

# DICYTECH



## DIGITAL TRAINING FOR CYBERSECURITY STUDENTS IN INDUSTRIAL FIELDS

[www.dicystech.eu](http://www.dicystech.eu)



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# CYBERSECURITY EDUCATION AND TRAINING: THE CURRENT NEEDS



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ENISA published a report in 2020, that focused on the **status of the cybersecurity education system** and the **inability to attract more students** in studying cybersecurity and to produce graduates with “*the right cybersecurity knowledge and skills*”.



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Regarding Higher Education sector, in its new report “**Addressing the EU cybersecurity skills shortage and gap through higher education**” (2021), ENISA proposed **5 recommendations to address the EU cybersecurity skills shortage and gap:**

1. Increase enrolments and eventually graduates in cybersecurity programmes
  - **the diversification of the HEIs curricula in terms of content, levels and language**
2. Support a unified approach across government, industry and HEIs
3. Increase collaborations between Member States
4. Promote analysis of the cybersecurity market needs and trends
5. Support the promotion of CyberHEAD



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Furthermore, in the coming years **Europe will need more than one million skilled jobs in cybersecurity.** Industry is transforming to exponential technologies such as artificial intelligence (AI), advanced robotics and cognitive automation, advanced analytics, and the Internet of Things (IoT). The technologies being implemented all involve the integration of advanced ICT and global digital supply networks (DSNs) connecting an increasing number of plant processes and management systems.



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The Fourth Industrial Revolution is creating a **mismatch between available workers and the skills necessary for open jobs**, especially concerning **cybersecurity**: indeed by 2022, the global cybersecurity workforce shortage will reach upwards of **1.8 million unfilled positions** and the most acute shortage are for highly skilled technical staff.



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*“An area where cybersecurity remains under-developed however is in the skills present in the workforce. [...] **there is a lack of skilled and qualified personnel in the labour market to work in cybersecurity roles and who can sufficiently address the range of cyberthreats posed**” (European Union Agency for Cybersecurity – ENISA, 2021).*



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One profile highlighted is that of **cybersecurity operator (cyber talent)**: technicians specializing in the design, deployment and maintenance of cybersecurity of the whole range of industrial control systems (ICSs).



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