**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

| WP 5         | Implementation AIISM                           |
|--------------|--|
| WPLeader     | TUS  |
| Task 5.1     | Implementation of AIISM - Pilot implementation |
| Task Leader  | TUS  |
| Dependencies |  |

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# History

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#### 1 Executive summary

This deliverable presents the report on the pilot implementation of AIISM at the Faculty of Applied Mathematics, Department of Computer Systems Software that is responsible for MEDIS Project in the National Technical University of Ukraine "Kyiv Polytechnic Institute".

# 2 Pilot implementation of AIISM Courses

The pilot implementation of AIISM is being conducted at the Faculty of Applied Mathematics, Department of Computer Systems Software for students of specialty "Software Engineering". The total number of students is 96.

The pilot implementation of the WP5 started on February 2016 (II semester). AIISM courses include:

- 1. Industrial controllers and simulators programming
- 2. Industrial computers programming
- 3. Industrial networks programming
- 4. Microcomputers programming
- 5. Mobile and cloud computing.

The modules were integrated into the Work Curricula for 2015/2016 as the alternative modules by student's choice with the distribution of academic hours shown in Table 1.

Table 1

|   | Semester | ECTS Credits | Academic Hours per<br>Semester |                        |                       |                     | Academic<br>Hours per<br>Week |            |            |
|---|----------|--------------|--------------------------------|------------------------|-----------------------|---------------------|-------------------------------|------------|------------|
| Subject   |          |              | Total                          | Lectures &<br>Seminars | Laboratory<br>Lessons | Independent<br>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          |            |

Module "Industrial controllers and simulators programming" was conducted by Yurii

Bukhtiiarov. The group consisted of 22 students. All students have successfully passed the test conducted as the final examination at the end of the semester. The distribution of the grades is the following: 64% "A", 23% "B", 9% "C", 4% "E".

Module "Industrial computers programming" was conducted by Mykola Onai. The group consisted of 22 students. All students have successfully passed the test conducted as the final examination at the end of the semester. The distribution of the grades is the following: 41% "A", 50% "B", 9% "C".

Module "Industrial networks programming" was conducted by Mykola Onai. The group consisted of 21 students. All students have successfully passed the test conducted as the final examination at the end of the semester. The distribution of the grades is the following: 14% "A", 48% "B", 38% "C".

Module "Microcomputers programming" was conducted by Dr. Yevgeniya Sulema. The group consisted of 14 students. All students have successfully passed the test conducted as the final examination at the end of the semester. The distribution of the grades is the following: 21% "A", 36% "B", 29% "C", 7% "D", 7% "E".

Module "Mobile and cloud computing" was conducted by Dr. Yevgeniya Sulema. The group consisted of 17 students. All students have successfully passed the test conducted as the final examination at the end of the semester. The distribution of the grades is the following: 18% "A", 47% "C", 23% "D", 12% "E".

### 3 Supporting documents

Application 1 – Assessment of students on Module "Industrial controllers and simulators programming".

Application 2 – Assessment of students on Module "Industrial computers programming".

Application 3 – Assessment of students on Module "Industrial networks programming".

Application 4 – Assessment of students on Module "Microcomputers programming".

Application 5 – Assessment of students on Module "Mobile and cloud computing".

#### 4 Conclusion

AIISM courses were successfully implemented during 2015/2016 academic year for the speciality "Software Engineering" at the Faculty of Applied Mathematics of the National Technical University of Ukraine "Kyiv Polytechnic Institute".