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| Subject name and code: Computer aided design | NEPTUN- code: KEX KEX | Hours: <i>lecture+practice+laboratory</i> 0+0+2 0+0+8 | Credit:4 Requirements: é |
| Lecturer responsible for the course: Dr. Antal Ürmös | Role: assistant professor | Prerequisites (with code): - | |
| Description of the subject matter: | | | |
| <p>The relationship between CAD/CAM systems, the grouping of these systems - their professional division. Historical development of PCB design. PCB manufacturing process. Presentation of electronic components. Description of the structure of the EAGLE program. Circuit diagram creation program part: grid setting, framing, finding and placing components, drawing wires and buses, changing the properties of circuit elements, error checking, practice. Circuit board design program: panel size setting, wiring, automatic wiring, error checking, drawing copper surfaces, creating production files.</p> | | | |
| Competences | | | |
| <ul style="list-style-type: none"> - Knows the materials used in the field of mechatronics, their production, characteristics and conditions of their use. - Knows mechatronic, electromechanical, IT, motion control systems, sensors and actuators, as well as their structural units and their basic operation from the viewpoint of a mechanical, electrotechnical, and control engineering perspectives as well. - He/She knows the basic mechatronic design principles and methods, including the basics of mechanical engineering and fine mechanical constructions, as well as the design of analog and digital circuits. - He/She is able to interpret and characterize the construction and operation of the structural units and elements of mechatronic systems, the design and connection of the applied system elements from a mechanical, electrotechnical, and control engineering approach - Able to diagnose malfunctions and select the appropriate troubleshooting procedure from a mechanical, electrical, and control engineering approach. - It strives to play a connecting and integrating role between the fields of mechanical engineering, IT, electrical engineering and life sciences. - He/She strives to ensure that his self-education is continuous and consistent with his professional goals in the fields of mechatronics, especially applied mechanical, electrical and IT subfields and other fields related to his work. | | | |
| References: | | | |
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