Course title: Conceptual Design	**Neptun code: GEGET401-a**

Course coordinator: Agnes Takacs, associate professor, PhD

type and number of lesson: lecture/seminar/practical lesson/consultation 2 / week or 28 / semester

method of accountability: **colloquium**/practical mark/other

curriculum location of the subject: autumn/**spring**

pre-study conditions: -

The task and purpose of the subject:

The aim of the subject is to study the basic elements of design methodology. Learn its systems, and its special jargon.

Course description:

Historical Overview. The role and importance of design in the development of machines and products. Introduction of the mechanical engineering design schools. The general structure and elements of the design process. Task definition, search for solutions, evaluation procedures. Methods of principled (production, maintenance, recycling, material saving) design.

Required literature:

1. Pahl, G. – Beitz, W. – Feldhusen, J. – Grote, K. H.: Engineering Design, third edition, Springer Verlag, London, 2007.
2. Ulrich, K. T. – Eppinger, S. D. – Yang, M. C.: Product Design and Development, seventh edition, McGraw Hill Education, New York, 2020.
3. Vajna, S.: Integrated Design Engineering, Springer, Switzerland, 2020.

Recommended literature:

1. Cross, N.: Engineering Design methods, third edition, John Wiley and Sons, Chichester, 2000.Ulrich, K. T. – Eppinger, S. D. – Yang, M. C.: Product Design and Development, seventh edition, McGraw Hill Education, New York, 2020.
2. Allen, M.: Smart Thinking, second edition, Oxford University Press, 2004.