

**TABLE 2: COURSE DISTRIBUTION PER SEMESTER ([Doc. 500.1.1](#))**

| A/A                | Course type | Course title                     | Course code | Periods/ week | Period duration | Number of weeks/ semester | Total periods/ semester | Number of ECTS |
|--------------------|-------------|----------------------------------|-------------|---------------|-----------------|---------------------------|-------------------------|----------------|
| <b>A' Semester</b> |             |                                  |             |               |                 |                           |                         |                |
| 1.                 | Compulsory  | Introduction to Computer Science | CSC 101     | 5             | 50 min          | 15                        | 75                      | 6              |
| 2.                 | Compulsory  | Programming Principles I         | CSC 102     | 5             | 50 min          | 15                        | 75                      | 6              |
| 3.                 | Compulsory  | Calculus I                       | CSM 103     | 3             | 50 min          | 15                        | 45                      | 6              |
| 4.                 | Compulsory  | Discrete Mathematics             | CSM 104     | 3             | 50 min          | 15                        | 45                      | 6              |
| 5.                 | Compulsory  | English Language I               | ENG 101     | 3             | 50 min          | 15                        | 45                      | 6              |
| <b>B' Semester</b> |             |                                  |             |               |                 |                           |                         |                |
| 6.                 | Compulsory  | Programming Principles II        | CSC 106     | 5             | 50 min          | 15                        | 75                      | 6              |
| 7.                 | Compulsory  | Digital and Logic Design         | CSC 107     | 3             | 50 min          | 15                        | 45                      | 6              |
| 8.                 | Compulsory  | Ethics in Computer Science       | CSC 108     | 3             | 50 min          | 15                        | 45                      | 6              |
| 9.                 | Compulsory  | Calculus II                      | CSM 109     | 3             | 50 min          | 15                        | 45                      | 6              |
| 10.                | Compulsory  | English Language II              | ENG 102     | 3             | 50 min          | 15                        | 45                      | 6              |
| <b>C' Semester</b> |             |                                  |             |               |                 |                           |                         |                |
| 11.                | Compulsory  | Computer Architecture I          | CSC 201     | 3             | 50 min          | 15                        | 45                      | 6              |
| 12.                | Compulsory  | Data Structures & Algorithms     | CSC 202     | 5             | 50 min          | 15                        | 75                      | 6              |
| 13.                | Compulsory  | Operating Systems                | CSC 203     | 5             | 50 min          | 15                        | 75                      | 6              |
| 14.                | Compulsory  | Probabilities and Statistics     | CSM 204     | 3             | 50 min          | 15                        | 45                      | 6              |
| 15.                | Compulsory  | Linear Algebra                   | CSM 205     | 3             | 50 min          | 15                        | 45                      | 6              |
| <b>D' Semester</b> |             |                                  |             |               |                 |                           |                         |                |
| 16.                | Compulsory  | Compilers                        | CSC 206     | 3             | 50 min          | 15                        | 45                      | 6              |

|                    |                |                                         |         |   |        |    |    |   |
|--------------------|----------------|-----------------------------------------|---------|---|--------|----|----|---|
| 17.                | Compulsory     | Computational Complexity                | CSC 207 | 3 | 50 min | 15 | 45 | 6 |
| 18.                | Compulsory     | Communications and Networks             | CSC 208 | 3 | 50 min | 15 | 45 | 6 |
| 19.                | Compulsory     | Human-Computer Interaction              | CSC 209 | 3 | 50 min | 15 | 45 | 6 |
| 20.                | Compulsory     | Computer Architecture II                | CSC 210 | 3 | 50 min | 15 | 45 | 6 |
| <b>E' Semester</b> |                |                                         |         |   |        |    |    |   |
| 21.                | Compulsory     | Web Design                              | CSC 301 | 3 | 50 min | 15 | 45 | 6 |
| 22.                | Compulsory     | Databases I                             | CSC 302 | 5 | 50 min | 15 | 75 | 6 |
| 23.                | Compulsory     | Software Engineering I                  | CSC 303 | 3 | 50 min | 15 | 45 | 6 |
| 24.                | Compulsory     | Research Methods                        | CSC 304 | 3 | 50 min | 15 | 45 | 6 |
| 25.                | Elective       | Free Elective                           | ELE 1   | 3 | 50 min | 15 | 45 | 6 |
| <b>F' Semester</b> |                |                                         |         |   |        |    |    |   |
| 26.                | Compulsory     | Web Programming                         | CSC 305 | 5 | 50 min | 15 | 75 | 6 |
| 27.                | Compulsory     | Computer Systems Security               | CSC 306 | 3 | 50 min | 15 | 45 | 6 |
| 28.                | Compulsory     | Software Engineering II                 | CSC 307 | 3 | 50 min | 15 | 45 | 6 |
| 29.                | Compulsory     | Introduction to Artificial Intelligence | CSC 308 | 3 | 50 min | 15 | 45 | 6 |
| 30.                | Compulsory     | Applied Big Data with PySpark           | CSC 309 | 5 | 50 min | 15 | 75 | 6 |
| <b>G' Semester</b> |                |                                         |         |   |        |    |    |   |
| 31.                | Compulsory     | Final Project Phase I                   | CSC 401 | 3 | 50 min | 15 | 45 | 6 |
| 32.                | Compulsory     | Computer Graphics                       | CSC 402 | 5 | 50 min | 15 | 75 | 6 |
| 33.                | Compulsory     | Advanced Web Programming                | CSC 403 | 5 | 50 min | 15 | 75 | 6 |
| 34.                | Compulsory     | Cloud Computing                         | CSC 404 | 3 | 50 min | 15 | 45 | 6 |
| 35.                | Specialization | Specialization Course                   | SPE 1   | 3 | 50 min | 15 | 45 | 6 |
| <b>H' Semester</b> |                |                                         |         |   |        |    |    |   |
| 36.                | Compulsory     | Final Project Phase II                  | CSC 406 | 3 | 50 min | 15 | 45 | 6 |



|     |                |                          |         |   |        |    |    |   |
|-----|----------------|--------------------------|---------|---|--------|----|----|---|
| 37. | Compulsory     | Digital Image Processing | CSC 407 | 5 | 50 min | 15 | 75 | 6 |
| 38. | Elective       | Free Elective            | ELE 2   | 3 | 50 min | 15 | 45 | 6 |
| 39. | Specialization | Specialization Course    | SPE 2   | 3 | 50 min | 15 | 45 | 6 |
| 40. | Specialization | Specialization Course    | SPE 3   | 3 | 50 min | 15 | 45 | 6 |

| INTERNSHIP |          |         |                           |
|------------|----------|---------|---------------------------|
| 1.         | ELECTIVE | INT 101 | Professional Placement I  |
| 2.         | ELECTIVE | INT 102 | Professional Placement II |

| SPECIALIZATION COURSES FOR SOFTWARE ENGINEERING    |                |         |                                   |
|----------------------------------------------------|----------------|---------|-----------------------------------|
| 1.                                                 | MAJOR ELECTIVE | MSE 401 | Advanced Programming              |
| 2.                                                 | MAJOR ELECTIVE | MSE 402 | Parallel and Distributed Systems  |
| 3.                                                 | MAJOR ELECTIVE | MSE 403 | Databases II                      |
| SPECIALIZATION COURSES FOR ARTIFICIAL INTELLIGENCE |                |         |                                   |
| 1.                                                 | MAJOR ELECTIVE | MAI 401 | Machine Learning and Optimization |

|                                                                  |                |         |                                   |
|------------------------------------------------------------------|----------------|---------|-----------------------------------|
| 2.                                                               | MAJOR ELECTIVE | MAI 402 | Neural Networks and Deep Learning |
| 3.                                                               | MAJOR ELECTIVE | MAI 403 | AI Applications and Systems       |
| <b>SPECIALIZATION COURSES FOR GAME DESIGN AND DEVELOPMENT</b>    |                |         |                                   |
| 1.                                                               | MAJOR ELECTIVE | MGD 401 | Interactive Game Design           |
| 2.                                                               | MAJOR ELECTIVE | MGD 402 | Principles of 3D Environments     |
| 3.                                                               | ELECTIVE       | MGD 403 | Scripting For Game Development    |
| <b>SPECIALIZATION COURSES FOR COMMUNICATIONS AND NETWORKS</b>    |                |         |                                   |
| 1.                                                               | MAJOR ELECTIVE | MCN 401 | Routing Protocols and Concepts    |
| 2.                                                               | MAJOR ELECTIVE | MCN 402 | Wireless and Mobile Networks      |
| 3.                                                               | MAJOR ELECTIVE | MCN 403 | Principles of Cybersecurity       |
| <b>SPECIALIZATION COURSES FOR MANAGEMENT INFORMATION SYSTEMS</b> |                |         |                                   |
| 1.                                                               | MAJOR ELECTIVE | MIS 401 | Digital Transformation            |
| 2.                                                               | MAJOR ELECTIVE | MSE 403 | Databases II                      |



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| 3. | MAJOR<br>ELECTIVE | MIS 403 | IT Project Management |
|----|-------------------|---------|-----------------------|