



Windows, Facades, Winter Gardens, Doors and Gates

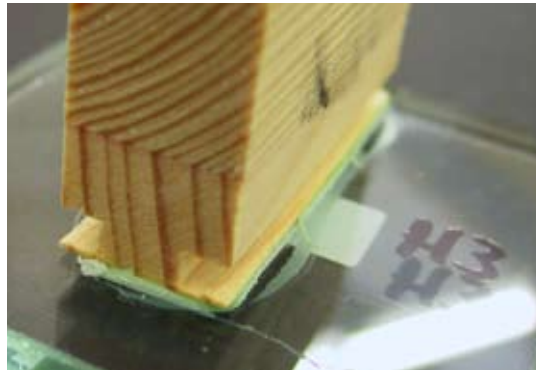
This Master Research Unit (MRU) is, on the one hand, based in the Faculty of Wood Engineering from the University of Applied Sciences Rosenheim and, on the other hand, in the research unit Facades, Finishing and Furniture from the Bern University of Applied Sciences Architecture, wood and civil engineering in Biel, Switzerland. The key topics in this MRU lay in the fields energy efficiency, security, serviceability as well as construction optimisation (choice of material, fabrication, statics and aesthetics). Facades, windows, doors and winter gardens are improved and developed under the aspect of energy conservation. Concepts and solutions for new buildings as well as renovations are generated. Next to the evolution of the adhesive technology for the construction of windows, research is ongoing in the domain of material combination and the interdependency between different materials.

The research unit is among other fields leading the realisation of structural-physical and material requirements for the fabrication-optimised construction of windows (project: «the new wood window generation thanks to the technology of wood-glass composite»). Other projects in this field are worked on together with the window institute ift in Rosenheim, Germany. The ift is an internationally recognised research institute in the field of window and facade technology.

Course contents

Your studies are practically oriented and individually structured depending on your goals and interests. In this MRU you gain knowledge in the field of energy optimisation of windows, winter gardens or facade elements as well as in the field of security and usability. You deepen your knowledge in the areas of construction and choice of material. This also includes the integration of the new technology for automatic fabrication processes.





Within the Windows, Facades, Winter Gardens, Doors and Gates MRU you will be able to develop your knowledge in one or several of the following skill sets:

Evolution of Windows and Construction Optimisation

The demands for energy conservation have become more important. Therefore, it is more eminent to develop energetically optimised and cost-saving windows and facade elements. The challenge lies in the intelligent combination of available resources and material as well as in the economical integration of these into the building shell while paying attention to the relevant building processes. The company internal logistics and the individually adapted fabrication technology are next to the construction and material relevance further key topics. Practical approaches, experiments with new material composites as well as fabrication processes can be simulated and examined in our modern laboratories. In the same way, the usability of whole systems can be checked.

As a specialist in Evolution of Windows and Construction Optimisation you will work for innovative companies on technically executive level.

Building Physics within Facades

The high standard regarding the building shell in the fields of heat, dampness and acoustic protection demand a wholistic observation of the windows and the facade. Due to modern architecture and the rising demands for transparent building shells, heat protection becomes more important already during the planing of a building. You will learn the necessary

knowledge for the judgement of a window or facade construction from a building physics point of view. You will be able to analyse and develop new solutions while keeping in mind the characteristics of the components and materials. The building physics laboratory with multifunctional checking and measuring devices allows for the construction specific assessment of windows and facade elements.

As a specialist for Building Physics within Facades you will be working on the physical processes within the building shell. You will work in an interdisciplinary manner with other specialists in architecture or facility management.

Contact

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