

## **Assignment by the commission: Pedestrian bridge in an urban environment**

Make a well-thought-out concept for the design of a pedestrian bridge crossing a two-lane road that reflects your skills and interests in civil engineering. The concept should demonstrate your planning, technical, mathematical, personal and communication skills. Include at least one sketch to visually illustrate your concept. Your approaching the task will play a key role in the evaluation of this assignment, since you may do not yet have the skills to complete the task successfully.

Explain your concept in a short text and visualize your concept with simple hand drawn sketches to clarify proportions and scale. The whole concept should be 2 to 4 pages (A4 or letter) and max. 2,500 characters without spaces. Submit the concept as pdf including scanned sketches. AI-generated representations are not allowed.

**Hint:** Your concept should address at least the following four points:

1. **Planning and Design:** Select an area in your region and describe the current situation in your own words and outline possible improvements or changes. Consider which elements relating sustainability should be used in the concept.
2. **Technical Implementation:** Discuss how you can achieve a sustainable design for the bridge regarding material selection and environmental aspects. Describe the steps necessary to actually implement the planned concept, such as the coordination of construction work.
3. **Mathematical analysis:** Consider which basic mathematical considerations might play a role in the design of a bridge, such as cost calculations.
4. **Personal and communicative aspects:** Describe which personal qualities, such as creativity, organizational skills, or teamwork, are important for the successful implementation of your concept. Explain how you would present your ideas to gain support from potential stakeholders.