

Program for More Quality in Teaching: Two Proposals of KIT Approved

Research-based Education Program and MINT Kolleg to Be Funded with Several Million Euros for another Four Years



Research-based education characterizes studies at KIT: The research-based education program sustainably strengthens academic education. Funding of the MINT Kolleg will also be continued. It prepares student beginners for studies of mathematics, informatics, natural sciences, and engineering. (Photo: Martin Lober, KIT)

In the next four years, Karlsruhe Institute of Technology (KIT) will receive presumably up to EUR 13 million from the program for more quality in teaching to further develop two projects for enhancing study conditions and teaching quality. The new teaching formats introduced to strengthen research-based education will now be implemented throughout the university during the second funding phase. Funding of the MINT Kolleg Baden-Württemberg will also be continued. It prepares student beginners for studies of mathematics, informatics, natural sciences, and engineering and, hence, improves individual success.

“Continued funding of both projects reflects the success of the measures implemented in the first funding phase. I am very happy about this confirmation of our work and further support by the federation and the state under the program for more quality in teaching,” KIT Vice President for Higher Education and Academic Affairs, Pro-

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fessor Alexander Wanner, says. In his opinion, the education approaches developed under the research-based education program draw students closer to research projects at an early stage in their studies. Wanner thinks that research-based education at KIT is an optimum basis of successful work of graduates in science, industry, and society. The MINT Kolleg has succeeded in establishing a concept to counteract known difficulties in the early studies phase of mathematics, informatics, natural sciences, and engineering. "Both projects complement each other ideally and contribute decisively to the continuous improvement of teaching and learning conditions as well as of teaching quality at KIT."

KIT-Lehre^{Forschung}-Plus

Among the successful measures implemented in the first funding phase were new course concepts in the form of projects and traineeships to provide early insight into basic and large-scale research. Now, these course formats with intensive mentoring of small groups can be further developed and integrated into other study programs. Among others, it is planned to develop a new curriculum "Internet and Society" in the master's program of informatics in cooperation with the KIT Department of Humanities and Social Sciences. The KIT Department of Electrical Engineering and Information Technology will introduce a StudentInnovationLab (SIL) for bachelor's and master's courses. Through projects, students will be familiarized with innovation aspects relevant to the subject, from project planning to early validation. In the bachelor's program of geodesy and geoinformatics, the "Lernen^{Coaching}" (coaching-based learning) approach will be pursued for the specific support of students in the early phase of their studies. Workshops, blended-learning offers, and presentations of job profiles will be organized.

The KIT-Lehre^{Forschung}-Plus (research-based education plus) program is not only aimed at improving studies conditions, but also at continuously increasing education quality by the further development of study programs. For this purpose, teachers, students, and service units will regularly exchange experience on the metaforum "Forschungsorientierte Lehre" (research-based education). At workshops organized by the university didactics unit together with KIT Departments, further development of the studies programs will be supported specifically and research-based education will be reflected. KIT-Lehre^{Forschung}-Plus is embedded in KIT's accredited quality assurance scheme for studies programs for the sustainable further development of academic education.

More information: <http://www.lehre-hoch-forschung.kit.edu/> (in German only)

MINT-Kolleg Baden-Württemberg

The MINT-Kolleg Baden-Württemberg established in 2010 is a joint institution of KIT and Stuttgart University. It is aimed at facilitating transition between school and university, preparing student beginners for studies of mathematics, informatics, natural sciences, and engineering, and improving their individual success in studies. To this end, the MINT Kolleg has developed a differentiated education program that includes both preparatory courses as well as courses parallel to the studies and courses to prepare students for examinations. Apart from classroom teaching, e-learning and blended learning elements are used. The education concepts developed during the first funding phase were found to increase success in the early phase of studies. In written tests, the pass rate of students, who had joined the MINT Kolleg, exceeded that of all students participating in the tests.

The second funding period is now aimed at continuing and further developing measures to meet the increasing demand. Existing offers will be complemented by new, more flexible formats for the individual support of students, as both personal skills of students and requirements in the studies programs vary considerably. It is planned among others to establish a MINT helpdesk at KIT for the subjects of mathematics and informatics. The helpdesk is to provide quick and specific advice to students of all levels in case of individual problems. In the area of e-learning, the existing MINT Kolleg online materials will be extended, including the online test to provide applicants with a basis for their decision in favor of a certain program and to inform them about support offers in the first phase, which correspond to their competence level. The MINT Kolleg also receives funds from the Baden-Württemberg Ministry of Science, Research, and the Arts.

More information: www.mint-kolleg.de (in German only)

Karlsruhe Institute of Technology (KIT) is a public corporation pursuing the tasks of a Baden-Wuerttemberg state university and of a national research center of the Helmholtz Association. The KIT mission combines the three core tasks of research, higher education, and innovation. With about 9,400 employees and 24,500 students, KIT is one of the big institutions of re-

search and higher education in natural sciences and engineering in Europe.

Since 2010, the KIT has been certified as a family-friendly university.

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