

Content

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|--|----------|--------|----------|-----|--------|------|
| INF402 | Introduction to the Internet of Things | 7 | 2 | 0 | 2 | 3 | 3 |

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| Prerequisites | |
| Admission Requirements | |

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| Language of Instruction | French |
| Course Type | Compulsory |
| Course Level | Bachelor Degree |
| Objective | <ol style="list-style-type: none">1. Managing and analyzing data produced by IoT systems2. architecture of embedded processors and how to design and build them3. design and optimization of wireless communication systems using machine learning techniques4. modern cryptography applications5. signal processing and computer vision |
| Content | Fundamentals of Embedded IoT Systems Embedded Computing Methods IoT Networks Research Methods and Project Preparation IoT Device Management Secure Hardware and Embedded Devices Embedded Processors Sensor Fusion Technique IoT Applications in Industry Sensor Based Health Applications Smart Agriculture Applications Applied Internet of Things - Internet of Vehicles and Applications Embedded Machine Learning Algorithms |
| References | |

Theory Topics

| Week | Weekly Contents |
|------|--|
| 1 | Fundamentals of Embedded IoT Systems |
| 2 | Embedded Computing Methods |
| 3 | IoT Networks |
| 4 | Research Methods and Project Preparation |
| 5 | IoT Device Management |
| 6 | Secure Hardware and Embedded Devices |
| 7 | Embedded Processors |
| 8 | Midterm |
| 9 | Sensor Fusion Technique |
| 10 | IoT Applications in Industry |
| 11 | Sensor Based Health Applications |
| 12 | Smart Agriculture Applications |

| Week | Weekly Contents |
|------|--|
| 13 | Applied Internet of Things - Internet of Vehicles and Applications |
| 14 | Embedded Machine Learning Algorithms |