**SYLLABUS**

1.  Data about the program of study

| 1.1 | Institution | The Technical University of Cluj-Napoca |
|---|---|---|
| 1.2 | Faculty | Faculty of Automation and Computers |
| 1.3 | Department | Automation |
| 1.4 | Field of study | System Engineering |
| 1.5 | Cycle of study | Bachelor of Science |
| 1.6 | Program of study/Qualification | Automation and Applied Informatics/ |
| 1.7 | Form of education | Full time |
| 1.8 | Subject code | 58.00 |

2.  **Data about the subject**

| 2.1 | Subject name | Graduation project | | | | |
|---|---|---|---|---|---|---|
| 2.2 | Subject area | Graduation project | | | | |
| 2.3 | Course responsible/lecturer | Diploma supervisor | | | | |
| 2.4 | Teachers in charge of seminars | | | | | |
| 2.5 Year of study | 4 | 2.6 Semester | 2 | 2.7 Assessment | A/R | 2.8 Subject category | DS/DI |

3.  **Estimated total time**

| 3.1 Number of hours per week | 4 | 3.2 of which, course: | 0 | 3.3 applications: | 4 |
|---|---|---|---|---|---|
| 3.4 Total hours in the curriculum | 100 | 3.5 of which, course: | 0 | 3.6 applications: | 56 |
| Individual **study** | | | | | hours |
| Manual, lecture material and notes, bibliography | | | | | 24 |
| Supplementary study in the library, online and in the field | | | | | 10 |
| Preparation for seminars/laboratory works, homework, reports, portfolios, essays | | | | | 0 |
| Tutoring | | | | | 10 |
| **Exams** and tests | | | | | 0 |
| Other activities | | | | | 0 |

| 3.7 | Total hours of individual study | 44 |
|---|---|---|
| 3.8 | Total hours per semester | 100 |
| 3.9 | Number of credit points | 4 |

4.  **Pre-requisites (where appropriate)**

| 4.1 | Curriculum | Working in the diploma field |
|---|---|---|
| 4.2 | Competence | Research and development |

5.  **Requirements (where appropriate)**

| 5.1 | For the course | N/A |
|---|---|---|
| 5.2 | For the applications | The presence is mandatory. |

**6. Specific competences**

| | |
|---|---|
| Professional competences | C4<br>Design, implementation, testing, operation and maintenance of systems with generic and dedicated equipments, including computer networks for control engineering and applied informatics.<br>C5<br>Development and implementation of automatic control structures and algorithms based on project management principles, software environments and technologies based on microcontrollers, signal processors, programmable logic controllers and embedded systems.<br>C6<br>Apply ing the knowledge related to law, economy marketing, business, and quality assurance in business and managerial contexts. |
| Cross competences | CT1<br>Application, in the context of law compliance, of the intellectual property rights (including technology transfer), product certification methodology, principles, norms and values of professional ethics code for the own rigorous, effective and accountable work strategy.<br>CT2<br> Identifying the roles and the responsibilities in a multicompetent team, taking decisions and delegating tasks by applying professional networking techniques and effective teamwork techniques.<br>CT3<br>Identify opportunities for continuing professional development and effective utilization of learning resources and techniques for own professional development. |

**7. Discipline objectives (as results from the *key competences gained*)**

| 7.1 | General objective | • practical application of theoretical knowledge acquired<br>• working in R&D |
|---|---|---|
| 7.2 | Specific objectives | • increasing practical skills<br>• developing research capacity |

**8. Contents**

| 8.2. Applications/Seminars | Teaching methods | Notes |
|---|---|---|

| 1. | Research and design activities | supervisory and guidance by the diploma supervisor | |
|---|---|---|---|
| | | | |

9. Bridging course contents with the expectations of the representatives of the comm unity, professional associations and employers in the field

| N/A |
|---|

10. Evaluation

| Activity type | 10.1 Assessment criteria | 10.2 Assessment methods | 0'3 Weight in the final grade |
|---|---|---|---|
| Course | N/A | N/A | 0% |
| Applications | Practice notebook | Practical exam | 100% |
| 10.4 Minimum standard of performance | | | |
| Supervisor permission  practical exam grade A | | | |

Date of filling in                                         Teachers in charge of seminars

| Date of approval by the Department Board ........       Head of Departament<br>Prof.dr.ing. Honoriu VALEAN<br><br>_____<br><br><br><br>Date of approval by the Faculty Council ...............       Dean<br>Prof.dr.ing. Mihaela Dinsoreanu<br><br>_____ |
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