



SUBJECT: Machine-2-Machine Communications

MASTER DEGREE: MASTER IN CONNECTED INDUSTRY 4.0

ECTS: 3

QUARTER: 1

TIMETABLE FOR THE SUBJECT

| WEEK | SESSION | DESCRIPTION OF EACH SESSION | GROUP (X mark) | | Indicate if a different lecture room is needed (computer, audiovisual, etc.) | HOMEWORK PER WEEK | | |
|------|---------|---|----------------|---|--|---|-----------------|-----------------------|
| | | | 1 | 2 | | DESCRIPTION | ATTENDING HOURS | HOMEWORK Max. 7H/WEEK |
| 1 | 1 | Introduction to the protocol architecture | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 1 | 2 | Introduction to the laboratory (Node-RED intro) | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |
| 2 | 3 | Application layer protocols: HTTP-REST | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 2 | 4 | HTTP Lab | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |



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|---|----|---|---|--|------------|---|-----|-----|
| 3 | 5 | Application layer protocols: HTTP-REST | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 3 | 6 | Application layer protocols: CoAP | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 3 | 7 | (Extra lab) CoAP lab | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |
| 4 | 8 | Application layer protocols: MQTT / MQTT-SN | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 4 | 9 | Discovery layer: DNS-SD / mDNS, CoAP Resource Discovery | X | | | Read the material and the references provided | 1,5 | 3,5 |
| 4 | 10 | (Extra lab) MQTT lab | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |
| 5 | 11 | Machine-machine communications and Cloud | X | | | Read the material and the references provided | 1,5 | 3,5 |



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| 5 | 12 | Lab (Node-RED) | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |
| 6 | 13 | Case study | X | | | Review the concepts seen throughout the course | 1,5 | 3,5 |
| 6 | 14 | Lab (Node-RED) | X | | laboratory | Read the statement of the practical assignment and review what has been explained in theory | 1,5 | 3,5 |
| 7 | 15 | Case study | X | | | Review the concepts seen throughout the course | 1,5 | 3,5 |
| 7 | 16 | Exam | X | | | Study the concepts seen throughout the course | | |
| TOTAL HOURS | | | | | | | 22,5 | 52,5 |