committees are also helpful; the whole year round, departments can request amendments, and all formalities are taken care of within a short time.

changes: "We don't feel like guinea pigs any more when something is being changed in the study programme," says Hanno Degner, the Master student in Political and Administrative Sciences – in any case he has benefited from the adjustments. Now he is looking forward to his year abroad in Grenoble, which will start soon. "With the Master programme," he says, "I feel that studying has become truly dynamic for me." ■



## The Digital Examiner

A high-tech computer lab has been upgraded to a test centre at the University of Bremen. And everyone benefits: the professors save time and work, while students find out their results faster



A small chip opens the door for Kai Schwedes to where the well-protected secrets of the university are stored: exam questions and final tests are saved on the hard drives that are quietly buzzing at work. This computer room is the heart of the test centre of the University of Bremen; thousands of tests are taken and evaluated here every semester. The concept is highly innovative – it must be, given that it won the 2009 Medida Prize, the highest media-didactic prize awarded in German speaking countries.

“The idea behind this new centre is that students shouldn’t have to write tests anymore on paper forms, but rather enter their answers directly into the computer,” says Kai Schwedes. He is a mathematician and one of the developers of the new test centre. The advantages are obvious: the computer can automatically evaluate certain test questions right away and the teachers save a great deal of time.

In the exam room, there is a clinical, but elegant atmosphere. The room measures about 300 square metres and the walls are covered with wood panelling. “This room used to be a concert hall,” says Schwedes. Now white desks stand

where note stands and benches used to be. There is a capacity of 120 exam spots, each technically equipped with a desktop computer, flat-screen monitor, a pair of headphones and a microphone. There are screens on the walls and several projects to cast additional images if need be. At

programme, and though they are often short, they result in a great deal of work for professors and teaching staff.

“The demand has been continuously growing, and the conditions before were simply inadequate,” says Kai Schwedes. He remembers a digital exam from the

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**“A rush from all subject areas: 4,500 exams per semester are already conducted electronically”**

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the front of the room is the desk for the teacher supervising the exam. And in the back, hidden behind an inconspicuous door is where the E-Assessment team of Dr. Jens Bücking, Kai Schwedes and his colleague Spyros Abatielos from Computer Science have their work space. And from this room, they can monitor the entire computer system.

“Following the Bologna Process, the number of exams has increased substantially,” says Kai Schwedes: ever more seminar tests are part of the study

time before the test centre existed that 1,000 students had to take. They were distributed among seven computer rooms, the largest of them having only a couple dozen seats. One room didn’t have any window and merely old, tube monitors, while another room did have modern monitors, but very little space.

“It took three days for all 1,000 students to get a space at a computer and take the test,” Schwedes recalls. Shortly after that, he got to work with his colleagues in order to finally set up equal testing



© Pressestelle Uni Bremen

### The pressure is on: exam in the new E-Assessment Centre

conditions and to expand capacity.

The computer specialists needed more than one year to set up the sophisticated technology in all details and in 2007, the test centre opened.

The test centre is available for teachers from all departments of the university, and it is operated by an independent organisation of the university, the "Centre for Multimedia and Teaching."

"We support the process of forming the questions and ensure their quality, facilitate access to the exams so students can review their results and prepare statistical evaluations. So, we are not only responsible for the technical aspects, but also advising and monitoring as well as training the teachers during the entire exam process," says Schwedes. The teachers can design the tests and exams themselves – thanks to special software, it is no problem for someone who has at least basic skills in working with a computer. For those preparing an exam for their students, the test centre will download the software on their computer so that they can compile the test in their own offices. A wide array of exam types is possible: multiple choice as well as free

text, single-choice questions or filling in a schematic drawing. Together with the questions, students can receive additional material such as PDF-documents, audio files and explanations. When the students complete the exam, their results are saved on a central server. For questions with pre-entered answers, the computer can even perform the evaluation right away. Then the students see their own results on the monitor immediately at the end of the test, and the professors receive the test scores in the form of an excel-file sent straight to their inbox. "That saves time for the examinees, and academic assistants no longer need to invest weeks of work, correcting piles of exams like it used to be," says Kai Schwedes. And the students find out their results much faster – if a make-up exam is necessary, it can be arranged for a few days later, rather than a few weeks or months as in the past.

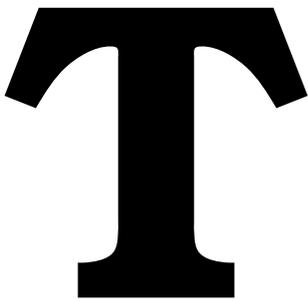
Students hoping to cheat do not stand much of a chance with this new system: the desks are indeed close enough that neighbouring students could theoretically look at each other's monitors; however, the questions can be programmed so that they appear in a different sequence

for each examinee. Or the professors can plan for five alternative questions for each topic section that the computer selects at random for the individual students. This procedure has an additional advantage: when students have to be tested in several groups consecutively, it still suffices for the professor to prepare one exam – and the same questions can be used now for a make-up exam, since the questions are recompiled automatically for each test.

In Bremen, the word of the test centre's advantages has spread rapidly. "Nearly all subject areas work with us now," says Kai Schwedes. The room is fully booked almost everyday – 26,000 electronic tests have taken place since the centre was launched, and each semester about 4,500 exams are taken. Meanwhile, the Linguistics and Language Studies programmes have discovered the use of the technology for them, particularly its multi-media possibilities: thanks to the headphones at each computer, they can test for hearing skills – and the students dictate their own texts via microphone, which the university instructor can listen to and correct comfortably in the office. ■

## Reducing the Dropout Rate Together

An early warning system at the Berlin University of Applied Sciences for Engineering and Economy (HTW) is helping to reduce the number of dropouts. The underlying idea: if the alarm sounds, the rector's office, departments and students take steps together



The most valuable tool for Professor Michael Heine is a set of white slips of paper, filled densely with numbers and tables. "Flow Statistics", the title, is printed on the upper margin, and underneath it is the name of a study programme. The numbers provide an accurate picture of a study programme; Heine prints out one per semester for each subject area. He is President of the Berlin University of Applied Sciences for Engineering and Economy (HTW) and their declared goal is to reduce the dropout rate.

"I can recognise right away, based on these statistics, how many students have dropped out in the past months," says Heine. Listed adjacent to the current semester are comparative values from previous semesters. Whenever the numbers shift and as soon as a negative trend appears, the university administration can react promptly. That is the result of a "home-made" early warning system that is already demonstrating an effective performance.

It is also the product of intense dialogue with the departments that the university administration relies on in its efforts to reduce the dropout rate – a dialogue with students as well as teachers. If a subject area indicates a negative trend over the previous semester, all concerned groups meet for an emergency conference. And the pressing issues are discussed

together: what are the reasons for the rising dropout rate – and what can be done about it? "You cannot allow yourself to neglect the dropout rate," says Heine. Consistency is therefore indispensable: a few months after the first emergency meeting, he calls the representatives from the respective subject area to check on progress. Even the rules for distributing budgetary funds have been amended: the amount of funding a department receives depends on performance criteria – and one important aspect is the number of student dropouts. Hence, the more teachers are involved for their students, the better the financing for their department.

This austerity was not uncontroversial at first. "But it is not some sort of cruelty here, what we're doing," says Heine: "It is just important to explain every step precisely. And there is one thing I have already noticed: if we manage to improve the conditions of a study programme, that has a tremendously motivating effect for everyone involved." Visible improvements even generate unexpected positive developments too.

The Berlin University of Applied Sciences is struggling with the same problems that have been observed among Engineering sciences across the country: many students throw in the towel after a couple of semesters, often because they underestimated the theoretical parts of Physics and Mathematics. In some programmes, the dropout rate is about 50 percent – with all its consequences for the higher education institution, but also for the students who have to start from scratch in a different programme or even different institution.

That is precisely why the HTW Berlin has launched the early warning system

and added a broad concept on reducing student dropouts. As a first measure, the teachers employ detailed information: prospective students interested in a degree programme should know from the outset what to expect – Mechanical and Electrical Engineering students, for example, are informed right away about the extent of the theoretical components of the programme. "Students registering for the International Media and Information Technology programme," says Michael Heine, "see the buzzwords, 'international' and 'media' and, once they begin, are surprised to find themselves in a primarily computer science programme." To prevent these kinds of misunderstanding, the HTW is planning a new internet presence that provides a better, user-friendlier overview of each subject area, its design and requirements.

Upon beginning their studies, students attend mandatory orientation days during the first semester. And: all professors receive extensive training in teaching methods. Newly appointed professors have to go through a year-long continuing education phase; even their remuneration depends on their teaching quality. The salary includes a performance-based component depending on the evaluation results – "the ones who slip up will have a hard time earning above the base salary," says Michael Heine. Those teachers, in contrast, taking on mentoring programme responsibility or other involvement for their students can count on a bonus. Each semester, the HTW in Berlin also awards a prize for good teaching. The university executive committee decides together with the Student Union on the award – the honouree receives 5,500 euros, which in turn motivates for further teaching improvements. ■

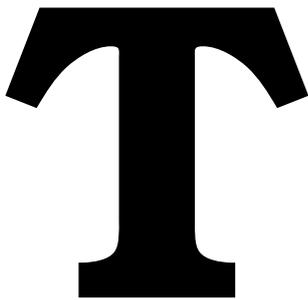


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*The HTW campus on the east side of Berlin*

## **The Difficult Good-Bye to Dipl.-Ing.**

Initially, the Rector's Office at the Ilmenau University of Technology was sceptical of the reforms. Today the university is adeptly combining the advantages of the old and new study systems in their curricula



Two buildings in the picturesque old centre of Ilmenau attest to the city's long tradition of educating engineers: the Alte Technikum ('Old Technical School') built in 1894 as the first classroom building and the Neue Technikum ('New Technical School') built in 1926. Back then it was a rather small educational institute attended by aspiring engineers from the surrounding area. Today the distinguished buildings are host to the institutes of the Faculty of Mathematics and Natural Sciences; the Ilmenau Technical University has grown so much that most institutes are housed on a new campus, located ten minutes by foot away from the old city centre on the Ehrenberg, the landmark mountain of Ilmenau.

When observers stand in front of the rector's office of the TU Ilmenau today and look far away, they not only have the historical city centre at their feet; they also get a view of a wonderful panorama of the Thuringian Forest with its wooded hills. Goethe was a regular guest here, having dedicated a poem to the city.

In 2004, when the newly elected rectorate met for the first time in this modern building, an important decision was taken: the Ilmenau university wanted to complete the implementation of the Bologna Process with its transition of study programmes to Bachelor and Master as soon as possible. In an impres-

sive effort, the professors proposed new curricula; no other technical university in Germany transformed the old Engineering programmes so quickly and completely as in Ilmenau. "We were not excited about the reform at first," says Jürgen Petzold, the Vice Rector for Education. They shared the same concerns as other engineers, and leaving the traditional Diplom-Ingenieur ("Dipl.-Ing") title behind was not easy. "But, we're pragmatists. Since it was

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**"We continue to educate first-class engineers"**

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inevitable, we tackled the challenge and actively restructured our degree programmes." From the outset, the TU Ilmenau has pursued a seven-semester Bachelor for the Engineering programmes with a comparable structure in all subject areas. "We had positive experience with the old study programmes, where we allotted a semester for students to gain practical experience in a company," says Petzold. "And we would like to continue doing that."

It was equally important for the university to remain faithful to its academic policy – "freedom and unity

in teaching and research, professional collegiality and upholding the professional ethos of members of the university," – those are the principles that the Technical University proudly upholds.

In converting the programmes, the TU applies the so-called system accreditation. What sounds like a bureaucratic detail has actually proved to be a decisive advantage for the university: it does not need to have each new study programme evaluated by experts individually before it commences. Instead, the TU in Ilmenau developed a system within its university for assessing and assuring the quality of the individual degree programmes. This helps them to maintain flexibility – under the condition, of course, that they establish a thorough in-house procedure for quality management. Having taken this measure so consistently, the TU Ilmenau's system remains unparalleled in Germany.

The person behind the quality management efforts is Dr. Heike Schorcht. She coordinates the work of the quality management representatives in the faculties and various university units. When difficulties arise in practice in one of the study programmes, there is a concrete handbook to consult to solve them quickly and routinely.

These approaches are based on the wealth of experience this higher educational institution has gained, thanks



Internationally renowned: the Ilmenau University of Technology recruits students from around the world to Thuringia.

to completing the transition early.

These sorts of solutions are not only used by professors and other university staff. Students have also been consciously included – a student quality management representative has also been established; a position that is filled by a student. Currently, Jana Pop is the QM-Rep, the term used within the university to refer to this position. Popp is working on her doctoral thesis on magnetic fluids in Mechanical Engineering.

“One of my most important tasks involves properly evaluating courses and

seminars,” says Jana Popp. Every year, students are surveyed systematically on a number of selected subject areas. The criterion for the selection is a vote by the faculties and students. If the rate of failed exams in a semester is particularly high, or the students are dissatisfied with the professor, or new courses have been introduced to the curriculum, the evaluation will also pay particular attention to such cases. If the results are not satisfactory, the faculties will seek a solution together with the teachers concerned. And, thanks to quality management,

ways to further improve the curriculum can be detected: in the area of Applied Media Sciences, for instance, the subject of “Hardware Basics” was replaced by a subject more relevant to the study programme, the components of the programme have been newly weighted and concrete working projects were given a higher significance as part of studies.

“For the students, it is incredibly important to see that they can affect things during their studies,” says Sascha Godawa, the student consultant.

“The acceptance of the Bachelor and >>

Master increases when students feel that they have a say in matters and are taken seriously." His office is an expression of this new openness: the task of the student consultant was set up after the reform was implemented, and is designed as a full-time position with a one-year term of office. The goal is to serve as an interface between the faculties, the university administration and the students. Consequently, the university has been able to alleviate the students' initial reservations about the Bachelor and Master, says Godawa. "The question of what a Bachelor Degree actually is and whether it qualifies you for the labour market has been resolved by and large," he says. "The students see that they are getting a good education and that they are in demand. In that respect, nothing has changed."

With their programmes and curriculum, the TU Ilmenau enjoys appeal well beyond its surrounding area: approximately 40 percent of its students come from the western states in Germany – a percentage that almost no other higher education institution has reached in the eastern parts of Germany. The same applies for international students: about 10 percent of the student body in Ilmenau comes from other countries and the university hopes to double that number in the next five years.

Those particular results make Dr. Claudia Haaßengier especially proud. As a Bologna advisor, she coordinated the transition to Bachelor and Master degree programmes for several years. "With the goals and guidelines set before them,"

she says, "the engineers have pushed forward with confidence and creativity." And this creativity is demonstrated clearly throughout the Ilmenau University of Technology; it is visible in smaller details as well as in newer pedagogical approaches: the services for students, for example, have been aggregated so that now all exam offices, student advisory services and the International Office are located together in one centre. This has shortened distances and improved coordination. Courses are planned so as to avoid scheduling conflicts, and at least one day break must be given between important exams. And the tutors working for the newly established assistance programme will go to laboratories regularly with their protégés to test their theoretical knowledge in practice. At the same time, the TU knows how to use its relatively small size to its advantage: since the transition to Bachelor and Master, each incoming student at the university is assigned a mentor and a tutor – a teacher and an older student, who familiarise the newcomers with academic life and its particularities. They serve as direct contact persons for questions or difficulties throughout the early semesters. And additional courses as well as exam preparation seminars are offered in groups of not more than 30 students.

Indeed, Vice Rector Jürgen Petzold is satisfied with the results from the transition to Bachelor and Master. "A lot has changed for us at the university. But one thing has stayed the same: we continue to educate first-class engineers." ■

### More Female Engineers

The higher education institution aims to inspire more young women to study engineering. Scholarships tailored to particular needs play a role; in addition, a number of teachers and staff regularly visit the surrounding secondary schools in order to make contacts and personally inform others about their programmes. And – the biggest highlight – there are special events for women in the "Laboratory for School Students" set up in a new building next to the rector's office. These serve to raise interest and curiosity in engineering sciences through exciting experiments.



*The Humboldt Building  
at the Ilmenau University  
of Technology*





Ceiling signpost: new building of the Osnabrück University of Applied Sciences

# V.

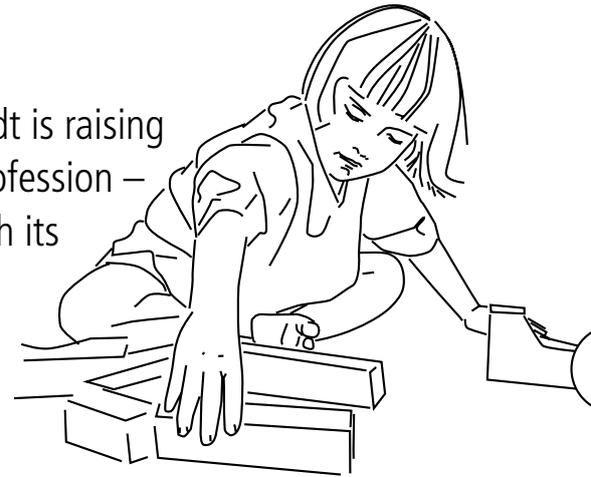
## More individual studying

There is no “run of the mill” study programme: whoever enters a higher education institution today can set their own focus, follow their own interests and curiosity, and choose individual specialisations. That is precisely in line with the Bologna Process, which calls for more room for students’ individual preferences.



## **Learning by Playing**

The Protestant University of Applied Sciences Darmstadt is raising early childhood care and education to an academic profession – and is attracting practitioners into the lecture halls with its innovative approach



# T

he boy's behaviour had always seemed strange. The incidents with the building blocks, for example: at first, the five-year old plays nicely with his friends in the kindergarten, but after a few minutes, he starts to get angry. "I don't want to play with you," he shouts, "go away!" A precarious situation for Petra Wrede; the educator is head of the pre-school Sonnenland or "Sunny Land" in Bickenbach, Hessen. "In the past, children with these sorts of behavioural problems were separated from the group right away," she says. "But actually, we need to look into the reasons for the behaviour."

These kinds of scenes taken from everyday practice illustrate the motivation behind a new study programme in Darmstadt: "Child Education and Development" is the Bachelor degree programme newly conceived by the Protestant University of Applied Sciences Darmstadt (Evangelische Fachhochschule Darmstadt, EFHD). "Early childhood development is becoming ever more complex and society's expectations are growing equally regarding the quality of education we are supposed to provide," says Professor Bernhard Meyer. In almost all other European countries, early childhood educators are academically trained; Germany alone is lagging behind this international tendency.

The transition to Bachelor and Master provided the impetus for the novel study programme in Darmstadt. The programme

designers wanted to ensure a low entry threshold; thus, they constructed a so-called "Y degree programme": there should be a smooth transfer over from vocational and technical schools so that students can merge their practical and academic education closely together. Individuals attending vocational training as a child educator can choose after two years (the "Y" juncture): they can either continue for another year at the vocational school along the classical path to completing a vocation – or they can switch to the university of applied sciences, where they can attain a Bachelor Degree in six semesters.

For many students, a university of applied sciences is their first contact with the academic world. Some need time to gradually acclimate – and when they sense the allure of science for themselves, the Bachelor opens the door for further studies. After that, they can also continue to pursue a Master degree in one of the other programmes. "One of the biggest advantages of this study programme is its permeability," says Professor Bernhard Meyer. With their creative implementation of the Bologna Process, the EFH in Darmstadt has gained a lot of attention and even drawn a prominent visit: during her "education journey" through Germany, Chancellor Angela Merkel made a stop in Darmstadt to see the new programme for herself.

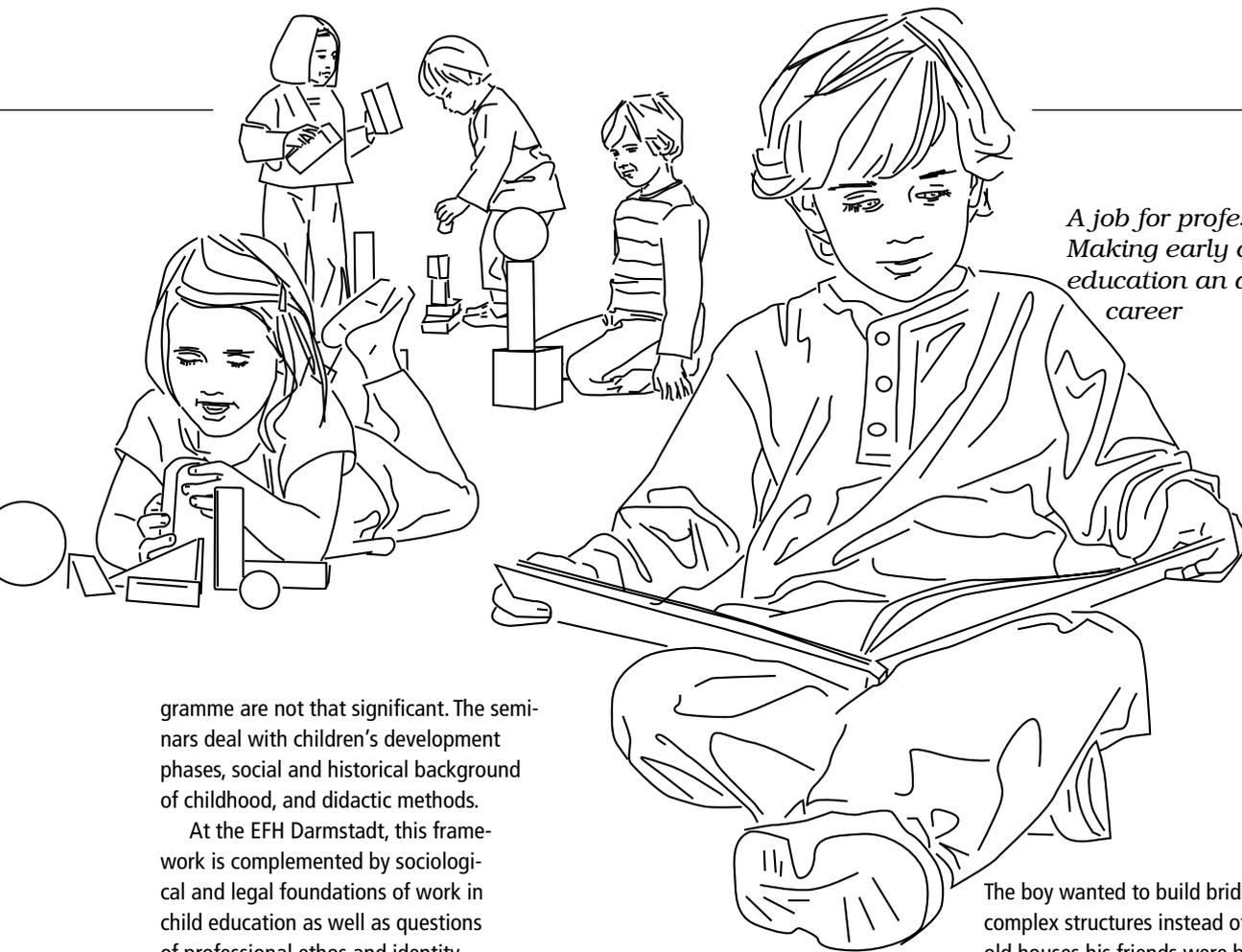
"In six semesters, we expand the practical background with an academic level of reflection," says Professor Claudia Maier-Höfer, an expert in the study of early childhood who heads the study

programme. The goal of the programme is for the "Bachelor Educators", the title gained upon graduation, to apply their knowledge in practice. Didactics, Psychology, Religion and other disciplines play a role in the seminars. "In teaching the material, however, we make sure to leave no gap between theory and practice," says Maier-Höfer. "Instead, we continually pose the question: at which point and in which situations is this theory relevant in practice?"

Therefore, practical elements are included throughout almost all parts of the study programme. Some of the most important seminars are based on the combination: the students make observations in pre-school and kindergarten centres and subsequently transfer them to a theoretical framework.

For the study programme director Claudia Maier-Höfer, this type of teaching represents a new experience. Before, she researched at a Faculty of Education at a traditional university and gathered independent of that her own practical insight in a few pre-schools. Now she can combine both – and must also adapt to new teaching methods: "Previously I would prepare a course by compiling the literature that we would use during the semester," she says. "Nowadays, I have to have the goal in mind and plan from there: what should the students have learned in the end – and which path leads us there?"

With regard to content, the differences between the theory-oriented education research at university and the practical-oriented teaching in the new study pro-



*A job for professionals:  
Making early childhood  
education an academic  
career*

gramme are not that significant. The seminars deal with children's development phases, social and historical background of childhood, and didactic methods.

At the EFH Darmstadt, this framework is complemented by sociological and legal foundations of work in child education as well as questions of professional ethos and identity.

## **We expand the practical background with an academic level of reflection**

"Didactic-methodological Promotion of Exploratory Learning" is the name of one of the modules included in the study programme; another example is "Procedures to Analysing and Documenting Children's Competences and Resources". The overarching goal of the study programme is illustrated by these modules: the students will learn how to assess the behaviour of a child and to be able to deduce the proper way to interact with the child. And they should learn how to learn about new topics themselves when they are confronted with an unfamiliar situation at their work.

In short, the goal is to educate experts on childhood development. "Certain patterns of behaviour of children that disturb class or the group do not necessarily have something to do with an improper development," says Bernhard Meyer. "Often, the children are at a develop-

ment stage that is further than their peers or, conversely, have not yet advanced to the next phase. And you need to be able to assess this if you want to react properly to the children and their behaviour."

As for career prospects, none of the Bachelor graduates at the EFH are really worried: the demand for academically trained educators is increasing continuously. "I can imagine that in the long-term, every pre-school and kindergarten will have an expert with this academic background on their staff," says Bernhard Meyer: "and they can advise their colleagues in difficult cases."

In situations like the one above with the five-year old boy who fought regularly with his friends while playing with building blocks. "We realised that he is highly gifted and was simply underchallenged among his age group," recalls Petra Wrede, the head of the pre-school.

The boy wanted to build bridges and complex structures instead of the same old houses his friends were building. Tests then revealed that the boy had an IQ of 140. He entered school a year early – and displayed behavioural problems again. Afterward, when he was not permitted to go on an excursion and instead had to sit in the second grade class as punishment, he really blossomed. "Even the first grade was not challenging him at five years old," says Petra Wrede.

Her Sonnenland pre-school in Bickenbach is currently attended by 225 children and is thus one of the largest ones in Germany. She works closely together with the Protestant University of Applied Sciences Darmstadt. Petra Wrede can talk about a lot of examples from her work where children with alleged behavioural problems suddenly became accessible. Again and again, there are cases where they turn around and are curious and excited because someone recognised what they were missing. Petra Wrede insists that age oriented learning needs to be replaced by learning suited to a child's development.

In order to be able to make those decisions, she is certain, the educators could use a theoretical background – the kind of knowledge that the Protestant University of Applied Sciences in Darmstadt is teaching in its innovative Bachelor study programme. ■



## Diversity as an Opportunity

The University of Duisburg-Essen is focusing on new target groups. Their programme for students with an immigrant background and from underprivileged families is having positive effects on the entire higher education institution

S

tories like the one with the school pupil of Turkish background are Professor Ute Klammer's favourite ones to tell: "she was plodding along in the eighth grade of a lower secondary school," says Klammer, "until someone discovered her talent and supported her. She went on to attain her university-entrance qualification and is now one of our best Mathematics graduates." These turns in life make up the most important motivation for Ute Klammer in her everyday work: She is Vice Rector for Diversity Management at the University of Duisburg-Essen.

The university in the Ruhr region is the first in all of Germany that has established the issue Diversity Management at the

level of the Rector's Office. The background is obvious: the densely populated cities of Duisburg, Essen and the area have an above-average population of families with an immigrant background. In the former working-class heartland of Germany, there is also a large percentage of educationally underprivileged families. And they represent the very target groups that the university is recruiting through its diversity approach. Promoting diversity and variety are the mainstays of this strategy – and likewise one of the key goals of the Bologna Process: academic education should be made more broadly accessible, while the higher education institutions are called upon to recruit more students with non-traditional educational vitas.

"We are still in the beginning of implementation," says Ute Klammer, who has only been in her position since October 2008. A task of Herculean proportions lies ahead: she wants to open the higher educa-

tion institution for students from immigrant families and children from families with underprivileged educational backgrounds, she wants to create a family friendly university and she wants to ensure a solid place at her university for continuing education and life-long learning. These three pillars are at the core of her job as top Diversity Manager.

The initial examples illustrate how well the concept has taken off at Duisburg-Essen: recently, the university won a prize for its exemplary support for transitions from school to higher education. "We want to have an impact in this region and we are working together with schools intensively," says Vice Rector Klammer. The goal is to stimulate curiosity among school pupils and to stir interest in research – and to achieve that, they are offering more than just the usual Open House Day: events like "Freestyle Physics" are geared to make experiments exciting, and they seek to attract school students through multiple channels.

For a lot of high school graduates from less privileged backgrounds, the obstacles to higher education have decreased in the past few years. "Compact, well-structured Bachelor degree programmes are attractive for people who would otherwise have been put off by long study programmes with ambiguous curricula," says Ute Klammer. Currently the university is planning a large support programme called "Chance2", which is geared toward various secondary school levels. Starting at the ninth and tenth grades, promising students from underprivileged and immigrant backgrounds will participate in the support system. Over a few years, they will be assigned a mentor and participate in a variety of support measures. "For us, this is about familiarising them early on with the prospect of going to uni-

### The University in Numbers

The University of Duisburg-Essen researched biographical details of its students through an expansive survey – and the results, which are more detailed than at any other German higher education institution, underline the need for an effective Diversity Management. Of the approximately 32,000 students, more than 5,500 took part in the survey. 94 percent of the participating students have German citizenship, but a quarter of the respondents had an immigrant background. 53 percent come from families in which both parents did not study, while more than 12 percent were solely responsible for themselves financially. And in Duisburg-Essen they are convinced: the student survey clearly indicates the needs of the various student groups and provides a good basis for specific steps for the Diversity Management to take.

versity. We want to support them in those areas where the education system does not provide any corresponding approaches.”

They include an already established support class for school pupils from immigrant families, providing early assistance to make sure they keep up with the learning material. 800 pupils from around the region receive tutorial lessons – by students in the university’s Teacher Education programme, who get to develop their didactic skills at the same time. “A lot of these pupils tell us they never would have made it passed the university qualification exam otherwise,” says Ute Klammer. “And the Teacher Education students, in turn, become familiar with specific problems confronting school pupils with immigrant backgrounds that they otherwise would not have encountered until they arrived on the job later.” Funding for this project is provided by the Mercator Foundation, the City of Essen and a number of other supporters.

In the future, all incoming students will receive intensive support. How do I get around the university as a student, who



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A recreational lawn at the Essen Campus

## The “internationalisation at home” is now using that previously untapped potential

can help me with urgent questions – and is it inappropriate for me to go straight to my professor when I have a problem? Support on these sorts of practical issues will be provided as part of the new mentoring programme that is being developed across all eleven Faculties of the UDE.

But Diversity Management should be more than just a large support network. “We are not only filling gaps or compensating deficits, but rather seeing the potential of such an international student body,” says Ute Klammer. Including the students’ various cultural experiences in the classroom is just as much a part of this approach – so not just reading, for instance, about the political systems of other countries, but also exchanging with somebody who is familiar with them from their own experience. To not only discuss theoretically the role of family in certain

cultures, but also experience it concretely. “Internationalisation at home” is the term that best captures this practice, and it facilitates reaching two goals at once: many students from the Ruhr region do not have the financial means to study abroad. But a lot of experiences that they could otherwise gain in Milan, Istanbul or Warsaw can also be made at their own higher education institution – that is, if the university recognises the potential offered by a high percentage of international students and students with an immigrant background.

The second, large construction site of the head Diversity Manager in Duisburg-Essen is supporting young parents. The goal is to develop a joint concept for child day care for university staff and students. What this concept could look like in practice is already visible on the Duisburg campus: day care facilities have been built there,

with the university taking over the costs and at the second campus in Essen, a day nursery is currently under construction. The university plans to expand capacity in the next few years. “40 percent of our students with children are in a situation, where they also have the main parenting responsibility,” says Ute Klammer. Exam periods or courses taking place after 4 pm, when virtually all public day care centres and kindergartens are closing, pose a particularly difficult challenge for students with children. Now the university wants to provide its own solutions to these issues.

How clever have they been at addressing these issues? A few examples illustrate: the library has set up its own parent-child-working spaces equipped with toys for the children and separated by a sound-proof wall from the other study areas. Plus: a “Fire Fund” for young academics and researchers has been established. The fund provides support for childcare in critical situations, like when parents have to travel to a conference, children fall ill or a babysitter or other childcare person suddenly cancels. Indeed, Ute Klammer is firmly convinced that, as small as the individual ideas are, taken together, they create a much different, open and inspiring climate at the university. ■



## “Maestros cannot be standardised”

For the Karlsruhe University of Music, the Bologna Process has required a balancing act between artistic disposition and academic restructuring. Today, however, everyone is certain: the reforms have improved the education they provide

# M

usic can be heard coming out of the large, open room, with diffident piano chords intermingling with violin tones. A contrabass can be heard through the door to the room across the hallway; in the central stairwell, the notes blend into a small symphony. Here in Karlsruhe, music has a regal home: the Castle Gottesaue is home to the University of Music, an impressive building that once served as a summer residence for the Margrave Ernst Friedrich von Baden-Durlach. The former ballroom is now a chamber music hall. In one of the five distinctive castle towers, a modern stairwell leads to the attic floor where a library is situated today; thousands and thousands of movements of music are archived here.

“In musical training, the maestro-student-principle plays an enormous role,” says Martin Emmerich, Violin student and Chair of the Student Council at the University of Music: “The maestro you trained under is incomparably more important than any degree title, and no study reform is going to change that.” Emmerich expresses concisely the distinctiveness of artistic study programmes – as well as the widespread scepticism found in many places with regard to the Bologna reforms. A large amount of practical elements, artistic maturity and close ties to

an experienced maestro are important in music and it is difficult to compare this with one of the mass study programmes at a conventional higher education institution. “Good maestros cannot be standardised,” says Martin Emmerich.

On that point, there is broad agreement between students and teachers at the Karlsruhe University of Music. “In the old Diplom study programmes, a lot of things became routine that we would not continue doing today,” says Professor Michael Uhde, Vice Rector for Academic Affairs and himself a pianist. He has decades of teaching experience and has held his position in the Rector’s Office since 2000. His office is less comfortably situated than the castle where the students study: the executive and administrative offices are housed in one of the previous farming buildings, a few steps away from the noble gateway. “It was in 2003 when we all decided together to jump into the commotion,” says Michael Uhde.

By commotion he means the conversion of the degree programmes to Bachelor and Master and for sure, the Karlsruhe University stuck out then like a one-legged dog: they were the first higher education institution of music in Germany to decide to convert all study programmes; since

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© HfM Karlsruhe, Marc Weisser



Students in Karlsruhe give an open-air concert



Major performance: students in the School of Opera

2006, all incoming students begin in Bachelor and Master programmes.

The curricula of the new study programmes were discussed in a specially formed Senate committee. "This process," recalls Michael Uhde, "was incredibly beneficial. Our course and programme offering is better and broader than before."

The condition for success was the flexibility that the Ministry of Science and Research of Baden-Württemberg permitted the University of Music. Instead of the three-year Bachelor, which is the designated guideline, they introduced a four-year model in Karlsruhe. "Artistic development takes time to mature. It does not make sense to rush things or to shorten the duration of studies," says Michael Uhde.

The advantages of the Bachelor have demonstrated additional benefits too: finally, there is a clear guideline on how studies can be divided into theory and practice – previously, there was no such binding rule, and often enough, teachers and students chose in favour of practice. As a result, important basics of Music History, Ear Training or Foundations of Acoustics were frequently neglected – and a mandatory course on the factors related to stage fright and how to overcome it or speech training did not exist at all. The Student Council welcomes these changes because they gently force students to take important seminars: "previously, a

lot of students were at risk of developing a narrow fixation and becoming one-track minded specialists," says Martin Emmerich. "Though the non-instrument related material is viewed by many as irrelevant to their career, they ultimately help to expand horizons."

He finds similar words of praise for the increased work and exam load in the beginning semesters. In contrast to the past, when everything depended on one big final exam, one decisive performance, now students know earlier where they stand. The balance between practical competence in an instrument and the tedious theory of the Karlsruhe model has proven itself in Emmerich's view – "fortunately, since the ultimately decisive question for a career in music is the instrumental-artistic level one has achieved at the end of studies." And the higher education institution sees itself more committed today than in the past to preparing students optimally for professional life.

The responsibility for how the degree programmes were designed was in the hands Eva-Maria Rieckert. She teaches piano at the University of Music and is Bologna Adviser at the same time. "Our goal was to increase the range of choice students have. That was our yardstick in the reform process," she says. With the old degree programmes, students had to decide at the start of their education

whether they would pursue the pedagogic-oriented Diplom Music Teacher or the Diplom programme for Artistic Training. Today, all students start off on the same track and, after a two-year orientation phase, can choose either the pedagogical or artistic area of concentration, or both. Beforehand, they are required to take an internship in a music school – each student should know from first-hand experience about what they are deciding on.

An unusual feature is the design of the modules: a practical module in the Bachelor programmes extends over four semesters with students receiving 62 credit points – much more than with typical seminars. The particularities of the University of Music and its nature account for this arrangement: "A student needs more than one semester to prepare a final concert, a one-hour performance. Therefore, we need to adapt the study framework accordingly," says Eva-Maria Rieckert. This flexibility is essential to fostering artistic maturity in the Bachelor and Master programmes.

When Professor Michael Uhde is asked to explain the primary advantage of the new Bachelor and Master system, he thinks back to his own time as a student. He took his first artistic steps in Germany, and then he went to Italy for two years to study under a maestro there. Still today, he is starry-eyed when talking about "Milano" and is enthused about the refinement he received under his mentor. "That was an incredibly valuable time," says Uhde. His study abroad, however, was apparently of no merit to his studies in Germany – he received an additional certificate, but irrespective of his achievements abroad, he had to finish the entire designated curriculum of his programme. "International exchange has become much more feasible, not least because now we can recognise students' work abroad," says Uhde.

The significance of this, especially in the area of music, is confirmed by the statistics at the Karlsruhe University of Music: the percentage of international students is around 30 percent, and that figure only includes the non-European students. The student register lists 55 different countries of origin. "Colleges of Music by nature have always been

international, even before the Bologna Process," says Uhde. "But the reform has brought new energy to our endeavours."

One indication of this is the AEC, the European Association of Conservatories, representing music colleges and universities from various countries. The association was more of a passive organization in the past, "a debate club for rectors," as Uhde refers to it. But following the Bologna Process, the organisation has thrived with new life. "We discussed the opportunities and agreed on common standards. Despite very little personnel, we have achieved a great deal at this international level." Models were compared and adjusted, good concepts transferred from one country to another. "At the same time, we did not change anything with approaches that have been tried and tested in these countries," says Uhde. "We feel like a home of the highest variety of nationalities. This mixture is a great opportunity for the university, particularly because very different culture perspectives frequently

come to expression." It is important that the students have not only learned the language, but also gained a feeling for the culture when they graduate. "Those backgrounds are indispensable for the artistic interpretation of a work," says Uhde – and they have traditionally played a key role in Karlsruhe. The Bologna Process has not changed this specific strength of their educational programme – "we want to foster more in our graduates than instrumental virtuosity alone."

There is still a considerable amount of changes to come at the university: on the lawn next to the monumental

castle, a new building complex is under construction, with space for a concert hall and numerous practice rooms. As a result, all subject areas of the university will be compiled from the previous four locations into one central campus. "Thanks to this construction project and also thanks to the Bologna Process," says Michael Uhde, "we will be better positioned than ever before in our history." That is no small statement, considering that in 2012, the Karlsruhe University of Music will be celebrating the 200th anniversary of its establishment. ■

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**“Colleges of Music by nature have always been international. But Bologna has brought new energy to our endeavours.”**

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## ▶ “The Bet has been won”

For the new subject Materials Science at the University of Göttingen, a number of professors from different subject areas have pulled together – and are showing that cooperation enriches academic life



Professor Götz Eckold can still remember the assembly quite clearly, when he announced his rough idea before the students: components of Physics, Chemistry and Geo Sciences could be combined to make a new study programme called Materials Science. “I was plain stunned,” says Götz Eckold, “at how enthusiastic the students reacted to this idea.”

The challenge for him would be on a different front: the new Bachelor degree programme was to be so well-founded that the graduates would be able to pursue a further Master degree in Materials Science – or to switch to one of the core disciplines of Physics, Chemistry and Geo

Sciences. “I made a bet with my colleagues that we would succeed in establishing this,” he says – “even if that meant, of course, having to make some conditions.”

The concerns were understandable for Eckold: students graduating with a degree in Materials Science would learn about the important foundations of the core subjects, but only the surface of some of the standard disciplines would be scratched – Organic Chemistry, for example, plays just as small a role in this programme as Theoretical Physics would. “And naturally, we cannot allow a future Chemist to circumvent essential basics by way of Materials Science,” says Eckold. In other areas such as Solid State Physics, the Materials Science students would be just as educated as required for the Master programme in Physics. “It is important to all of us to avoid creating a ‘discount transfer’ to Master,” says Eckold – “but that also does not mean that we should be piling up unnecessary hurdles.”

A lot of ideas and uncountable talks were necessary before he found a practicable solution with his colleagues: Whoever switches subjects after the Bachelor can do that without a problem – under the condition, though, that those students close subject-related gaps in the first semesters of the Master programme. “As for the bet,” says Eckold with a smile, “I won.”

The winners, however, are first and foremost the students. With this new study programme, they have access to a professional field that has opened up in recent years: they learn how to select or produce exactly fitting materials for certain tasks.



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The Göttingen State and University Library

During their studies, they learn about the properties of metals, polymers as well as semi- and super-conductors." Companies often used to select the proper materials, for instance for production processes, by the principle of trial and error," says

ive," recalls Eckold of his meetings with various firms. "The need for people with our graduates' profile is immense!"

Quite a few years ago, Göttingen had already recognised that experts in the area of Materials Science were in demand.

**“The winners are the students – a broad field has opened up for them”**

Eckold, himself a Physical Chemist. Nowadays, an analytical approach is gaining in significance in the production sector and the chemical industry. Many companies in the region have thus expressed their support for the new study programme. "The feedback has been entirely posi-

Back then, the respective departments developed a project for students from these core subjects: they could qualify themselves through additional seminars for a certificate in Materials Science. The initiative, however, quickly faded out, as the original project leaders recall – the work-

load demanded in addition to the regular full-time study programmes was too much.

The second chance for the innovative study programme came with the Bologna Process. Now the professors have pulled their efforts together to optimise the study programme and to set clear areas of concentration. For a couple of lectures, they are even working with colleagues from Forest Sciences, who provide their expertise on various woods. 13 professorships participate in the Materials Science programme, and approximately 40 percent of the seminars and lectures are designed specifically for the new study programme.

"For the most part, our Bachelor graduates that want to continue studying will pursue their Master in Materials Science," says Eckold. "But should individual students realise that they have a stronger affinity for Chemistry or Physics, we want to make sure that path is open to them." ■

## **Open for Individual Paths**

Not only high school graduates, but also practitioners can enter the Harz University of Applied Sciences. Their career experiences will be recognised for credit – the path to higher education could hardly be shorter

# A

t the International Tourism Convention ITB in Berlin, Professor Georg Westermann is one of the regular guests: he is presenting his project to a full house, a study programme in Tourism Management geared toward experienced practitioners. Prospective students do not have to give up their job to study, and the seminars and lectures are designed to take place complementary to one's work. "We can even recognise applicants' knowledge from practical experience for credit," Westermann promotes.

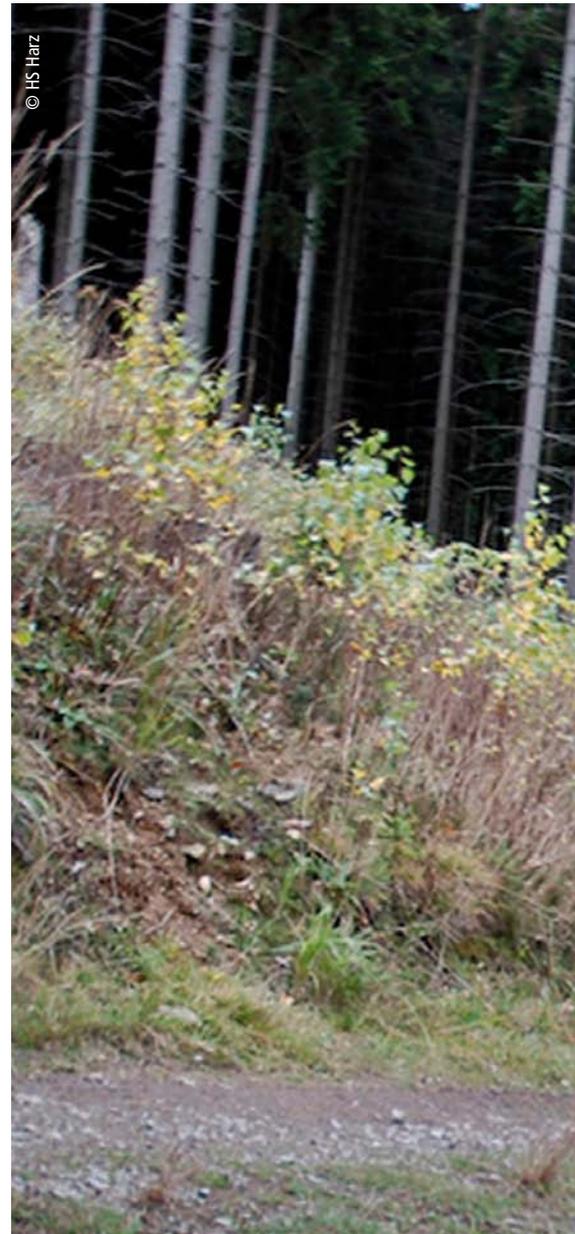
The Harz University of Applied Sciences in Wernigerode, where Westermann teaches, has opened itself systematically in the past few years for students who previously would not have had much of an opportunity to study. Above all, experienced professionals are the target group, who either have not studied or do not have a university-qualifying degree. For them, the Harz University has developed a new concept as part of a model project of the Joint Federal-State Governments Commission. The core of the concept is to assess the applicants' competences objectively as possible so that they can qualify for a conventional study programme through their career experience.

"Our society cannot afford to simply waste the potential of these individuals who are very interested in studying," says

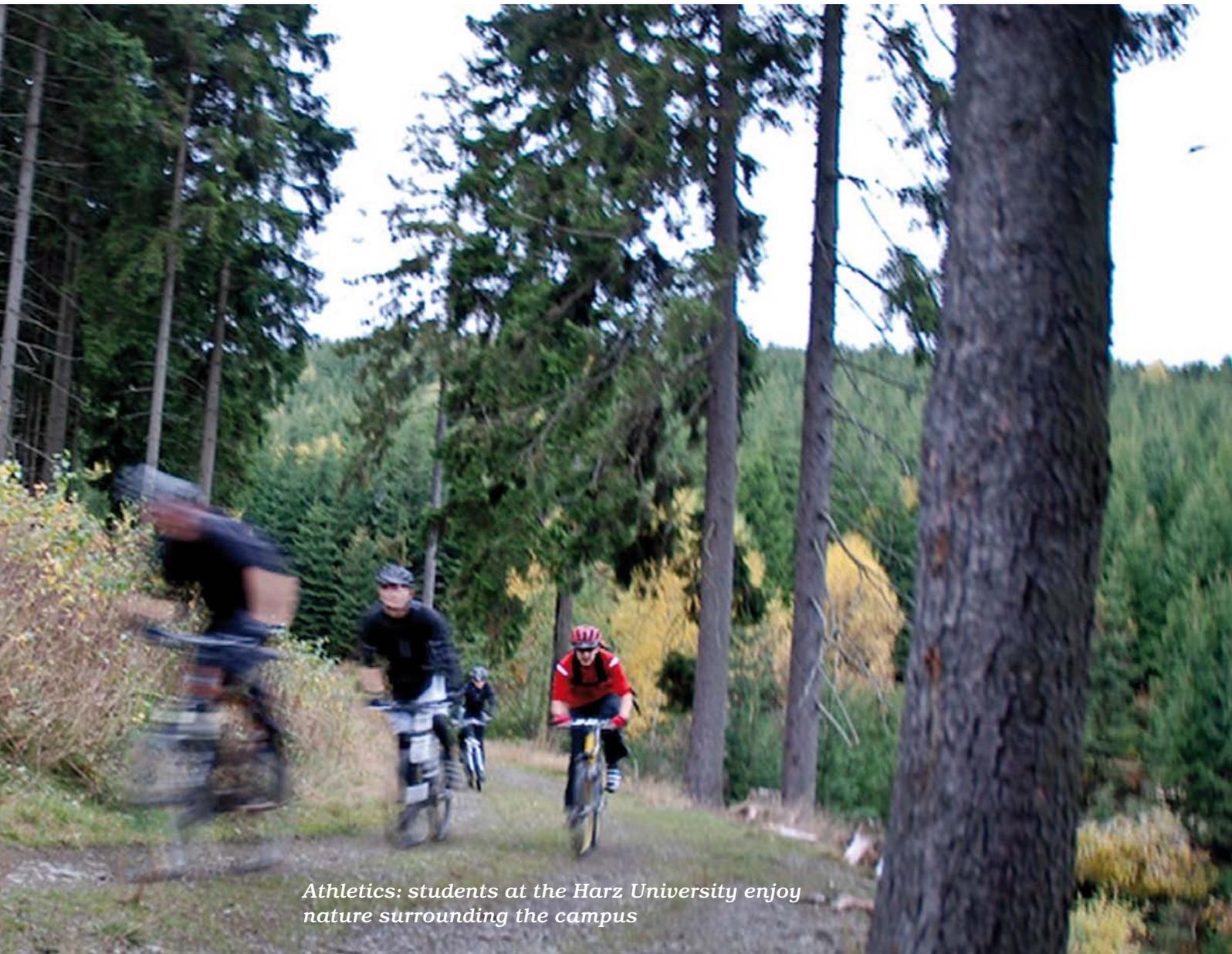
Westermann. "And of course our university has to think economically: in our state, Saxony-Anhalt, last year the number of pupils obtaining a university-qualifying degree decreased by 50 percent, but we still have the same student capacity." Opening the higher education institution for non-traditional educational backgrounds provides a solution to both problems – an approach that wholly coincides with the spirit of the Bologna Process. Lifelong Learning belongs equally to the overarching goals, as does the promotion of unconventional academic careers.

The new students at the Harz University of Applied Sciences have vitas similar to those of a Head of Controlling at a medium-sized company, for instance. The person usually never studies, but rather entered professional life directly and has gained a great deal of experience with Controlling in 20 years of employment. "If he or she wants to attain a Bachelor in Business, but has to take a seminar on Introduction to Controlling in the first semester, that person will feel like the university is pulling their leg," says Georg Westermann. "We developed our new admission concept so as to avoid deterring those potential students."

Applicants seeking to have their previous experiences counted for credit are



required to create a portfolio that indicates their achievements – whether they were attained in vocational training, in professional practice or in other areas like volunteer work. "Documents we receive include certificates of employment, work samples, or reference letters confirming several years of service as the treasurer of an organisation," says Manuela Koch, who directed the model project of the Joint Federal-State Governments Commission at the Harz University. The respective professors can quickly assess whether these practical experiences are comparable with the material taught in their corresponding lectures and seminars. Up to 50 percent of



*Athletics: students at the Harz University enjoy nature surrounding the campus*

the credits to be attained in a study programme can be awarded in this manner.

For this new approach to succeed, the curriculum of the study programmes will play a crucial role – “the modules have to be skills oriented,” according to the Harz University of Applied Sciences. That means that each course has to list precisely what the students learn. “In the past, that mostly meant bibliographies of relevant literature, but they of course do not help much here. Today, we describe in detail what the students will have learned and be capable of after completing the seminar,” says Professor Westermann. Prospective students applying to

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**“Soon all study programmes will be open for academic newcomers”**

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a programme can thus see right away how far along they are in their competences and what they still need to learn.

After initial experience with this competence-crediting model, the Harz University of Applied Sciences is starting to open all of its degree programmes for academic newcomers. And, they are planning to offer additional programmes enabling professionals to work and study in order to facilitate their entrance to higher education. They are study programmes like in Tourism Management that George Westermann has gone to promote on his road show. ■



## **A Sound Study Plan**

The University of Applied Sciences in Osnabrück is providing their students more space for their individual plans: generous holiday and study-abroad semesters allow for a flexible curriculum that each student can adapt to their own needs

# W

Whenever Dr. Andreas Bertram wanted to solve a problem, new difficulties often turned up instead: if he wanted to allow students the possibility to take a semester off in order to prepare for exams or go on a world trip, they would have returned to the University of Applied Sciences Osnabrück a few months later – and would have tough luck after their half-year off with regard to seminars only offered once a year. Now Bertram, Vice-President of the higher education institution in Osnabrück, has developed a new programme that would resolve these and similar difficulties all at once.

“Bachelor Plus” is the name of the concept and it plans to bring more flexibility to studying – more room for those who need it and a more rigid track for those who want to complete their studies swiftly. The principle idea is based on the existing Bachelor degree programmes that are designed with a prescribed six-semester duration of study at the University of Applied Sciences Osnabrück. Within this basic framework, it will no longer be a problem to take a semester off and to integrate semesters abroad into one’s course of study. “This is about showing students that it is totally alright when they want to take more than six semesters time for their studies,” says Andreas Bertram.

Until now, breaking away from the prescribed study plan has not been so

easy. Students applying to take a semester off, during which tuition fees are also suspended, had to deal with strict rules. According to the state law of Lower Saxony for example, students are not allowed to utilise any services of the higher education institution during that period. “That was especially counterproductive for our purposes,” according to staff in Osnabrück. A lot of students would like to take a semester off, for instance, to recapitulate the material – but that has not been possible since exams are not allowed to be taken during a semester off. Other students experienced similar complexities with their individual plans: students who went abroad could not seek advice at the university’s International Office, while the Internship Office could not direct students to a potential employer during semesters off. With the Bachelor Plus programme, that is going to change.

“Our holiday semesters will give students the opportunity to acquire ad-

**“It is totally alright when students want to take more time!”**

ditional individual skills outside of the prescribed duration of study or to simply take a break in between,” says Bertram. In Engineering Sciences for example, an additional option is in planning for students who want a holiday semester to work on research projects or to visit lectures in other subject areas to

expand their horizons. Then the study programme picks up where it left off without a problem. Consequently, the higher education institution in Osnabrück is planning a broader course offering, with more seminars taking place outside of the usual once per two-semester pattern.

“The trick is to implement these sorts of structural guidelines on a university-wide basis,” says Andreas Bertram. He is working on that task currently: soon the Bachelor Plus will be established as a framework model across the university; step by step, as many study programmes as possible will adopt this model. The system offers clear advantages: students preferring to complete their studies quickly can continue to do so in six semesters, while students who prefer to take time to learn about other areas or undertake other endeavours will likewise have an opportunity.

The University of Applied Sciences Osnabrück would like to facilitate this increased flexibility in further areas as well. At the Faculty of Social Sciences and Economics, the study programmes are designed so that students can switch their major after the first two semesters without difficulty, if they determine that they have a stronger interest for another subject area. The already completed courses will still be counted. The professors see this introductory phase of studies as a type of platform – the basics taught here ultimately can be applied in another discipline of the same Faculty. As Vice-President Andreas Bertram sees it: with these sorts of impulses, we can accomplish a lot toward making sound study plans and supporting individuality.” ■



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*Studying in nature: Agricultural Sciences and Landscape Architecture are housed on the Campus in Haste of the University of Applied Sciences Osnabrück*

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## Imprint

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**bologna@hrk.de**

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#### **Editor-in-Chief:**

Dr. Peter A. Zervakis

#### **Author:**

Kilian Kirchgeßner

#### **Translation:**

Jared Sonnicksen

#### **Editorial Staff:**

Stefanie Busch, Mina Chun, Petra Martini, Monika Schröder, Jared Sonnicksen

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