

## ETHZ Cyber Security courses (version 17.03.2021)

**It is your responsibility to check, when it is time to register, the existence of courses and the number of credits on the ETHZ website.**

| Breadth requirement <sup>[1]</sup> (Groupe 1) |                           |      |          |                         |                     |      |          |
|---|---------------------------|------|----------|-------------------------|---------------------|------|----------|
| ETHZ courses                                  |                           |      |          | Equivalent EPFL courses |                     |      |          |
|   |                           | ECTS | Semester |                         |                     | ECTS | Semester |
| 263-4500-00L                                  | Advanced Algorithms       | 9    | Fall     | CS-450                  | Advanced algorithms | 7    | Spring   |
| 252-0535-00L                                  | Advanced Machine Learning | 10   | Fall     | CS-433                  | Machine learning    | 7    | Fall     |

<sup>[1]</sup> Students can choose to take either the ETHZ course or the equivalent EPFL course, but they can not validate both among the 30 ECTS 'breadth requirement'

| Depth requirement <sup>[2]</sup> (Groupe 2) |  |      |          |                         |                       |   |        |
|---|--|------|----------|-------------------------|-----------------------|---|--------|
| ETHZ courses                                |  |      |          | Equivalent EPFL courses |                       |   |        |
|   |  | ECTS | Semester |                         |                       |   |        |
| 252-0811-00L                                | Applied Security Laboratory <sup>[3]</sup>           | 8    | Fall     |                         |                       |   |        |
| 227-0579-00L                                | Hardware Security                                    | 6    | Fall     |                         |                       |   |        |
| 263-0009-00L                                | Information Security Lab <sup>[3]</sup>              | 8    | Fall     |                         |                       |   |        |
| 263-4640-00L                                | Network Security                                     | 8    | Fall     |                         |                       |   |        |
| 252-0463-00L                                | Security Engineering                                 | 7    | Fall     |                         |                       |   |        |
| 252-1411-00L                                | Security of Wireless Networks                        | 6    | Fall     |                         |                       |   |        |
| 252-1414-00L                                | System Security                                      | 7    | Fall     |                         |                       |   |        |
|   |  |      |          |                         |                       |   |        |
| 263-4660-00L                                | Applied Cryptography                                 | 8    | Spring   |                         |                       |   |        |
| 252-0407-00L                                | Cryptography Foundations (not given in Spring 2021)  | 7    | Spring   |                         |                       |   |        |
| 252-0408-00L                                | Cryptographic Protocols                              | 6    | Spring   | COM-501                 | Advanced cryptography | 4 | Spring |
| 263-4656-00L                                | Digital Signatures                                   | 5    | Spring   |                         |                       |   |        |
| 263-4600-00L                                | Formal Methods for Information Security              | 5    | Spring   |                         |                       |   |        |
| 263-2925-00L                                | Program Analysis for System Security and Reliability | 7    | Spring   |                         |                       |   |        |

<sup>[2]</sup> When there is an equivalent EPFL course, students can choose to take either the ETHZ course or the equivalent EPFL course, but they can not validate both among the 30 ECTS 'depth requirement'

<sup>[3]</sup> Students can only take one lab, either Applied Security Laboratory or Information Security Lab.

| Other Fall and Spring ETHZ courses |                        | ECTS |                 |
|------------------------------------|------------------------|------|-----------------|
|                                    | Semester project       | 12   | Fall and Spring |
|                                    | SHS                    | 3-6  | Fall and Spring |
|                                    | Other optional courses | 2-18 | Fall and Spring |