**Master’s Programme in Lighting Design**

**Questions for entrance examination**

1. Architectural style. Definition, main characteristics.
2. Design. Definition. Types of design.
3. Light environment. Definition.
4. Significance of light in human life.
5. Light as the element of contemporary visual culture.
6. Reconstruction, renovation, restoration. Definitions, examples.
7. Imagery. Definition.
8. Aesthetics. Definition, objectives, aesthetic function.
9. Colours theory in architecture.
10. Urban and natural landscapes.

11. Natural and artificial lighting.

12. Sources of radiation (thermal, Luminescence, gas-discharge, light-emitting diode, laser). Basic parameters and characteristics.

13. Optical processes in atoms and molecules. Width and contour of spectral lines.

14. Main properties of laser radiation.

15. Interaction between radiation and inverse medium. The main principles and conditions for optical radiation increasing.

16. Laser structural scheme. Laser as the amplifier with positive feedback.

17. Holography. Physical fundamentals of holography. Recording and reconstruction.

18. Radiation polarization. Malus's law.

19. Measurement of polarizing parameters radiation and optical phase difference.

20. Physical properties of inner photoelectric effect.

21. Double reflection mediums.

22. Lighting metrics and energy quantities.

23. Spectral density of energy quantities. Spectral parameters and characteristics.

24. Refractive index dispersion.

25. Beer–Lambert–Bouguer law.

26. Spectral sensitivity of a human eye.

27. Visual acuity and field of view.

28. Object’s visual angular size and visual information placement.

29. Adaptation time. Types of adaptation.

30. Colour perception depending on different levels of brightness.