

Master's Programme in Cyber Security

Tentative Course List ETHZ

Please find information on each course in the ETH Course Catalogue: www.vvz.ethz.ch

During the course of the programme, students spend one semester at EPF Lausanne and obtain 20–35 credit points. For more details, see: <https://inf.ethz.ch/studies/master/master-cybsec.html>

Major in Cyber Security

CORE COURSES

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|--------------|----------------------|--------|---|
| 252-0463-00L | Security Engineering | autumn | 7 |
| 252-1414-00L | System Security | autumn | 7 |
| 263-4640-00L | Network Security | autumn | 8 |
| 263-4660-00L | Applied Cryptography | spring | 8 |

CORE ELECTIVES

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|--------------|--|--------|---|
| 227-0575-00L | Advanced Topics in Communication Networks | autumn | 6 |
| 227-0579-00L | Hardware Security | autumn | 7 |
| 252-0811-00L | Applied Security Laboratory | autumn | 8 |
| 252-1411-00L | Security of Wireless Networks | autumn | 6 |
| 263-4657-00L | Advanced Encryption Schemes | autumn | 5 |
| 263-4665-00L | Zero-Knowledge Proofs | autumn | 5 |
| 252-0408-00L | Cryptographic Protocols | spring | 6 |
| 263-2925-00L | Program Analysis for System Security and Reliability | spring | 7 |
| 263-4600-00L | Formal Methods for Information Security | spring | 5 |
| 263-4630-00L | Computer-Aided Modelling and Reasoning | spring | 8 |
| 263-4656-00L | Digital Signatures | spring | 5 |

SEMINAR

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|--------------|--|--------|---|
| 252-4601-00L | Current Topics in Information Security | autumn | 2 |
| 252-2603-00L | Seminar on Systems Security | spring | 2 |
| 263-4651-00L | Current Topics in Cryptography | spring | 2 |

| Minor | | | | | | | | | | | | | | | | | | | | |
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| <div><div>CORE COURSES</div><div>CORE ELECTIVES</div><p>Students choose one Major from the Master's Programme in Computer Science (Regulations 2020) and take Core Courses and Core Electives of the chosen Major:</p><ul style="list-style-type: none">- Data Management Systems- Machine Intelligence- Visual and Interactive Computing- Theoretical Computer Science</div> | | | | | | | | | | | | | | | | | | | | |
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| <div><div>SEMESTER PROJECT</div><table><tr><td>260-0100-00L</td><td>Semester Project</td><td></td><td></td><td>12</td></tr></table></div> | | | | | 260-0100-00L | Semester Project | | | 12 | | | | | | | | | | | |
| 260-0100-00L | Semester Project | | | 12 | | | | | | | | | | | | | | | | |
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| <div><div>INTER FOCUS COURSES</div><table><tr><td>263-0006-00L</td><td>Algorithms Lab</td><td>autumn</td><td>8</td></tr><tr><td>263-0009-00L</td><td>Information Security Lab</td><td>autumn</td><td>8</td></tr><tr><td>263-0007-00L</td><td>Advanced Systems Lab</td><td>spring</td><td>8</td></tr><tr><td>263-0008-00L</td><td>Computational Intelligence Lab</td><td>spring</td><td>8</td></tr></table></div> | | | | | 263-0006-00L | Algorithms Lab | autumn | 8 | 263-0009-00L | Information Security Lab | autumn | 8 | 263-0007-00L | Advanced Systems Lab | spring | 8 | 263-0008-00L | Computational Intelligence Lab | spring | 8 |
| 263-0006-00L | Algorithms Lab | autumn | 8 | | | | | | | | | | | | | | | | | |
| 263-0009-00L | Information Security Lab | autumn | 8 | | | | | | | | | | | | | | | | | |
| 263-0007-00L | Advanced Systems Lab | spring | 8 | | | | | | | | | | | | | | | | | |
| 263-0008-00L | Computational Intelligence Lab | spring | 8 | | | | | | | | | | | | | | | | | |
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| <div><div>FREE ELECTIVES</div><p>All Master's level courses in the area of computer science, or a closely related field, offered by ETH Zurich, EPFL and the University of Zurich may be chosen as Free Elective Courses.</p></div> | | | | | | | | | | | | | | | | | | | | |
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| <div><div>SCIENCE IN PERSPECTIVE</div><p>Courses offered by D-GESS, see details in the Cyber Security Study Guide.</p></div> | | | | | | | | | | | | | | | | | | | | |
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| <div><div>MASTER'S THESIS</div><table><tr><td>260-0800-00L</td><td>Master's Thesis</td><td></td><td></td><td>30</td></tr></table></div> | | | | | 260-0800-00L | Master's Thesis | | | 30 | | | | | | | | | | | |
| 260-0800-00L | Master's Thesis | | | 30 | | | | | | | | | | | | | | | | |