

Press Release from Biberach University of Applied Sciences

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Interdisciplinary Challenge for all Construction Degree Programs

Biberach University of Applied Sciences (HBC) is participating in the international “Solar Decathlon Europe 21” competition and developing ideas for innovative housing development.

The HBC team has already completed the first step: In December 2019 a panel of experts nominated HBC for the student competition Solar Decathlon Europe 21 (sde21), focusing on the construction of sustainable, energy-efficient buildings. Project Manager Lena Frühschütz heads up the highly motivated, interdisciplinary group, which has been hard at work on planning and realizing the concept ever since its nomination. The master’s student studying Energy Engineering and Professor Andreas Gerber are responsible for coordinating the 40-person team from Biberach. “We have a tight schedule,” says the Dean of Studies. This is why the project is now in full swing: The students from the Architecture Degree Program are working diligently on blueprints, while aspiring Energy Engineering students are developing the construction physics and energy design concept. Although the coronavirus pandemic has changed the conditions for the project overall – lectures at all universities in the country have been called off until 20 April – work on the project continues unabated: “We’re using digital tools and virtual meetings,” Lena Frühschütz explains.

The assignment for the competition is to develop and realize an idea for sustainable, energy-efficient and socially responsible construction in urban environments. This includes Architects, Energy Engineers and Construction Project Managers from HBC – all specialized fields of construction covered by the university’s degree programs. University Director André Bleicher believes the task reflects the transformation – in this case in sustainable urban planning – that is needed to solve the challenges of the future. “Everyone involved is welcome to contribute their knowledge and ideas – this makes the competition a transfer project for education, research and practice.”

University Council Chairman Gerd Leipold also sees participation in the event as an interdisciplinary challenge. The former head of Greenpeace International feels HBC is ideally equipped for the task of constructing a smart, sustainable building in an urban setting: “We don’t just teach sustainable planning and construction at the university. We

also develop new scientific methods, for example in the Research Institutes for Building and Energy Systems or Timber Construction.”

Intelligent building extension

Project Manager Frühschütz notes that the project requirements and schedule are very demanding: “We still have a year and a half to plan and realize our building.” The project title “Extension for Sustainability” (“X4S”) is aimed at adding on to an existing, two-story building. “Of course, we won’t disclose our specific solutions approaches for implementing a CO₂-neutral extension just yet. The competition is fierce and certainly never sleeps,” the master’s student says with a wink.

The impact the project will have on the university’s networking efforts is another key topic for the team. They added that the competition was a welcome opportunity to demonstrate the university’s performance capability to its partners,” says University President Thomas Schwäble: “The collaboration between the university, local tradespeople, small and medium-sized businesses, industry and associations creates added value for everyone involved.”

Coordinating, organizing and planning

The project group is simultaneously learning the ropes, visiting conferences such as the one for energy-independent communities, which took place in Freiburg this February, exchanging ideas with experts from a range of fields, creating interdisciplinary lectures for the upcoming semester and coordinating the necessary project work.

“Interdisciplinary collaboration at the university must be absolutely seamless,” Lena Frühschütz explains. The awarding authority, the Energy Endeavour Foundation, has a list of specifications that requires progress be made, documented and published at certain milestones.

The first team workshop in Wuppertal is planned for early April. Due to the coronavirus outbreak, it will be conducted virtually.

Solar Decathlon Europe 21

This is the first time the Solar Decathlon Europe 21 (sde21) competition will take place in Germany. The project team at the University of Wuppertal (BUW) includes the City of Wuppertal, the Wuppertal Institute for Climate, Environment and Energy, the Utopiastadt Initiative, the Wuppertal Municipal Utilities and Neue Effizienz GmbH. This is also the first time the building and energy competition will focus on the energy transition in an urban context. In August 2021 a panel of experts will make their decision on the submitted drafts. sde21 is sponsored by the Federal Ministry for Economic Affairs and Energy (BMWi).

<https://solardecathlon.eu/>

Additional voices on the subject

The interdisciplinary challenge the competition offers is “extremely welcome”, says University President Thomas Schwäble:

President Schwäble Interdisciplinary – 10 sec

A lot of exciting work, especially for coordinator and master's student Lena Frühschütz. Right now, organization and motivation are key:

Student Frühschütz Team building – 21 sec

The competition never sleeps; six German universities are among the 18 participants, which also include other European universities and three from Asia. Some of them are more experienced:

Professor Gerber Fierce competition – 12 sec

So competition will be fierce. This is why HBC is focusing on the path to getting there and not the outcome, says Andreas Gerber:

Professor Gerber The path to getting there – 20 sec