

## Schedule of study programme implementation: Computer Science

mode of study: full-time study  
Institute of Computer Science

| ITEM   | NAME OF A GROUP OF COURSES/NAME OF A COURSE      | COURSE USOS CODE   | Exam after semester | Course credit after semester | Number of hours in the course |            |           |                    |              |                          |                      |               |          | I year            |           | II year           |           | III year          |           |                   |           |                   |           |    |    |    |  |  |
|--|--|--------------------|---------------------|------------------------------|-------------------------------|------------|-----------|--------------------|--------------|--------------------------|----------------------|---------------|----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|----|----|----|--|--|
|  |  |                    |                     |                              | TOTAL                         | LECTURES   | CLASSES   | DISCUSSION CLASSES | LABORATORIES | FOREIGN LANGUAGE CLASSES | SEMINARS/PROSEMINARS | FIELD CLASSES | 1 sem.   | 2 sem.            | 3 sem.    | 4 sem.            | 5 sem.    | 6 sem.            |           |                   |           |                   |           |    |    |    |  |  |
|  |  |                    |                     |                              |                               |            |           |                    |              |                          |                      |               | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC |           |    |    |    |  |  |
| 1  | 2  | 3                  | 5                   | 6                            | 7                             | 8          | 9         | 10                 | 11           | 12                       | 13                   | 14            | 15       | 16                | 17        | 18                | 19        | 20                | 21        | 22                | 23        | 24                | 25        | 26 |    |    |  |  |
| <b>Group of courses 1 (Programming)</b>                        |  |                    |                     |                              |                               |            |           |                    |              |                          |                      |               |          |                   |           |                   |           |                   |           |                   |           |                   |           |    |    |    |  |  |
| 1  | Algorithms and Data Structures                   | 510-IS1-2ASD-23CS  | 3                   |                              | 60                            | 30         | 30        |                    |              |                          |                      |               |          |                   |           |                   | 30        | 30                |           |                   |           |                   |           |    |    |    |  |  |
| 2  | Structured Programming                           | 510-IS1-1PPS-23CS  | 1                   |                              | 75                            | 30         | 15        |                    | 30           |                          |                      |               |          | 30                | 45        |                   |           |                   |           |                   |           |                   |           |    |    |    |  |  |
| 3  | Object-Oriented Programming                      | 510-IS1-1WPO-23CS  | 2                   |                              | 75                            | 30         |           |                    | 45           |                          |                      |               |          |                   |           | 30                | 45        |                   |           |                   |           |                   |           |    |    |    |  |  |
| 4  | Python Programming                               | 510-IS1-1PJP-23CS  |                     | 2                            | 45                            | 15         |           |                    | 30           |                          |                      |               |          |                   |           | 15                | 30        |                   |           |                   |           |                   |           |    |    |    |  |  |
| 5  | Java Programming                                 | 510-IS1-2PZ-23CS   | 3                   |                              | 75                            | 30         |           |                    | 45           |                          |                      |               |          |                   |           |                   |           | 30                | 45        |                   |           |                   |           |    |    |    |  |  |
| 6  | Internet Programming                             | 510-IS1-2PIN-23CS  |                     | 4                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           | 30                | 30        |                   |           |    |    |    |  |  |
| 7  | Graphical User Interface Programming             | 510-IS1-2PWSG-23CS |                     | 4                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           | 30                | 30        |                   |           |    |    |    |  |  |
| 8  | Parallel and Distributed Programming             | 510-IS1-3PRR-23CS  |                     | 5                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           |                   |           |                   | 30        | 30 |    |    |  |  |
| <b>TOTAL</b>   |  |                    |                     |                              | <b>510</b>                    | <b>225</b> | <b>45</b> |                    | <b>240</b>   |                          |                      |               |          | <b>30</b>         | <b>45</b> | <b>45</b>         | <b>75</b> | <b>60</b>         | <b>75</b> | <b>60</b>         | <b>60</b> | <b>30</b>         | <b>30</b> |    |    |    |  |  |
| <b>Group of courses 2 (Informatics Tools and Applications)</b> |  |                    |                     |                              |                               |            |           |                    |              |                          |                      |               |          |                   |           |                   |           |                   |           |                   |           |                   |           |    |    |    |  |  |
| 1  | Computational Methods                            | 510-IS1-2MOB-23CS  | 4                   |                              | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           | 30                | 30        |                   |           |    |    |    |  |  |
| 2  | Artificial Intelligence                          | 510-IS1-3SZI-23CS  | 6                   |                              | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           |                   |           |                   |           |    | 30 | 30 |  |  |
| 3  | Elements of Automata Theory and Formal Languages | 510-IS1-3TAJF-23CS |                     | 5                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           |                   |           | 30                | 30        |    |    |    |  |  |
| 4  | Computer Systems Architecture                    | 510-IS1-1ASK-23CS  |                     | 2                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   | 30        | 30                |           |                   |           |                   |           |                   |           |    |    |    |  |  |
| 5  | Operating Systems                                | 510-IS1-2SOP-23CS  | 3                   |                              | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   | 30        | 30                |           |                   |           |                   |           |    |    |    |  |  |
| 6  | Network Technologies                             | 510-IS1-2TSI-23CS  |                     | 4                            | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           | 30                | 30        |                   |           |    |    |    |  |  |
| 7  | Databases  | 510-IS1-2BD-23CS   | 3                   |                              | 60                            | 30         |           |                    | 30           |                          |                      |               |          |                   |           |                   | 30        | 30                |           |                   |           |                   |           |    |    |    |  |  |
| 8  | Graphics and Human-Computer Communication        | 510-IS1-2GRA-23CS  |                     | 4                            | 45                            | 15         |           |                    | 30           |                          |                      |               |          |                   |           |                   |           |                   |           | 15                | 30        |                   |           |    |    |    |  |  |
| <b>TOTAL</b>   |  |                    |                     |                              | <b>465</b>                    | <b>225</b> |           |                    | <b>240</b>   |                          |                      |               |          | <b>30</b>         | <b>30</b> | <b>60</b>         | <b>60</b> | <b>75</b>         | <b>90</b> | <b>30</b>         | <b>30</b> | <b>30</b>         | <b>30</b> |    |    |    |  |  |

| ITEM   | NAME OF A GROUP OF COURSES/NAME OF A COURSE | COURSE USOS CODE   | Exam after semester | Course credit after semester | Number of hours in the course |            |            |                    |              |                          |                      |               |          | I year            |            | II year           |           | III year          |           |                   |           |                   |           |    |           |
|--|---|--------------------|---------------------|------------------------------|-------------------------------|------------|------------|--------------------|--------------|--------------------------|----------------------|---------------|----------|-------------------|------------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|----|-----------|
|  |   |                    |                     |                              | TOTAL                         | LECTURES   | CLASSES    | DISCUSSION CLASSES | LABORATORIES | FOREIGN LANGUAGE CLASSES | SEMINARS/PROSEMINARS | FIELD CLASSES | 1 sem.   | 2 sem.            | 3 sem.     | 4 sem.            | 5 sem.    | 6 sem.            |           |                   |           |                   |           |    |           |
|  |   |                    |                     |                              |                               |            |            |                    |              |                          |                      |               | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES   | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC | LECTURES  | C/DC/L/FLC/SaP/FC |           |    |           |
| 1  | 2   | 3                  | 5                   | 6                            | 7                             | 8          | 9          | 10                 | 11           | 12                       | 13                   | 14            | 15       | 16                | 17         | 18                | 19        | 20                | 21        | 22                | 23        | 24                | 25        | 26 |           |
| <b>Group of courses 3 (Software Engineering)</b>                         |   |                    |                     |                              |                               |            |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           |                   |           |    |           |
| 1  | Software Engineering 1                      | 510-IS1-2IO1-23CS  |                     | 4                            | 30                            | 30         |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           | 30                |           |                   |           |    |           |
| 2  | Software Engineering 2                      | 510-IS1-3IO2-23CS  | 5                   |                              | 60                            | 15         |            |                    | 45           |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           | 15                | 45        |    |           |
| 3  | Team Project                                | 510-IS1-3PZ-23CS   |                     | 6                            | 30                            |            |            |                    | 30           |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           |                   |           |    | 30        |
| <b>TOTAL</b>   |   |                    |                     |                              | <b>120</b>                    | <b>45</b>  |            |                    | <b>75</b>    |                          |                      |               |          |                   |            |                   |           |                   |           | <b>30</b>         |           | <b>15</b>         | <b>45</b> |    | <b>30</b> |
| <b>Group of courses 4 (Professional and Legal Issues in Informatics)</b> |   |                    |                     |                              |                               |            |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           |                   |           |    |           |
| 1  | Health, Safety and Ergonomics               | 510-IS1-1BHPE-23CS |                     | 1                            | 10                            | 10         |            |                    |              |                          |                      |               |          | 10                |            |                   |           |                   |           |                   |           |                   |           |    |           |
| 2  | Intellectual Property Rights                | 510-IS1-1OWI-23CS  |                     | 1                            | 10                            | 10         |            |                    |              |                          |                      |               |          | 10                |            |                   |           |                   |           |                   |           |                   |           |    |           |
| <b>TOTAL</b>   |   |                    |                     |                              | <b>20</b>                     | <b>20</b>  |            |                    |              |                          |                      |               |          | <b>20</b>         |            |                   |           |                   |           |                   |           |                   |           |    |           |
| <b>Group of courses 5 (Mathematics Courses)</b>                          |   |                    |                     |                              |                               |            |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           |                   |           |    |           |
| 1  | Review of Mathematics                       | 510-IS1-1REM-23CS  |                     | 1                            | 15                            |            | 15         |                    |              |                          |                      |               |          |                   | 15         |                   |           |                   |           |                   |           |                   |           |    |           |
| 2  | Mathematical Analysis 1                     | 510-IS1-1AM1-23CS  | 1                   |                              | 45                            | 15         | 30         |                    |              |                          |                      |               |          | 15                | 30         |                   |           |                   |           |                   |           |                   |           |    |           |
| 3  | Mathematical Analysis 2                     | 510-IS1-1AM2-23CS  | 2                   |                              | 60                            | 30         | 30         |                    |              |                          |                      |               |          |                   |            | 30                | 30        |                   |           |                   |           |                   |           |    |           |
| 4  | Mathematical Analysis 3                     | 510-IS1-2AM3-23CS  | 3                   |                              | 45                            | 15         | 30         |                    |              |                          |                      |               |          |                   |            |                   |           | 15                | 30        |                   |           |                   |           |    |           |
| 5  | Defferential and Difference Equations       | 510-IS1-2RRR-23CS  |                     | 3                            | 30                            | 15         | 15         |                    |              |                          |                      |               |          |                   |            |                   |           | 15                | 15        |                   |           |                   |           |    |           |
| 6  | Linear Algebra with Analytical Geometry     | 510-IS1-1ALG-23CS  | 1                   |                              | 60                            | 30         | 30         |                    |              |                          |                      |               |          | 30                | 30         |                   |           |                   |           |                   |           |                   |           |    |           |
| 7  | Logic and Set Theory                        | 510-IS1-1PLTM-23CS | 1                   |                              | 60                            | 30         | 30         |                    |              |                          |                      |               |          | 30                | 30         |                   |           |                   |           |                   |           |                   |           |    |           |
| 8  | Discrete Mathematics                        | 510-IS1-1MDY-23CS  | 2                   |                              | 60                            | 30         | 30         |                    |              |                          |                      |               |          |                   |            | 30                | 30        |                   |           |                   |           |                   |           |    |           |
| 9  | Probabilistic Methods and Statistics        | 510-IS1-2PST-23CS  | 4                   |                              | 75                            | 30         | 30         |                    | 15           |                          |                      |               |          |                   |            |                   |           |                   |           |                   | 30        | 45                |           |    |           |
| <b>TOTAL</b>   |   |                    |                     |                              | <b>450</b>                    | <b>195</b> | <b>240</b> |                    | <b>15</b>    |                          |                      |               |          | <b>75</b>         | <b>105</b> | <b>60</b>         | <b>60</b> | <b>30</b>         | <b>45</b> | <b>30</b>         | <b>45</b> |                   |           |    |           |
| <b>Group of courses 6 (Humanities and Social Sciences Courses)</b>       |   |                    |                     |                              |                               |            |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           |                   |           |    |           |
| 1  | Humanities Elective Course                  |                    |                     | 2                            | 30                            | 30         |            |                    |              |                          |                      |               |          |                   | 30         |                   |           |                   |           |                   |           |                   |           |    |           |
| 2  | Social Sciences Elective Course             |                    |                     | 3                            | 30                            | 15         | 15         |                    |              |                          |                      |               |          |                   |            |                   |           | 15                | 15        |                   |           |                   |           |    |           |
| 3  | Computer and Information Ethics             | 510-IS1-3EI-23CS   |                     | 5                            | 15                            | 15         |            |                    |              |                          |                      |               |          |                   |            |                   |           |                   |           |                   |           | 15                |           |    |           |
| <b>TOTAL</b>   |   |                    |                     |                              | <b>75</b>                     | <b>60</b>  | <b>15</b>  |                    |              |                          |                      |               |          |                   | <b>30</b>  |                   |           | <b>15</b>         | <b>15</b> |                   |           | <b>15</b>         |           |    |           |



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|--|--|-------------------|---------------------|------------------------------|-------------------------------|----------|---------|--------------------|--------------|--------------------------|----------------------|---------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|-----|--|
|  |  |                   |                     |                              | TOTAL                         | LECTURES | CLASSES | DISCUSSION CLASSES | LABORATORIES | FOREIGN LANGUAGE CLASSES | SEMINARS/PROSEMINARS | FIELD CLASSES | 1 sem.   |                   | 2 sem.   |                   | 3 sem.   |                   | 4 sem.   |                   | 5 sem.   |                   | 6 sem.   |                   |     |  |
|  |  |                   |                     |                              |                               |          |         |                    |              |                          |                      |               | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES | C/DC/L/FLC/SaP/FC | LECTURES | C/DC/L/FLC/SaP/FC |     |  |
| 1  | 2  | 3                 | 5                   | 6                            | 7                             | 8        | 9       | 10                 | 11           | 12                       | 13                   | 14            | 15       | 16                | 17       | 18                | 19       | 20                | 21       | 22                | 23       | 24                | 25       | 26                |     |  |
| <b>TOTAL</b>                                 |  |                   |                     |                              | 270                           | 90       |         |                    |              | 180                      |                      |               |          |                   |          |                   |          |                   |          |                   |          | 45                | 90       | 45                | 90  |  |
| <b>Group of courses 10 (Apprenticeships)</b> |  |                   |                     |                              |                               |          |         |                    |              |                          |                      |               |          |                   |          |                   |          |                   |          |                   |          |                   |          |                   |     |  |
| 1  | Apprenticeships (3 weeks/120 hours/160 didactic hours) | 510-IS1-3PZA-23CS |                     | 5                            |                               |          |         |                    |              |                          |                      |               |          |                   |          |                   |          |                   |          |                   |          |                   |          |                   |     |  |
| <b>TOTAL</b>                                 |  |                   |                     |                              |                               |          |         |                    |              |                          |                      |               |          |                   |          |                   |          |                   |          |                   |          |                   |          |                   |     |  |
| <b>TOTAL</b>                                 |  |                   |                     |                              | 2210                          | 860      | 360     |                    |              | 810                      | 120                  | 60            |          | 125               | 210      | 165               | 225      | 165               | 225      | 195               | 225      | 135               | 240      | 75                | 225 |  |

checksum 1 2210

checksum 2 2210

number of ex./cred.

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 3 | 5 | 5 | 3 | 3 | 5 | 4 | 6 | 4 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|