


SCIENCES, INGÉNIERIE ET TECHNOLOGIES

# MASTER ELECTRONIC SYSTEMS FOR EMBEDDED AND COMMUNICATING APPLICATIONS M2

MASTER ELECTRONIC SYSTEMS FOR EMBEDDED AND COMMUNICATING APPLICATIONS

 ECTS  
60 credits

Presentation

Organisation

# Program

|  | Nature | CM | TD | TP | Crédits           |
|--|--------|----|----|----|-------------------|
| <b>M2 Electronic Systems for Embedded &amp; Communicating Appli.</b> | UE     |    |    |    | <b>60 credits</b> |
| M2 ESECA Semestre 10   | UE     |    |    |    | 30 credits        |
| M2 ESECA Soutenance PFE  | UE     |    |    |    | 30 credits        |
| M2 ESECA Circuits Intégrés pour Systèmes Embarqués Sem. 9            | UE     |    |    |    | 30 credits        |
| Sciences Humaines et Sociales  | UE     |    |    |    | 2 credits         |
| Soutenance de stage  | UE     |    |    |    |                   |
| Langue M2 ESECA (option ICES et SIP) semestre 9                      | UE     |    |    |    |                   |
| Relations entreprises  | UE     |    |    |    |                   |
| Métiers et fonctions de l'Ingénieur dans l'industrie                 | UE     |    |    |    |                   |
| Architecture des systèmes mixtes                                     | UE     |    |    |    | 5 credits         |
| VHDLAMS  | UE     |    |    |    |                   |
| IoT  | UE     |    |    |    |                   |
| Architecture, mise en oeuvre et fiabilité des systèmes embar         | UE     |    |    |    |                   |
| Projet plate forme mobile autonome                                   | UE     |    |    |    |                   |
| Systèmes optoélectroniques   | UE     |    |    |    | 4 credits         |
| Composants et Circuits optoélectroniques en HF                       | UE     |    |    |    |                   |
| Projet liaison optique embarquée                                     | UE     |    |    |    |                   |
| Capteurs laser et à fibre optique                                    | UE     |    |    |    |                   |
| Circuits intégrés  | UE     |    |    |    | 13 credits        |
| Dugital Synthesis  | UE     |    |    |    |                   |
| Silicon Technology   | UE     |    |    |    |                   |
| SILVACO CAD Technology   | UE     |    |    |    |                   |
| Introduction to Cadence CAD  | UE     |    |    |    |                   |
| ADC and DAC  | UE     |    |    |    |                   |
| System on Chip   | UE     |    |    |    |                   |
| Conception VHDL  | UE     |    |    |    |                   |
| Choix option Analogique ou Numérique                                 | UE     |    |    |    |                   |
| Option Analogique  | UE     |    |    |    |                   |
| Analog IC  | UE     |    |    |    |                   |
| Instrumentation Chain Integration                                    | UE     |    |    |    |                   |
| Analog ASIC Project  | UE     |    |    |    |                   |
| Option Numérique   | UE     |    |    |    |                   |
| Signal Processing ASIC Project                                       | UE     |    |    |    |                   |
| Systèmes embarqués   | UE     |    |    |    | 6 credits         |
| DC/DC Energy Converters  | UE     |    |    |    |                   |
| Drivers  | UE     |    |    |    |                   |
| Noise  | UE     |    |    |    |                   |
| Procédés MEMS  | UE     |    |    |    |                   |
| Projet SIP   | UE     |    |    |    |                   |
| Compatibilité électromagnétique des circuits intégrés                | UE     |    |    |    |                   |
| M2 ESECA Micro-Wave Engineering Semestre 9                           | UE     |    |    |    | 30 credits        |

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| Equipements                                     | UE | 6 credits  |
| RF equipment                                    | UE |            |
| PayLoad Design                                  | UE |            |
| MEMs  | UE |            |
| Optical and Microwaves Measurements             | UE |            |
| Applied physics 2                               | UE | 3 credits  |
| Silicon Technology                              | UE |            |
| Active Components                               | UE |            |
| Plasmas Physics                                 | UE |            |
| Optoelectronics MicroWaves                      | UE |            |
| Projet Recherche                                | UE | 7 credits  |
| Enseignements Communs                           | UE | 6 credits  |
| Conferences for Microwaves                      | UE |            |
| Engineering Trade Conferences                   | UE |            |
| Engineering Trade Conferences                   | UE |            |
| English   | UE |            |
| Project management                              | UE |            |
| Radar et Systèmes                               | UE | 3 credits  |
| Signal Radar                                    | UE |            |
| Radar Equipement                                | UE |            |
| Communicating Networks                          | UE |            |
| Physique Appliquée 1                            | UE | 5 credits  |
| Multi Physics Modelling - COMSOL Software       | UE |            |
| EMC   | UE |            |
| Network Antennas                                | UE |            |
| Diffraction Theory                              | UE |            |
| Real Propagation                                | UE |            |
| M2 ESECA Signal and Image Processing Semestre 9 | UE | 30 credits |
| UE Modélisation et Représentation des signaux   | UE | 8 credits  |
| Signals Representation and Analysis II          | UE |            |
| Signals Representation and Analysis I           | UE |            |
| Source coding - Application to audio            | UE |            |
| Estimation - Detection                          | UE |            |
| Forms Classification and Recognition            | UE |            |
| UE Traitement des signaux numériques            | UE | 4 credits  |
| Digital Signal Processing II                    | UE |            |
| DSP   | UE |            |
| UE Technique avancée du traitement du signal    | UE | 6 credits  |
| Antennas Processing                             | UE |            |
| Adaptative Processing                           | UE |            |
| Inverse Problems                                | UE |            |
| Projet de traitement avancé                     | UE |            |
| UE Télémedecine et Télédetection                | UE | 10 credits |
| Medical imaging                                 | UE |            |
| Remote sensing                                  | UE |            |
| Radar signal                                    | UE |            |

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| Projet d'imagerie biomédicale                        | UE |           |
| Projet de télédétection                              | UE |           |
| Sciences Humaines et Sociales                        | UE | 2 credits |
| Soutenance de stage                                  | UE |           |
| Langue M2 ESECA (option ICES et SIP) semestre 9      | UE |           |
| Relations entreprises                                | UE |           |
| Métiers et fonctions de l'Ingénieur dans l'industrie | UE |           |