Certified Network Defender

Instructions for Downloading your CND Electronic Courseware, Lab Manuals, and Tools.

Step 1:

Visit: https://aspen.eccouncil.org. If you have an account already, skip to **Step 4**.

Step 2:

Click **Register** and fill out the registration form. Click the **Register** button.

Step 3:

Using the email you provided in **Step 2**, follow the instructions in the auto-generated email to activate your EC-Council Aspen Portal account.

Step 4:

Login using your Username and Password.

Step 5:

Once successfully logged in, click **eBooks** icon under the **Learning Resources** section. It will open the Academia page.

Step 6:

Enter the access code below in the **Access Code** field and click the **Submit** button.

Access Code: XXXXXXXXXXXXXXX

Step 7:

If your Access Code is valid, scroll down and you will be able to view instructions on how to access the Electronic Courseware, Lab Manuals, and Tools.

Support:

E-mail support is available at academia@eccouncil.org.

System Requirements:

The Academia page contains details about system requirements and how to download the e-courseware.

Instructions to Download Digital Copy of your Class Certificate of Attendance


EC-Council

Certificate of Attendance

THIS IS TO ACKNOWLEDGE THAT

HAS SUCCESSFULLY COMPLETED A COURSE ON

AT AN EC-COUNCIL ACCREDITED TRAINING CENTER

INSTRUCTOR NAME

CERTIFICATE NUMBER DATE

Sanjay Bavisi, President

You can verify authenticity of this certificate by visiting https://aspen.eccouncil.org/VerifyEval.aspx

Step 1: Complete the official training.

Step 2: Visit: https://aspen.eccouncil.org. If you have an account already, skip to **Step 5**.

Step 3: Click **Register** and fill out the registration form. Click the **Register** button.

Step 4: Using the email you provided in **Step 3**, follow the instructions in the auto-generated email to activate your EC-Council Aspen Portal account.

Step 5: Login using your Username and Password.

Step 6: Click the **Class Eval** icon in the **Student Services** section.

Step 7: Enter the **Evaluation Code** (see the code below) in the **Evaluation Code** field and click the **Submit**.

Step 8: Fill in the **Course Evaluation Form**. ***Note:** All fields on this form are mandatory. Click the **Submit Classroom Evaluation** button.

Step 9: On the **Course Evaluation Submission** page, click the **Download Certificate of Attendance** button to download your certificate of attendance.

Evaluation Code: ***CND-*********

EC-Council

Foreword

The computer network has become more and more complex over the past few years and so has the threats to its security. The Certified Network Defender (CND) course has focused on helping the administrator to understand how to effectively deal with such issues that challenge the security of a network.

This course presents a defensive stand to network security. It enhances the skills of a network administrator so as to analyze the internal and external network security threats, how to proactively minimize their effect by developing necessary security policies, designing a defense strategy, implementing the security mechanisms, and by responding to security incidents in a timely manner.

The course covers all major domains in such a manner that the reader will be able to appreciate the way network security mechanisms have evolved over time; as well as gain insight into the fundamental workings relevant to each domain. It is a blend of academic and practical wisdom, supplemented with tools that the reader can readily access and obtain a hands-on experience. The emphasis is on understanding various network security elements, updating the already deployed security mechanisms, spotting any known or possible vulnerabilities, and hardening security implementations using various tools. You will read about the defense mechanisms that are most widely used such as the firewalls, IDS, digital signatures, the secure configuration of various every-day applications, and a comprehensive set of policies that are to be enforced in the network to secure it from network breaches.

This courseware is a resource material. Any network administrator can tell you that there is no one straight methodology or sequence of steps that you can follow while securing a network. There is no one template that can meet all your needs. Your network defense strategy varies with the type of network, the security mechanisms you chose to deploy, and the resources at your disposal. However, for each stage you choose, be it training your staff on security awareness, identifying network threats, implementing packet filtering, deploying a honeypot, troubleshooting the network, configuring a digital signature, securing wireless networks, you will find something in this courseware that you can definitely use.

Finally, this is not the end. This courseware is to be considered as a 'work-in-progress', as it is updated by adding value to it over time. You may find some aspects detailed, while others may be in brief. The yardstick that is used in this respect is simple- "does the content explain the point at hand?" It would be great to hear the views of the reader with respect to viewpoints and suggestions. You can send your feedback so that this courseware can be a more useful one.

Table of Contents

Certified Network Defender

Module 00: Welcome to Certified Network Defender Class!

Exam 312-38

Introduction

C|ND Certified Network Defender

- Name
- Company Affiliation
- Title / Function
- Job Responsibility
- Networking related experience
- Expectations

Course Materials

C|ND Certified Network Defender

Identity Card

Student Courseware

Lab Manual/ Workbook

Course Evaluation

Reference Materials

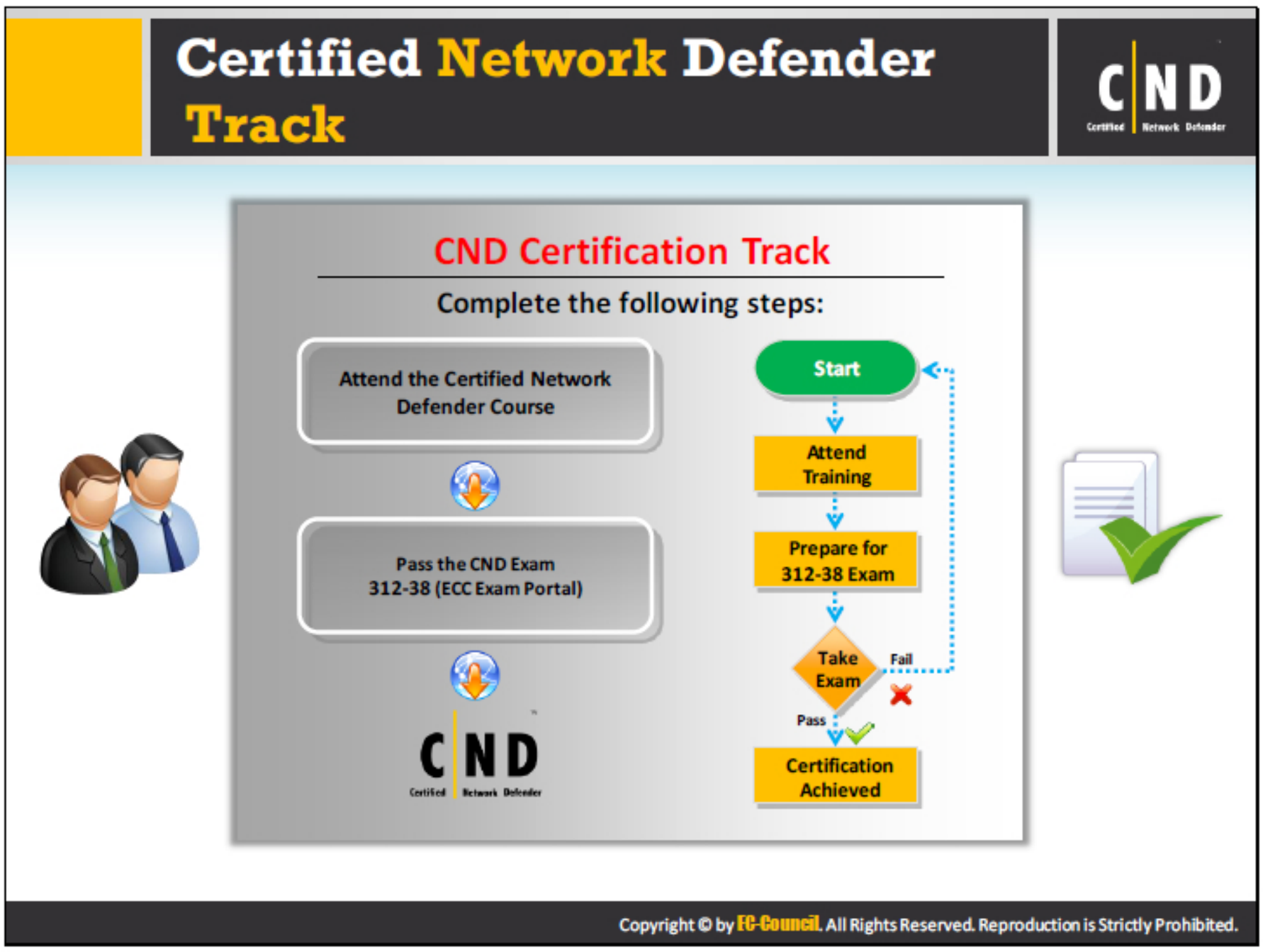
CND Course Outline

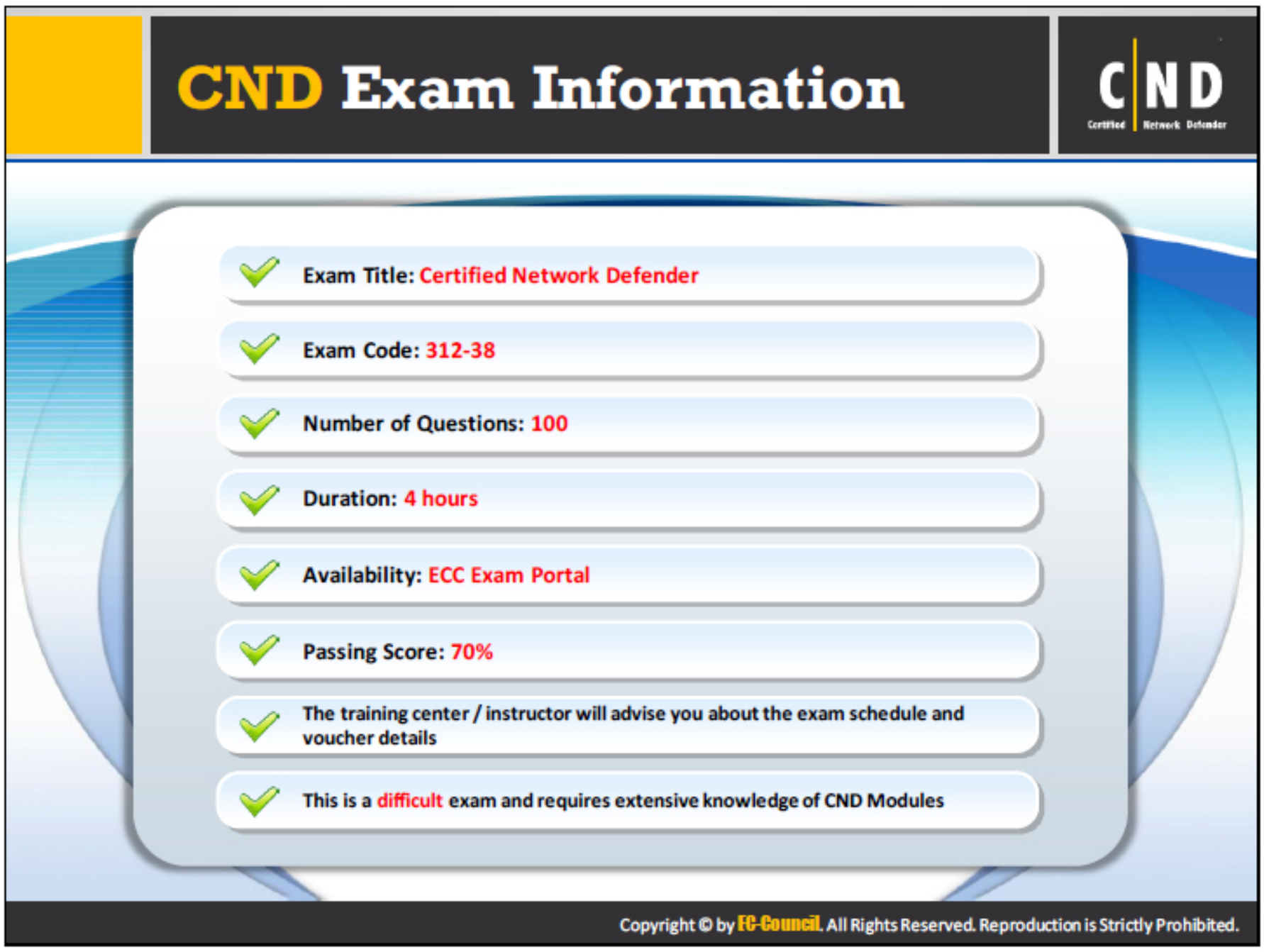
1	Computer Network and Defense Fundamentals	8	Secure IDS Configuration and Management
2	Network Security Threats, Vulnerabilities, and Attacks	9	Secure VPN Configuration and Management
3	Network Security Controls, Protocols, and Devices	10	Wireless Network Defense
4	Network Security Policy Design and Implementation	11	Network Traffic Monitoring and Analysis
5	Physical Security	12	Network Risk and Vulnerability Management
6	Host Security	13	Data Backup and Recovery
7	Secure Firewall Configuration and Management	14	Network Incident Response and Management

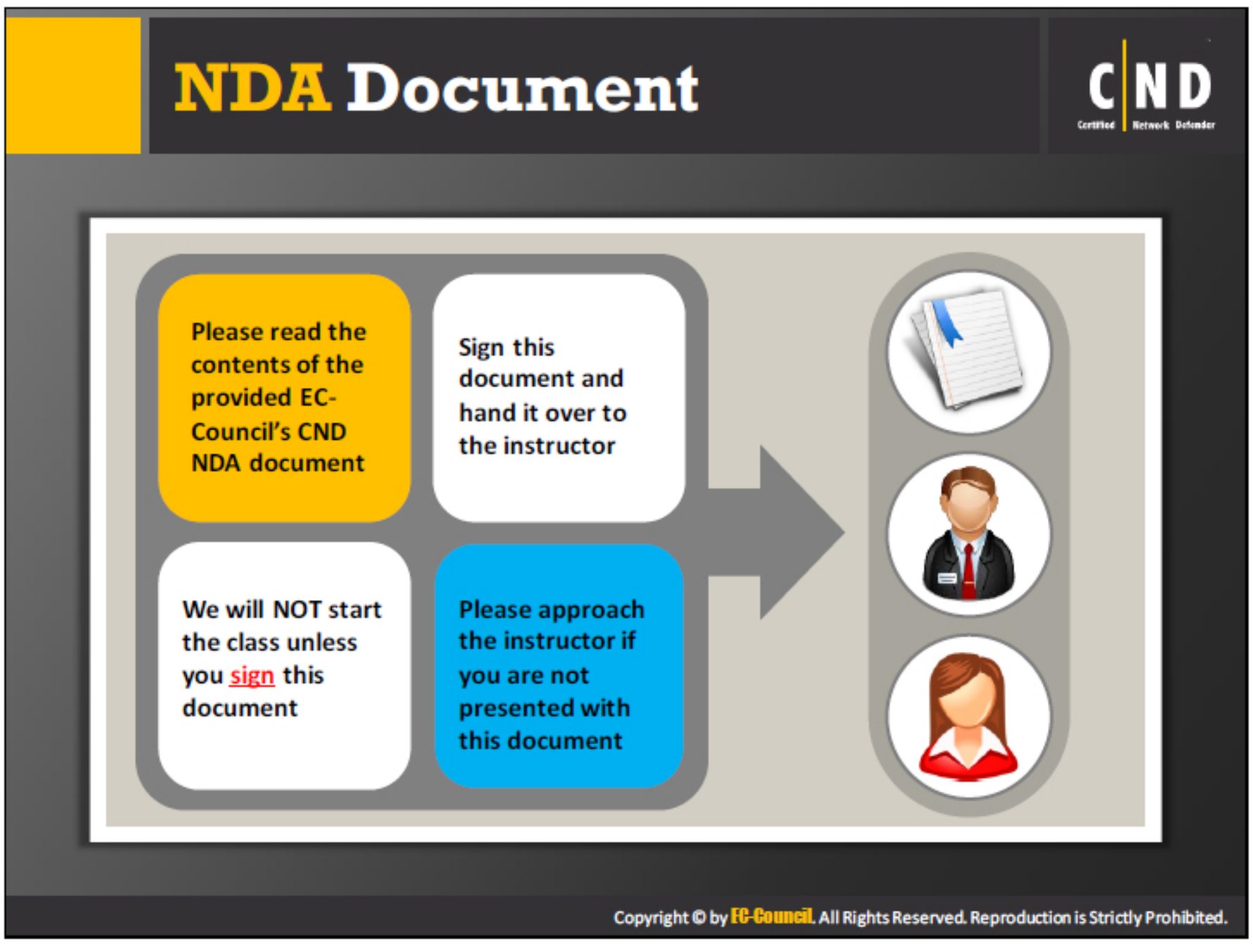
EC-Council Certification Program

There are several levels of certification tracks under the EC-Council Accreditation body:

Certified Secure Computer User (CSCU)	EC-Council Disaster Recovery Professional (EDRP)
Certified e-Business Professional	EC-Council Certified Secure Programmer (ECSP)
EC-Council Certified Security Specialist (ECSS)	EC-Council Certified Security Analyst (ECSA)
Certified Network Defender(CND) ← You are here	Licensed Penetration Tester (LPT)
Certified Ethical Hacker (CEH)	Certified Chief Information Security Officer (CCISO)
Computer Hacking Forensic Investigator (CHFI)	Master of Security Science (MSS)







What Does CND Teach You?

Network Security Technologies

- Physical security
- Access control mechanism
- Firewalls /IDS implementation
- Proxy servers
- OS hardening/patching
- Packet/content filtering
- Antivirus protection
- Product evaluation based on common criteria
- Encryption mechanism
- Passwords security
- Authentication mechanism
- DMZ (demilitarized zones)
- Configuration management
- Network logs audit

What Does CND Teach You?

Network Security Operations

- Creating and enforcing security policies
- Creating and enforcing standard network operating procedures
- Planning business continuity
- Configuration control management
- Creating and implementing incident response processes
- Planning data backup and recovery
- Conducting forensics activities on incidents
- Providing security awareness and training
- Enforcing security as culture

CND Lab

There are tons of networking **tools** and **technologies** covered in the curriculum

Instructors **WILL NOT** be able to demonstrate **ALL** the tools in this class

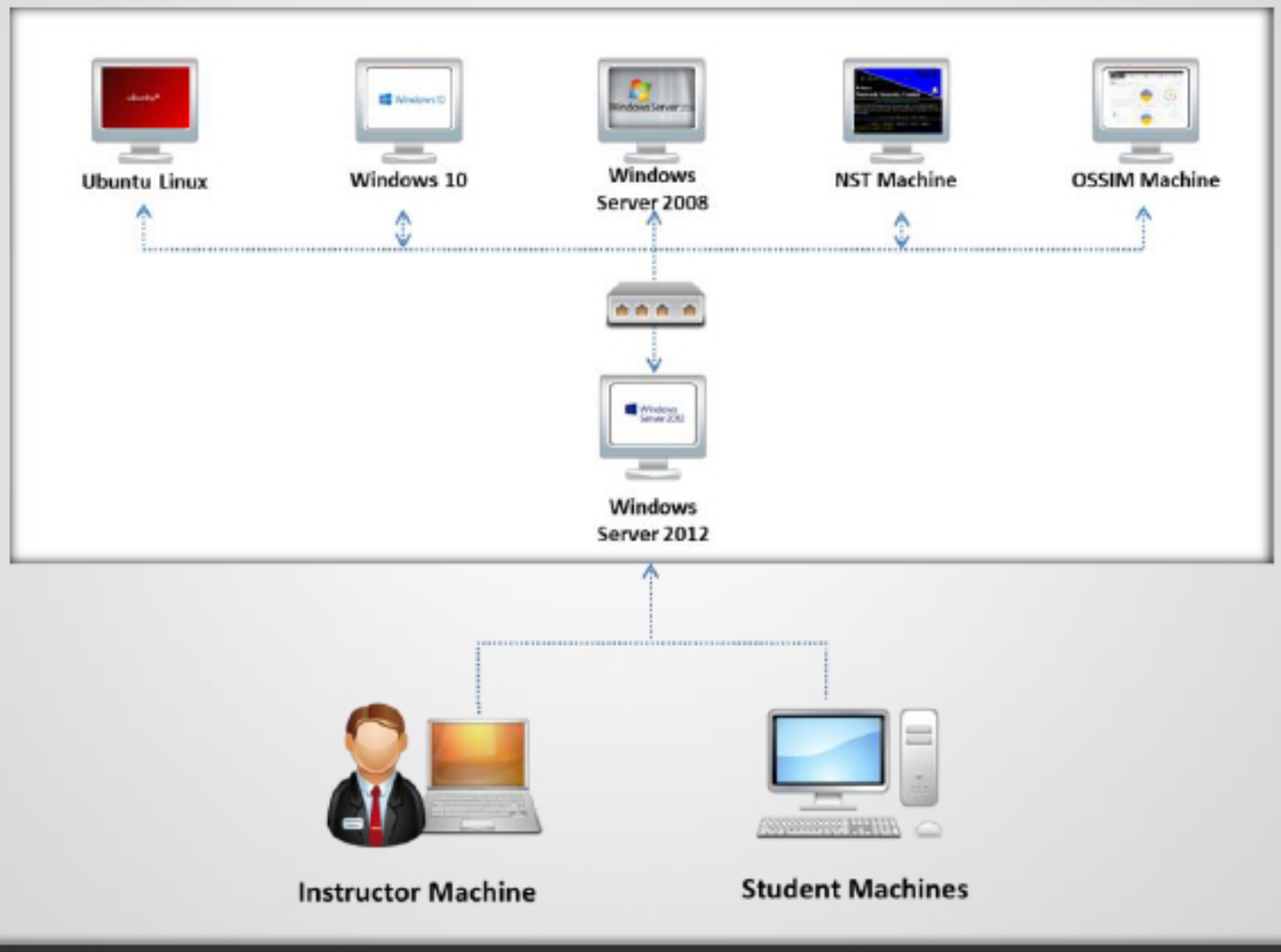
They will showcase only **selected tools**

The students are required to **practice with the tools** not demonstrated in the class on their own

Lab Sessions

- Lab Sessions are designed to **reinforce** the classroom sessions
- The sessions are intended to give a **hands on experience** only and does not guarantee proficiency

Advanced Lab Environment



Student Computer Checklist

Check if your machine has the following OSes installed (Fully Patched)

- Host Machine preferably installed with Windows server 2012 or Windows 10
- Windows Server 2012 as VM
- Windows Server 2008 as VM
- Windows 10 as VM
- Ubuntu as VM
- OSSIM as VM
- NST as VM