COREP

SAA
School of Management

DIPLOMA DI MASTER EXECUTIVE

in

"CYBERSECURITY"

della durata di 288 ore
tenutosi dal **19 Febbraio** all'**11 Maggio 2018**
presso COREP- SAA
Via Ventimiglia 115- Torino

conferito a

Federico COPPO

Nato a Ivrea(TO) il 21/12/1985

Torino, lì 28 Maggio 2018

Il Direttore
Dott. Davide Caregnato

COREP

Torino, 28 Maggio 2018

Prot. N. 141.s/2.6.1/EO/eo

si dichiara che

COPPO FEDERICO

nato a IVREA (TO) il 21/12/1985, ha frequentato e concluso con esito positivo nell'anno 2018 il Master Executive in "Cybersecurity " organizzato dal COREP, ottenendone il relativo diploma.

Si allega il piano didattico.

Rilasciato ai fini dell'acquisizione di ufficio.

La Segreteria Master Corep

Emanuela Ca

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Piano Didattico Master Executive in "Cybersecurity "

Module A - General knowledge modules

Contenuto	N. ore proposte
Introduction to Real time O.S. Labs to be performed using FRDM K64F and Micrium mC/OS-III operating system Autosar architecture and workflow, with reference to industrial solutions such as ETAS Isolar	24
Embedded SW development environment (crosscompiler, JTAG debugger) Lab using Lauterbach uTrace, TRACE32 and FRDM K64F	8
O.S. Linux/Android (o.s. architecture, build systems, development tools) Labs to be performed on Udoo-neo and/or i.MX6Q sabresd	24
Language C. C++ (review of C and C++ programming languages) Labs on developing, debugging and profiling on target board (Udoo-neo/i.MX6Q)	16
Coding rules (MISRA/CERT) & SW Design patterns e Static analysis SW Unit Test Labs using Polyspace Bug Finder and Polyspace CodeProver	12
UML modelling	4
Automotive Networks (including TCP/IP over Ethernet)	8
Cryptographic algorithms (RSA, AES, ECC, digest SHA) Labs to be performed on PC with openSSL	8
Digital certificate management (X.509, PKI) Labs to be performed on PC with openSSL	8
Network security protocols (TLS, SSH, IPsec, WPA) Labs to be performed on PC with openSSL and Linux	16
Firewall, VPN, IDS Labs to be performed on PC with openSSL and Linux	16
TOTALE MODULO A	**144**

Module B1 - Specific modules for developers/architects

Contenuto	N. ore proposte
TARA (Threat Assessment and Remediation Analysis) – MITRE VARA (Vulnerability assessment and risk analysis) w/ application to case studies	16
Application Sandboxing (Linux namespaces, Firejail, Flatpack, Legato, Docker, seccomp, SELinux, ...)	16
Cybersecurity for embedded systems: Secure boot (on Android/Qualcomm) HSM SW development and configuration (lab w/ HSM emulator or Infineon chip if available) [8 ore] Trusted Execution on ARM (TrustZone) and Intel (TXT) Secure storage Crypto libraries (lab with openSSL)	48
TOTALE MODULO B1	**80**

Module B2- Specific modules for testers

Contenuto	N. ore proposte
System hardening (laboratory about Linux secure configuration, drivers loaded, signed binaries, ...)	8
BT and Wi-Fi vulnerability identification (laboratory w/ BT and WiFi devices)	8
Ethernet vulnerability identification (laboratory w/ Ethernet devices)	8
Automotive network vulnerability identification (laboratory w/ CAN devices)	8
Fuzzy testing (laboratory about testing an application)	8
Penetration test tools – the Kali Linux distribution	16
TOTALE MODULO B2	**56**