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| Óbuda University Bánki Donát Faculty of Mechanical and Safety Engineering | | Insitute of Mechatronics and Vehicle Engineering | | | |
| Subject title and code: PLC knowledges, BMXPLE5BNE | | | Credits: 4 | | |
| Full-time study | | 2024/25 ac. 1 semester | year | | |
| The course is available at: | | mechatronical engineering | | | |
| Supervised by: István Nagy | | Instructors: Ákos Jányoki | | | |
| Prerequisite (neptun code): | | Electrical Engineering | | | |
| Weekly number of lessons | | | | | |
| Lecture: 1 | Group seminar: 0 | Lab: 2 | Consultation: see, consultation's time | | |
| Way of assessment: Exam | | (Written) | | | |
| Online consultation (in case it's required): ... (BBB link) | | | | | |
| Educational goal: | <i>The aim of education is to give the students general information about PLC structure, operation and PLC programming. In the exercises the students will program through a Mitsubishi –FX trainer simulation's model, and TIA portal.</i> | | | | |
| Schedule | | | | | |
| Education week | Topics | | | | |
| 1. | PLC main components and generations | | | | |
| 2. | | | | | |
| 3. | PLC processors- structures, bit/byte/modular, organized PLCs; Counters/timers/merkers : HW ad SW realizations; | | | | |
| 4. | | | | | |
| 5. | PLC I/O modules; PLC OS structure and basic SW components (modules) of op. system; | | | | |
| 6. | | | | | |
| 7. | PLC programming standards and programming languages: IL, FBD, SFC, LD, GraphCet. | | | | |
| 8. | | | | | |
| 9. | PLC communications: networks, BUS systems, access modes, master-slave connections (CSMA/CD/CA) | | | | |
| 10. | | | | | |
| 11. | Rector's Holyday | | | | |
| 12. | | | | | |
| 13. | Final pre-exam, theory test paper | | | | |
| 14. | | | | | |
| Mid-semester requirements | | | | | |
| Test | | Assignment to be submitted | | Lab measurement | |
| amount | dates | amount | deadlines | amount | dates |
| 1 | 13th week | | | | |
| <i>According to the Study and Examination regulations of Óbuda University attendance of group seminars and lab exercises are mandatory.</i> | | | | | |
| Other requirements for participation in sessions not covered by the regulations and restrictions on substitutions: The lectures are mandatory, max. 30% absence is allowed. | | | | | |
| Test | | Assignment to be submitted | | Lab measurement | |

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|---------------------------------------|--|---------------------------------------|--|---------------------------------------|--|
| maximum points available 100points | minimum score required to pass /test 50points | maximum points available 100points | minimum score required to pass / assignment ...points | maximum points available ...points | minimum score required to pass /lab ...points |
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| Total number of points achievable in semester: ...points | | | | |
| Grading thresholds | satisfactory 50-65% choose | average 66-79% choose | good 80-89% choose | excellent >90 % choose |
| Other evaluation criteria: if the TOTAL (practice+theory) average of evaluation is over 60% the recommended mark is offered. | | | | |
| Receive a signature denied entry: over max. absence, | | | | |
| Required references: http://siva.banki.hu/jegyzetek/mechatronikai_alapismeretek/English_Mechatr/PLC_Control/ | | | | |
| Recommended references: see, moddle | | | | |
| Quality assurance methods of the subject: | | | | |

Things, that are not included, can be found within the regulations of Óbuda University.