

## First Year

### Compulsory courses

|            |   |    |    |   |          |
|------------|---|----|----|---|----------|
| INFO0085-2 | <i>Compilers</i> - Pierre GEURTS  | 20 | 40 | - | <b>6</b> |
| INFO0031-1 | <i>Computer network architectures and multimedia</i> (english language) - Guy LEDUC | 30 | 30 | - | <b>6</b> |
| INFO0051-1 | <i>Logic</i> - Pascal GRIBOMONT   | 30 | 30 | - | <b>6</b> |
| INFO0063-1 | <i>Object-Oriented Software Engineering</i> - Bernard BOIGELOT                      | 30 | 30 | - | <b>6</b> |
| INFO0016-1 | <i>Introduction to the theory of computation</i> (english language) - Pierre WOLPER | 30 | 30 | - | <b>6</b> |

### Optional courses

Students choose 30 credits from the list of option courses below :

|            |   |    |    |   |           |
|------------|---|----|----|---|-----------|
| INFO0049-1 | <i>Knowledge Representation</i> - Pascal GRIBOMONT                                    | 30 | 30 | - | <b>6</b>  |
| INFO0056-1 | <i>Managing and securing computer networks</i> (english language) - Guy LEDUC         | 30 | 30 | - | <b>6</b>  |
| ELEN0016-1 | <i>Digital Image Processing</i> - Marc VAN DROOGENBROECK                              | 30 | 30 | - | <b>6</b>  |
| INFO0026-3 | <i>Computer Graphics</i> - Eric BÉCHET  | 30 | 30 | - | <b>6</b>  |
| INFO0939-1 | <i>High performance scientific computing</i> (english language) - Christophe GEUZAINÉ | 30 | 30 | - | <b>6</b>  |
| INFO0941-1 | <i>Network measurement and monitoring</i> (english language) - Benoît DONNET          | 10 | 50 | - | <b>6</b>  |
| INFO0940-1 | <i>Operating systems</i> (english language) - Laurent MATHY                           | 30 | 30 | - | <b>6</b>  |
| ASTG0021-1 | <i>Internship</i> - COLLÉGIALITÉ  | -  | -  | - | <b>12</b> |

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| INFO0085-2 | <i>Compilers</i> - Pierre GEURTS  | 20 | 40 | - | <b>6</b> |
| INFO0031-1 | <i>Computer network architectures and multimedia</i> (english language) - Guy LEDUC | 30 | 30 | - | <b>6</b> |
| INFO0051-1 | <i>Logic</i> - Pascal GRIBOMONT   | 30 | 30 | - | <b>6</b> |
| INFO0063-1 | <i>Object-Oriented Software Engineering</i> - Bernard BOIGELOT                      | 30 | 30 | - | <b>6</b> |
| INFO0016-1 | <i>Introduction to the theory of computation</i> (english language) - Pierre WOLPER | 30 | 30 | - | <b>6</b> |
| MATH0006-3 | <i>Introduction to numerical analysis</i> - Quentin LOUVEAUX                        | 20 | 20 | - | <b>4</b> |
| INFO0039-2 | <i>Object-Oriented Programming Project, I</i> - Pierre WOLPER                       | -  | 90 | - | <b>8</b> |

### Optional courses

[...] Students choose 18 credits from the optional courses list of the first year in the two year Computer Sciences Masters.

## Second Year

### Compulsory courses

|            |  |   |   |   |           |
|------------|--|---|---|---|-----------|
| ATFE0002-1 | <i>Final Work (including an introduction to methodology and research)</i> - COLLÉGIALITÉ | - | - | - | <b>24</b> |
|------------|--|---|---|---|-----------|

### Optional courses

[...] Choose 6 credits in the University's programme of courses; this choice must have the approval of the cycle's Jury president

### Compulsory courses

|            |   |    |    |   |          |
|------------|---|----|----|---|----------|
| MATH0462-1 | <i>Discrete optimization</i> - Quentin LOUVEAUX                   | 30 | 30 | - | <b>6</b> |
| INFO0064-1 | <i>Embedded Systems</i> - Bernard BOIGELOT                        | 30 | 30 | - | <b>6</b> |
| ELEN0062-1 | <i>Applied Inductive Learning</i> - Pierre GEURTS, Louis WEHENKEL | 30 | 30 | - | <b>6</b> |

### Optional courses

Choose courses totalling 12 ECTS from the following :

|            |  |    |    |   |          |
|------------|--|----|----|---|----------|
| ELEN0070-1 | <i>Signal Processing</i> - Jacques VERLY   | 30 | 30 | - | <b>6</b> |
| GBIO0009-1 | <i>Bioinformatics</i> (english language) - Kristel VAN STEEN   | 30 | 30 | - | <b>6</b> |
| INFO0050-1 | <i>Constrained programming</i> - Pascal GRIBOMONT  | 30 | 30 | - | <b>6</b> |
| INFO0060-1 | <i>Concurrent System Verification and Temporal Logic</i> - Bernard BOIGELOT, Pascal GRIBOMONT, Pierre WOLPER | 30 | 30 | - | <b>6</b> |
| MATH0461-1 | <i>Introduction to numerical optimization</i> (english language) - Quentin LOUVEAUX                          | 30 | 30 | - | <b>6</b> |

|            |   |    |    |   |          |
|------------|---|----|----|---|----------|
| INFO2046-1 | <i>Computational Geometry</i> - Eric BÉCHET   | 30 | 30 | - | <b>6</b> |
| ELEN0019-1 | <i>Treatment of the audio signals : principles and experiments</i> -<br>JeanJacques EMBRECHTS | 30 | 30 | - | <b>6</b> |
| ELEN0002-1 | <i>Introduction to Audio and Video Techniques</i> - JeanJacques EMBRECHTS                     | 30 | 30 | - | <b>6</b> |
| INFO0940-1 | <i>Operating systems (english language)</i> - Laurent MATHY                                   | 30 | 30 | - | <b>6</b> |
| INFO0941-1 | <i>Network measurement and monitoring (english language)</i> - Benoît DONNET                  | 10 | 50 | - | <b>6</b> |

**Compulsory courses**

|            |  |   |   |   |           |
|------------|--|---|---|---|-----------|
| ATFE0002-1 | <i>Final Work (including an introduction to methodology and research)</i> - COLLÉGIALITÉ | - | - | - | <b>24</b> |
|------------|--|---|---|---|-----------|

**Optional courses**

Choose one course among the following (6 credits) :

|  |  |  |  |  |          |
|--|--|--|--|--|----------|
| List of optional courses not taken in the first year of the master's degree. |  |  |  |  | <b>6</b> |
|--|--|--|--|--|----------|