

Project Acronym: MEDIS

Project Title: A Methodology for the Formation of Highly Qualified Engineers at Masters Level in the Design and Development of Advanced Industrial Informatics Systems

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Context

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WP Leader	TU Sofia
Task 5.1	Implementation of AIISM - Pilot implementation
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History

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1 Executive summary

This deliverable presents the summary of the reports on the pilot implementation of AIISM at the following partner universities:

- Faculty of Mechanics and Mathematics, Department of Informational Systems that is responsible for MEDIS Project in al-Farabi Kazakh National University
- Faculty of Applied Mathematics, Department of Computer Systems Software, the National Technical University of Ukraine “Kyiv Polytechnic Institute”
- Odessa National Polytechnic University (ONPU).

2 Pilot implementation of AIISM Courses

Partnering universities implemented in their programmes a number of courses, developed under the MEDIS project.

All courses were run under Master programmes.

The Table 1 a, b, c presents the academic structure of the courses by partner

- al-Farabi Kazakh National University

Table 1a - KazNU.

Subject	Semester	ECTS Credits	Academic Hours per Semester					Academic Hours per Week		
			Total	Lectures	Seminars	Laboratory Lessons	Independent Work	1 Semester	2 Semester	3 Semester
Industrial Computers	1	5	105	15	15	30	45	4		
Industrial controllers and simulators	1	5	105	15	15	30	45	4		
Microcontroller based systems for controlling industrial processes	1	5	105	15	15	30	45	4		
Mobile and Cloud Computing	3	5	105	15	15	30	45			4
Industrial Networks and Fieldbuses	3	5	105	15	15	30	45			4

The 3 courses: Industrial computers, Industrial controllers and simulators, Microcontroller based systems for controlling industrial processes were implemented as a Compulsory Professional Modules. The courses Mobile and Cloud Computing and Industrial Networks and Fieldbuses as a Modules of Individual Educational Trajectories “Design and development of the advanced industrial information systems (TEMPUS MEDIS)”.

- Faculty of Applied Mathematics, Department of Computer Systems Software, the National Technical University of Ukraine “Kyiv Polytechnic Institute”

Table 1b - KPI

Subject	Semester	ECTS Credits	Academic Hours per Semester				Academic Hours per Week		
			Total	Lectures & Seminars	Laboratory Lessons	Independent Work	1 Semester	2 Semester	3 Semester
Industrial controllers and simulators programming	2	3	90	36	18	36		3	
Industrial computers programming	2	3	90	36	18	36		3	
Industrial networks programming	2	3	90	36	18	36		3	
Microcomputers programming	2	3	90	36	18	36		3	
Mobile and cloud computing	2	3	90	36	18	36		3	

- Odessa National Polytechnic University (ONPU).

Table 1b - KPI

Subject	Semester	ECTS Credits	Academic Hours per Semester						Contact Hours per Week	
			Total	Contact Hours	Lectures	Laboratory Lessons	Seminars	Unsupervised Work	1 Semester	2 Semester
Programming of Industrial Computers	1	4	120	58	30	14	14	62	4	

Programming of Microcomputers	1	5	150	58	30	14	14	92	4	
Programming of Controllers and Simulators	2	6	180	52	30	14	8	128		3,5
Mobile and Cloud Computing	2	3,5	105	36	16	14	6	69		2,5
Industrial Networks and Fieldbuses	2	3	90	28	14	14	-	62		2

3 Students participation

For the presented partners the number of student participated AIISM courses is as follows:

- Faculty of Mechanics and Mathematics, Department of Informational Systems that is responsible for MEDIS Project in al-Farabi Kazakh National University

In general - 51 students. Here is very important to report that courses were presented on different languages – Kazakh, Russian and English with the appropriate adaptation.

Syllabuses are presented as additional documents.

- Faculty of Applied Mathematics, Department of Computer Systems Software, the National Technical University of Ukraine “Kyiv Polytechnic Institute”

Courses were attended by different students. In general 98 students participated in the courses.

- Odessa National Polytechnic University (ONPU)

In general - 44 students attended first two courses.

4 Students Assessment

Presented partners had prepared assessment analyses with different structure. Here is presented generalized table for each of them proposing possibilities for comparisons.

- Faculty of Mechanics and Mathematics, Department of Informational Systems that is responsible for MEDIS Project in al-Farabi Kazakh National University

Letter Grade	Points percentage (%)	Results (%)	Conventional Grade
A	95-100	58.18	“Excellent”
A-	90-94	41.82	

B+	85-89	-	Good
B	80-84	-	
B-	75-79	-	
C+	70-74	-	“Satisfactorily”
C	65-69	-	
C-	60-64	-	
D+	55-59	-	
D	50-54	-	
F	0-49	-	Failure
I	–	-	Incomplete
W	–	-	Withdrawal
AW	–	-	Academic Withdrawal
AU	–	-	Audit
P/NP	65-100/0-64	65-100/0-64	Pass / No Pass

- Faculty of Applied Mathematics, Department of Computer Systems Software, the National Technical University of Ukraine “Kyiv Polytechnic Institute”

Letter Grade	Points percentage (%)	Results (%)	Conventional Grade
A	95-100	33.33	“Excellent”
A-	90-94	13.54	
B+	85-89	18.75	Good
B	80-84	11.46	
B-	75-79	13.54	
C+	70-74	3.13	“Satisfactorily”
C	65-69	2.08	
C-	60-64	4.17	
D+	55-59	0	
D	50-54	0	
F	0-49	0	Failure
I	–	-	Incomplete
W	–	-	Withdrawal
AW	–	-	Academic Withdrawal
AU	–	-	Audit
P/NP	65-100/0-64	65-100/0-64	Pass / No Pass

- Odessa National Polytechnic University (ONPU)

Letter Grade	Points percentage (%)	Results (%)	Conventional Grade
A	95-100	17.05	“Excellent”
A-	90-94	15.34	
B+	85-89	6.25	

B	80-84	14.20	Good
B-	75-79	11.93	
C+	70-74	6.82	“Satisfactorily”
C	65-69	3.41	
C-	60-64	25.00	
D+	55-59	0.00	
D	50-54	0.00	
F	0-49	0.00	Failure
I	–	-	Incomplete
W	–	-	Withdrawal
AW	–	-	Academic Withdrawal
AU	–	-	Audit
P/NP	65-100/0-64	65-100/0-64	Pass / No Pass

Detailed analysis is uploaded on the project site – “*del-5-1 detailed total.xlsx*”

5 Supporting documents

All partners presented a number of primary documents – curriculums, syllabuses, assessment sheets. All primary documents are on the project site – WP5 folder.

6 Conclusion

According to the presented material we can conclude that the implementation of the courses provided by the EU partners is successful.