**ANNEXURE 1 : MASTER - INFORMATION SYSTEMS- ESIGELEC**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SEMESTER** | **CREDITS** | **MODULES** & COURSES | **HOURS / WEIGHT** | |
|  | **11** | **Computer Science 1** |  |  |
|  |  | Fundamentals of Data Communication and Networking | 24 | 2 |
| **1st Semester** |  | Introduction to Object-Oriented Programming with Java | 40 | 4 |
|  |  | Database Management Systems | 24 | 2 |
| ***From September 2017*** |  | Fundamentals of Web-Centric Development | 30 | 3 |
| ***To January 2018*** | **7** | **Business Analysis** |  |  |
|  |  | Econometrics, Probabilities and Statistics | 30 | 2 |
|  |  | General Accounting | 20 | 2 |
|  |  | Decision Making in Finance: Optimization | 30 | 3 |
|  | **6** | **Project** |  |  |
|  |  | Minor Project | 60 | 6 |
|  | **6** | **Foreign Language** |  |  |
|  |  | French as a Foreign Language | 60 | 6 |
| **2nd Semester**  ***From***  ***February 2018***  ***To***  ***July 2018*** | **10** | **Computer Science 2** |  |  |
|  | Object-Oriented Programming with JAVA EE | 40 | 4 |
|  | Enterprise Network | 20 | 3 |
|  | Introduction to .NET Framework (C#) | 24 | 3 |
| **10** | **Business Intelligence** |  |  |
|  | Introduction to Business Intelligence | 20 | 2 |
|  | PL/SQL Programming for Databases | 20 | 2 |
|  | Introduction to a BI Tool | 20 | 2 |
|  | Data Mining | 20 | 2 |
|  | Data Driven Applications avec R | 20 | 2 |
| **6** | **Project Management** |  |  |
|  | Cross Cultural Awareness | 24 | 2 |
|  | Team Working | 12 | 1 |
|  | Oral Communication | 14 | 1 |
|  | Analysis and Design with UML | 32 | 2 |
| **4** | **Foreign Language** |  |  |
|  | French as a Foreign Language | 60 | 4 |
| **3rd Semester**  ***From***    ***September 2018***  ***To***  ***January 2019*** | **14** | **Information Systems** |  |  |
|  | Cloud Computing | 20 | 2 |
|  | Development of Mobile Application | 40 | 4 |
|  | Information Systems and Organizations | 30 | 3 |
|  | Information System Security | 30 | 3 |
|  | Webcentric Development and ASP.NET | 20 | 2 |
| **5** | **Business Management** |  |  |
|  | Management Control and Business | 32 | 2 |
|  | Marketing in a Technical Environment | 32 | 2 |
|  | Intellectual Property and Internet Protection Laws | 12 | 1 |
| **7** | **Project Development and Management** |  |  |
|  | Project Management | 26 | 2 |
|  | R&D Projects | 80 | 5 |
| **4** | **Foreign Language** |  |  |
|  | French as a Foreign Language | 60 | 4 |
| **4th Semester**  ***From February 2019 onwards*** | **30** | INTERNSHIP of 4 to 6 months |  |  |

**SYLLABUS 2017/2019**

(Some minor changes can happen in the syllabus till its official and final validation on 01/07/2017)

**ANNEXURE 2 : MASTER – ELECTRONIC EMBEDDED SYSTEMS- ESIGELEC**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SEMESTER** | **CREDITS** | **MODULES** & COURSES | **HOURS / WEIGHT** | |
|  | **5** | **Systems Control** |  |  |
|  |  | Automation | 20 h | 2 |
| **1st Semester** |  | Matlab Project | 30 h | 3 |
|  | **8** | **Computer Science** |  |  |
| ***From September 2017*** |  | Object-Orienting Programming with Java | 25 h | 3 |
| ***To January 2018*** |  | Introduction to C Programming | 30 h | 3 |
|  |  | Analysis and Design with UML | 32 h | 2 |
| ***&*** | **9** | **Electronics** |  |  |
| ***GENERAL*** |  | Fundamentals of Electronics | 30 h | 3 |
|  |  | Binary Logic and Digital Functions | 30 h | 3 |
|  |  | Digital Electronic Project | 30 h | 3 |
| ***KNOWLEDGE*** | **8** | **Communication and Language 1** |  |  |
|  |  | French Language as a Foreign Language | 60 h | 6 |
|  |  | Bibliographical Study | 12 h | 2 |
| **2nd Semester**  ***From***  ***February 2018***  ***To***  ***July 2018*** | **8** | **Digital Systems** |  |  |
|  | Microprocessors | 60 h | 4 |
|  | VHDL and Logic Synthesis | 30 h | 2 |
|  | Communication Busses | 30 h | 2 |
| **6** | **Embedded Operating systems** |  |  |
|  | Real Time Operating Systems | 30 h | 3 |
|  | Embedded Linux | 30 h | 3 |
| **6** | **Embedded Software** |  |  |
|  | Embedded C programming | 30 h | 3 |
|  | Embedded Java | 30 h | 3 |
| **6** | **Instrumentation** |  |  |
|  | Virtual Instrumentation | 30 h | 3 |
|  | Specific Instrumentation | 30 h | 3 |
| **4** | **Communication and Language 2** |  |  |
|  | rench Language as a Foreign Language | 60 h | 4 |
| **3rd Semester**  ***From***    ***September 2018***  ***To***  ***January 2019*** | **6** | **Embedded Communication** |  |  |
|  | MtoM Communication | 30 h | 4 |
|  | Smart Sensors | 20 h | 2 |
| **9** | **Embedded Electronics** |  |  |
|  | System on Chip | 20 h | 3 |
|  | DSP Processors | 20 h | 3 |
|  | Safety Systems | 20 h | 3 |
| **8** | **Management and Foreign Language** |  |  |
|  | Cross Cultural Awareness/Working in a Team | 36 h | 3 |
|  | Oral Communication and Coaching | 14 h | 1 |
|  | French Language as a Foreign Language | 60 h | 4 |
| **7** | **Project Development and Management** |  |  |
|  | Project Management | 26 h | 2 |
|  | Research and Development Projects | 80 h | 5 |
| **4th Semester**  ***From February 2019 onwards*** | **30** | MSTINT: INTERNSHIP of 4 to 6 months | | |

**SYLLABUS 2017/2019**