CYBERSECURITY: FROM DESIGN TO OPERATIONS

A.A. 2020 / 2021

From - To
January 2021 – July 2021

Application deadline
23 November 2020

Selection
27 November 2020

Enrollment
9-22 December 2020
The aim of the Master’s in Cybersecurity is to train, within a business context, experts in IT security of hardware-software infrastructures for the management of critical systems and data processing. In particular, the Master’s provides skills in the analysis of existing criticalities, as well as expertise in the design, planning, integration and deployment of security solutions on both an application and network level, in all infrastructure and process operating phases.

**Director of studies:** Prof. Marco Prandini, Department of Computer Science and Engineering, Alma Mater Studiorum University of Bologna.

### INTRODUCTION

The course is aimed at a wide audience, from new graduates in the ICT sector who immediately want to expand their knowledge, to graduates who want to specialize their education, to professionals who work for themselves or are employed in companies in any sector, already working in the area of ICT infrastructure design and management or software development and who want to update and expand their skills with elements of cybersecurity.

As a legal requirement, participants must have a minimum of a three-year degree, not necessarily in the ICT sector. During the selection phase, the panel will also make sure that the candidates have the basic knowledge required to successfully follow the training program.

### ENTRY REQUIREMENTS

The master's is a six-month course comprising 288 hours of lessons and tutorials via live streaming. The minimum attendance required to obtain the qualification is 80%.

In parallel, full-time students will use their free days to do a 500-hour internship, while working students can carry out project work as an alternative, applying the concepts learned to their jobs. There is an exam for each module, the results of which will not be reported but will influence the overall assessment. The final exam will take the form of a discussion of the results of the internship or project work.

On passing the exam, students will gain a Master’s in Cybersecurity and 60 University Credits.

**FUNDAMENTALS**
- Fundamentals of Security and Cryptography

**SYSTEM DEFENSE**
- Network security and administration
- Computer security and administration

**DEVELOPMENT OF SECURE CODE**
- Secure coding I - software engineering
- Secure coding II - web app security and testing
- Secure coding III - mobile security and testing

**ANALYSIS OF ATTACKS**
- Security monitoring I - malware analysis and detection
- Security monitoring II - information correlation

**RESPONSE AND COLLECTION**
- Incident response
- Digital Forensics

For more information: [https://master.unibo.it/cybersecurity/en/programme](https://master.unibo.it/cybersecurity/en/programme)

At the end of the Master's, participants will have acquired a general awareness of cybersecurity issues and the relationships between the multiple application environments in which security requirements must be taken into consideration.
**REGISTRATION AND FEES**

The Master’s fees are € 4,950, to be paid in two installments.

Thanks to the contributions of all our partners, 5 grants are available: 2 covering the entire course fees and 3 covering the second installment. The grants will be awarded to the most deserving students based on the position obtained in the ranking during the selection stage.

Register on the website by going to:

www.unibo.it > Teaching > Professional Masters

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**CALENDAR AND LOCATION**

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<tr>
<th>Event</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Start of lessons</td>
<td>January 8, 2021</td>
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<tr>
<td>End of lessons</td>
<td>July 17, 2021</td>
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<tr>
<td>Lessons will be held</td>
<td>Fridays from 2-6pm and Saturdays from 9am-6pm</td>
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<td>Internship</td>
<td>March-July 2021</td>
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<td>Final exam</td>
<td>September/October 2021</td>
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**Location of lectures:**

All Master’s lessons will be provided via live streaming. Furthermore, for some courses a blended learning approach will be used: students will be able to choose to follow lessons either remotely or in the classroom at the University of Bologna School of Engineering and Architecture, at Viale del Risorgimento, 2.

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**PARTNERSHIP**

The Master’s was developed through a collaboration between the Department of Statistical Sciences and Department of Economics at the University of Bologna and CRIF, a global company specializing in credit and business information systems, outsourcing and processing services, and credit solutions.

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**CONTACTS**

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https://master.unibo.it/cybersecurity/en