



BSc Diploma II Task Description

1. *Building physics, building energy calculations*

- Boundary surfaces (wall, floor, roof etc.) heat and humidity transfer calculations. Representation is required on the partial pressure and temperature diagram.
- Proof that the boundary surfaces correspond to 7/2006. TNM requirements of "nearly zero energy buildings".
- The building energy control and energy certification according to the existing 7/2006. TNM regulation. The planned building must satisfy the requirement levels for a nearly-zero energy building! The calculation should be prepared manually based on the above referenced regulations. Computer processing is allowed for those students who have signature from one of the following subjects "Solar buildings computer design" or "Energy-conscious design methods". In the calculation the proposed building envelope and window structure should be specified with factors of heat transfer, the specific heat loss factor with simplified calculation method as well as the overall energy performance, which is carried out under the building energy classification.

2. *Drawing task*

- Plumbing and electrical facilities designation on the architectural plans, indicate in the plans (substation or boiler house, gas measurement space, ventilation machine room, air conditioning (cooling towers), positioning, electrical switches, transformer stations, mechanical shafts of the main equipment, ductwork, etc.), and an indication of the elements influencing the facade (chimneys, air outlet and inlet means, cooling equipment outdoor units, air handling units disposed outdoors, etc.).
- Facilities or spaces within the building have to ensure an unobstructed approach handicapped, disabled visitors and employees.

3. *Building services and electrical equipment technical description*

- Description of the planned building services, plumbing, lighting and electrical equipment approximated sizing, conceptual description of the key design and performance data.
- Determination of energy utilities and power demands.
- Description of the plumbing and electrical aspects of fire protection (fire water network, built-extinguishing systems, fire water tanks, smoke-free stairwell, heat and smoke ventilation, fire alarm system, inhibiting the spread of fire systems and their controls, etc.).
- Environmental aspects: steps taken to chimneys air protection, waste management and emission reduction.

The final signature of the acquisition is conditional on implementation of this program points!