Project work form –
Cybersecurity in automated industry, especially in PLC and IoT technology

Project Title: Cybersecurity in automated industry, especially in PLC and IoT technology	**Institute ID: MEI-077**

Aims: The automated industry (Industry 4.0) is increasingly exploiting the potential of IoT and "remote" techniques. However, these are giving more and more possibilities to "hackers" to crack the industrial communication's systems. Basically, systems become more vulnerable. This project work should be a study summarizing the tools adopted by industry 4.0 and communication devices used in the automotive industry against cyber-attacks**. Minimum expected results of the study: analysis of the industrial cyber security provisions and practical measures (advantages, disadvantages, possible innovations) of at least three known PLC manufacturers (eg. selects from: Siemens, Omron, Mitsubishi, Schneider, Festo), then comparison of the industrial cyber security provisions of the three companies and evaluation.** *(3 companies can be 3 applicants for the project, 4 companies, 5 companies: 4-5 applicants!)*

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Group size (min./max.):	3-5 persons *Under the minimal nr. of participants the project will not be started.*
Material requirements available:	Internet and practical research (state of art) in the field of industrial cyber security, a recommended link to siemens (in hungarian): http://gyartastrend.hu/muveltmernok/cikk/kiberbiztonsagi_kihivasok_a_gyartoszektorban?utm_source=newsletter&utm_medium=muvelt_mernok_hirlevel&utm_campaign=29415
Material requirements pending purchase:	—
Usable financial frame (max.):	—
Required prerquisities:	Exam from ***„PLC knowledge"*** subject,

Expected schedule:	weeks 1-2.	Formation of a project team, distribution of tasks within the project group. Preparation of a semester time and work plan, schedule. seeking for similar studies. Literature research, possible solutions of problems. Creating the working plan, scheduling the personal works. Responsibilities, writing.
	weeks 3-4.	- **Writing individual studies** - (studies should be formally similar to thesis)
	weeks 5-6.	- **Writing individual studies** - (studies should be formally similar to thesis)
	weeks 7-9.	- **Writing individual studies** - (studies should be formally similar to thesis)
	weeks 10-13.	**Completition** and evaluation of a final (summarized) study from both a cyber-security and economic point (what the firm can save if applying the security provisions, and what can lose if not) of view.

	weeks 14 -15.	Presentation and evaluation, work logs and documentation submitting.

REMARK:

- The project can apply only **students of Mechatronics**
- The „project work" is using the studied knowledge and not teaching the required subjects.

Date of application / number of applicants	***Date of finishing the project / result***