
Job profile B.Sc. BIG-BI “Civil Engineer for Building Energetics” („Bauingenieur:in für Gebäudeenergetik“)

1.1. Description

As an energy engineer in the building sector, you look at the building in particular from a building physics and energy perspective.

- You will dimension building envelopes and carry out building physics verifications, using independent calculations and numerical simulations. Thermal building simulations (energy demand, heating and cooling load calculations) are used for heat protection, for example. You also carry out measurements and tests on the building itself. Additionally, your tasks may include the dimensioning of technical building equipment and investigations into building concepts and building technology components.
- You will carry out assessments of energy-efficient buildings and advise planners on efficient buildings and the use of efficient building technology.

A university degree in civil and environmental engineering, building physics and technical building services or similar is required. Knowledge of measurement technology, (building physics and building management) standards and guidelines as well as CAD programs and common GEG calculation programs are recommended. In addition, the specialist knowledge should include the area of building energy efficiency or passive house planning, technical building equipment (ventilation technology, heat pumps, renewable energies) and the area of simulation calculations for the behavior of buildings or building components. Further training to become a certified energy consultant/energy efficiency expert is a useful addition.

1.2. Module Recommendation

Modules of the subject-elective area totalling 18 CP (max. 24 CP)

- Bauphysik [M13-D3-M003] (6 CP)
- Grundlagen der Verfahrenstechnik für Bau- und Umweltingenieure [M13-K7-M002] (6 CP)
- Regenerative Energien [M13-C0-M021] (6 CP)

1.3. Further Information on the Job Profile

Modules such as ‘Physics’ [05-95-1001] (8 CP) and ‘Building Construction and Building Physics’ [13-D0-M001] (6 CP) from the compulsory engineering area as well as the modules mentioned here in the job description form the basis for the corresponding Master's job description. The Bachelor's degree only forms the basis for specialisation in the field of ‘Civil Engineer for Building Energetics’ and does not in itself provide sufficient qualification for the job description.

1.4. Advice on the Job Profile

Contact persons from the working group „Energie im Bauwesen“

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