

# STUDY PLAN



## EC-Council Certified Ethical Hacker (CEH) v9.0

Total Videos: **108** Time: **20 hours\***

\*The time indicated above represents the total time to view all videos in the course, but does not include time spent using virtual labs, practice exams, embedded quizzes, etc.

## Certified Ethical Hacker (CEH) v9.0

[Certified Ethical Hacker](#) is an intermediate-level certification designed to validate learners' ability to determine if vulnerabilities exist within one's computer and/or network, and undertake preventative, corrective, and protective countermeasures before an actual compromise of the system occurs.

The CEH is made up of just one exam, which is covered by the CBT Nuggets training, [EC-Council Certified Ethical Hacker v9.0](#). It is important to note that learners pursuing self-study, such as that offered by CBT Nuggets, must [apply for exam eligibility](#) and demonstrate a minimum of two (2) years of work experience in security.

Because the CEH is an intermediate-level certification, learners typically should have 2-5 years of experience in security, or a security-related field, and familiarity with Windows (all versions, including Windows XP and Windows Server 2003). While it is not required, familiarity with Linux is strongly recommended. Familiarity with basic networking also is recommended.

## Exam Details

### Exam Eligibility

According to EC-Council, a candidate may be granted permission to attempt the exam if:

- The candidate has and can prove two years of Information Security related experience.
- The candidate remits a non-refundable Eligibility Application Fee of \$100 (USD).
- The candidate submits a completed [Exam Eligibility Application](#).

The CEH exam is offered through the EC-Council or through Pearson VUE. Learners who complete their training for the CEH through CBT Nuggets must register for their exam directly through EC-Council.

**Time allotted for exam:** 4 hours (240 minutes)

**Number of questions:** 125

**Passing score:** 70%

**Question types:** Multiple choice

**Exam registration:** [EC-Council Store](#)

**Exam cost:** \$950 (USD) for an exam voucher; \$100 (USD) for the exam eligibility fee

**Exam Blueprint:** [CEH Exam Blueprint v2.0](#)

## STUDY STRATEGIES

Learners use a great variety of strategies to attack their training. Here are some options you can choose from to get the most out of your training experience:

Proceed through all CBT Nuggets video training on double-speed to develop a strong overview of the material; then proceed through all the training for a second time, taking good notes and focusing on deeper learning.

**OR**

Proceed through all CBT Nuggets video training, taking good notes and focusing on deep learning on the first pass; then proceed back through all training a second time, using double-speed when appropriate.

Supplement all video training with book study and practical application of knowledge.

Build a practice environment where you can practice your skills throughout your training.

Learn more about how to get all you can out of your practice exam experience from a quick video by Keith Barker



## PRACTICE EXAM STRATEGIES

CBT Nuggets offers practice exams as part of your subscription. You can take the practice exams as many times as you like! Here are some tips to help you take full advantage of this excellent resource:

### ! PLAN TO TAKE THE PRACTICE EXAM 3 TIMES

#### FIRST EXAM

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Create a baseline against which you can measure your progress with future exams.

Identify areas of weakness in order to direct your training as you move forward.

#### SECOND EXAM

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Measure your progress since your first practice exam! Ask yourself: Are you retaining the information and material you learned at the beginning of your training? Are there areas to which you should return now to ensure your understanding before moving forward?

The results from your second practice exam experience should help you identify areas where you may need to spend extra effort and energy in the training ahead.

#### THIRD EXAM

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Measure your progress against your first two practice exams! Ask yourself: Are you scoring 90% by now? If so, you might be ready for the real

Allow the results from your practice exam to direct your review ahead of your certification exam. Ask yourself: Are you retaining all the material? And are you understanding it well?

11. Deploy Windows 10  
 12. Deploy Windows 2016  
 13. Ethics and Hacking  
 24 30

The number and title for each video corresponds to the number and title you will find on the EC-Council Certified Ethical Hacker v9.0 course page online (and on your mobile device).

The duration of the video in minutes.

Time required to complete a virtual lab in minutes.

The Extra Mile section of your study plan challenges you to dig a little deeper with your training. The Extra Mile might be a textbook recommendation, supplemental materials downloads, or other resources to help you take your training to the next level. Nothing in the Extra Mile is required, but it is here to help you learn.

## EC-Council Certified Ethical Hacker v9.0

1. Welcome  
 2. Building a LAB: Concepts  
 3. Building a LAB: Networking  
 4. Deploy a Kali Linux VM

*\*Build your practice environment!*

33 30-45

5. Adding Metasploitable to Your Lab  
 6. Adding Windows to Your Lab  
 7. Configure a Static IP on Kali

*\*Continue refining your practice environment!*

30 30

8. Windows Evaluations  
 9. Deploy Windows 8.1  
 10. Deploy Windows 2012

*\*Plan to spend no less than 30 minutes per day working in your practice environment throughout the rest of your training.*

33 30

11. Deploy Windows 10  
 12. Deploy Windows 2016  
 13. Ethics and Hacking

24 30

14. Hacking Vocabulary  
 15. InfoSec Concepts  
 16. Attack Categories, Types, and Vectors

16 30

### EXTRA MILE

Download the [CEH Exam Blueprint v2.0](#). Use the blueprint to guide you through your training.

Download the [EC-Council CEH Candidate Handbook v2.2](#) to better understand the certification and its requirements.

Consider purchasing a textbook to supplement your video training.

- [CEH v9: Certified Ethical Hacker Version 9 Kit](#) by Sean-Philip Oriyano and Raymond Blockmon
- [CEH Certified Ethical Hacker Bundle, Third Edition \(All-In-One\)](#) by Matt Walker
- [CEH v9: Certified Ethical Hacker Version 9 Study Guide](#) by Sean-Philip Oriyano

## WEEK 2

17. Five Phases of Hacking  
18. Footprinting and Reconnaissance Concepts  
19. Search Engine Tools

▶ 24 📦 30

20. Hacking using Google  
21. Website Recon Tools  
22. Metagoofil Metadata Tool

▶ 28 📦 30

23. Email Headers for Footprinting  
24. Using WHOIS for Recon  
25. DNS Tools  
26. Network Scanning Overview

▶ 24 📦 30

27. Network Scanning Methodology  
28. Port Discovery  
29. Network Scanning Tools

▶ 23 📦 30

30. Stealth Idle Scanning  
31. OS and Application Fingerprinting  
32. Vulnerability Scanning

▶ 28 📦 30

## EXTRA MILE

Join the [CBT Nuggets Learner Community](#) on Slack! Join other CBT Nuggets learners in a community where you can post questions, share study resources, connect with IT experts from all over the world, and get mentoring for your training.

*\*Please allow 48 hours for your request to join the community to be processed.*

Explore the [EC-Council Whitepapers](#)! There are many worthwhile resources available, including:

- [5 Phases Every Hacker Must Follow](#)
- [10 Deadly Sins of Cyber Security](#)
- [Tracking Hackers Using HoneyDocs](#)

## WEEK 3

33. Network Mapping Tools  
34. Proxy Servers  
35. Using Public Proxy Services  
36. Enumeration Concepts

▶ 24 📦 30

37. NetBIOS Enumeration  
38. SNMP Enumeration Concepts  
39. SNMP Enumeration Tools

▶ 31 📦 30

40. LDAP Enumeration Concepts  
41. LDAP Enumeration Example  
42. NTP Enumeration  
43. SMTP Enumeration

▶ 27 📦 30

44. System Hacking Overview  
45. Password Cracking Concepts  
46. Password Attack Example: MITM and Sniffing

▶ 32 📦 30

47. Rainbow Crack Lab Setup  
48. Rainbow Crack Demonstration  
49. Password Reset Hacking

▶ 24 📦 30

## EXTRA MILE

Create flashcards to help you master the material. Consider making your own or using online services like [quizlet.com](#) to get more out of the flashcard experience.

Practice, practice, practice! Make sure you're spending time every week practicing the new skills you're learning!

WEEK 4

50. DHCP Starvation  
51. Remote Access

▶ 25 📦 30

52. Spyware  
53. NTFS Alternate Data Streams Exploit  
54. Steganography with OpenPuff

▶ 25 📦 30

55. Steganography with SNOW  
56. Covering Tracks  
57. Malware Overview

▶ 22 📦 30

58. Trojan Overview  
59. Creating a Trojan  
60. Virus Overview

▶ 34 📦 30

TAKE THE PRACTICE EXAM!

📄 90-120

EXTRA MILE

TAKE THE PRACTICE EXAM!

Use the results to drive your review and practice as you continue your study\*.

- [Transcender EC-Council Cert-312-50](#)

*\*Keep in mind that you've not completed the training yet, so you probably won't ace this exam. This is just to help you assess how well you are retaining the material you've learned so far!*

Keith Barker says, "ITsec and InfoSec pros can advance their careers by doing three basic things: Stay current, stay current, stay current!" Use these online resources to keep up with the ever-evolving nature of security.

- [IT Security Guru](#)
- [Dark Reading](#)
- [Krebs on Security](#)
- [ThreatPost](#)
- [Wired's Threat Level](#)

WEEK 5

61. Virus Creation  
62. Detecting Malware

▶ 25 📦 30

63. Malware Analysis  
64. Hash File Verification  
65. Sniffing Overview

▶ 30 📦 30

66. CAM Table Attack and Port Security  
67. DHCP Snooping

▶ 24 📦 30

68. Dynamic ARP Inspection (DAI)  
69. Social Engineering

▶ 29 📦 30

70. Denial of Service (DoS) Attacks  
71. Session Hijacking

▶ 37 📦 30

EXTRA MILE

Explore the [webinars offered by EC-Council](#) and consider signing up for a couple that address topics that pique your interest or address any areas of weakness you've identified in your training.

- [Threat Hunters in Action: Social Engineering - Inside Out](#) (43 minutes)
- [Bait the Phishing Hook: How to Write Effective Social Engineering Emails](#) (47 minutes)

**"Effort only fully releases its reward after a person refuses to quit."**

- *Napoleon Hill*

WEEK 6

72. Hacking Web Servers  
73. Buffer Overflow

▶ 23 📦 30

74. OWASP Broken Web Application Project  
75. Shellshock  
76. SQL Introduction

▶ 28 📦 30

77. SQL Injection  
78. Web App Vulnerabilities: WordPress

▶ 26 📦 30

79. Wireless Hacking  
80. Using an Android VM  
81. Malware for Mobile

▶ 33 📦 30

82. Mobile Device Risks and Best Practices  
83. Firewall Evasion

▶ 32 📦 30

EXTRA MILE

Submit your [EC-Council Exam Eligibility Form](#) to ensure you are eligible to sit for the exam at the conclusion of your training. Please note that you will be required to submit the name and contact information for a supervisor (or similar) who can verify your work experience.

Return to the [CEH Exam Blueprint](#) for review. Make sure you're conquering all the right information ahead of your exam!

**"A winning effort begins with preparation."**

*- Joe Gibbs*

WEEK 7

84. Firewall ACL Example  
85. NAT and PAT Fundamentals

▶ 26 📦 30

86. IDS/IPS Evasion  
87. Honeypots

▶ 29 📦 30

88. Cloud Computing  
89. CIA: Confidentiality, Integrity, and Availability

▶ 26 📦 30

90. Policies  
91. Quantifying Risk  
92. Separation of Duties

▶ 28 📦 30

93. Symmetrical Encryption Concepts  
94. Asymmetrical Encryption Concepts

▶ 30 📦 30

EXTRA MILE

**Register for your exam!**

Once you are notified of your eligibility to sit for the exam by the EC-Council (typically, about five working days after the eligibility form is received by the EC-Council), register with an approved testing site.

- Please note that you will have just three months to sit for the exam after you receive your approval from EC-Council.

Prepare for your future. Take a few minutes to review [Ethical Hacker Salaries: What to Expect](#) on the CBT Nuggets blog.

**"Success is peace of mind, which is a direct result of self-satisfaction in knowing you made the effort to become the best of which you are capable."**

*- John Wooden*

95. Control Types  
96. Multifactor Authentication

▶ 23 📦 30

97. Centralized Identity Management  
98. Kerberos and Single Sign On (SSO)

▶ 30 📦 30

99. Backups and Media Management  
100. Operations Security Controls

▶ 23 📦 30

101. Physical Security Controls  
102. Incident Response

▶ 23 📦 30

TAKE THE PRACTICE EXAM!

📄 90-120

### EXTRA MILE

#### TAKE THE PRACTICE EXAM!

Use the results to drive your review and practice as you continue your study\*.

- [Transcender EC-Council Cert-312-50](#)

*\*You should see strong improvements in your performance by now! Measure your improvement and let your practice exam results guide your study ahead of your certification exam.*

Return to your [flashcards](#). Flashcards are a great way to commit information to memory, making you a more efficient test-taker.

**"No one succeeds without effort. Those who succeed owe their success to perseverance."**

*- Joe Gibbs*

103. VPNs

▶ 21 📦 30

104. Disaster Recovery Planning  
105. Pen Testing Tips

▶ 23 📦 30

106. Useful Tools

▶ 11 📦 30

107. Case Study

▶ 21 📦 30

108. Additional Resources and Exam Prep

TAKE THE PRACTICE EXAM! One last time...

▶ 8 📄 90-120

### EXTRA MILE

This is an intentionally lighter week for video training, giving you the time to practice all that you've learned! Hands-on practice solidifies your knowledge and deepens your understanding of CEH concepts.

#### TAKE THE PRACTICE EXAM!

Use the results to drive your review and practice as you continue your study\*.

- [Transcender EC-Council Cert-312-50](#)

*\*As a general rule of thumb, learners who successfully pass certification exams consistently score 90% or better on practice exams. Pay attention to those topics where you may need to dedicate more time and effort to master.*

Take the [EC-Council CEH Assessment](#) as another measure of your preparedness for the certification exam.



## THE BIG DAY

Take the exam.

Get a good night's sleep  
ahead of your exam!



Brag about it! Tweet us or let us know  
how your exam went and what you're  
doing to celebrate your success!

The Certified Ethical Hacker certification puts you on the path to a career in IT or information security, but also opens up other pathways as well, including networking, virtualization, cloud computing, system administration, and more. Consider these pathways as you move beyond your CEH.

ENTRY LEVEL			INTERMEDIATE				ADVANCED	
NETWORKING								
CompTIA Network+	Cisco CCENT	Juniper JNCIA-Junos	CCNA Routing and Switching	CCNP Routing and Switching	Juniper JNCIS-ENT	Palo Alto Networks Firewall		Cisco CCIE Routing and Switching
SECURITY								
CompTIA Security+	Cisco CCENT		CCNA Security	CCNP Security	Penetration Testing with Linux Tools	EC-Council Certified Ethical Hacker		(ISC) <sup>2</sup> CISSP Cisco CCIE Security
VIRTUALIZATION								
CompTIA Network+	VMware vSphere Foundation		MCSA: Windows Server 2012	OR MCSA: Windows Server 2016	CCNA Data Center	VMware VCP6.5-DCV	Cisco CCNP Data Center	MCSE: Cloud Platform VMware VCAP6.5-DCV Design or Deploy
CLOUD COMPUTING								
CompTIA Network+	AWS: Technical Essentials	LPI Linux LPIC-1 and CompTIA Linux+	AWS: Certified Solutions Architect - Associate	AWS: Certified SysOps Administrator	MCSA: Cloud Platform	MCSA: Linux on Azure		MCSE: Cloud Platform
SYSTEM ADMINISTRATION								
CompTIA A+	LPI Linux LPIC-1 and CompTIA Linux+	VMware vSphere Foundation	Microsoft MCSA: Windows 10	Microsoft MCSA: Office 365	MCSA: Windows Server 2012	VMware vSphere 6.5 (VCP6.5-		MCSE: Cloud Platform

## CAREER PATHWAYS

CBT Nuggets is committed to providing you with the resources necessary to plan your training, certification, and career pathway effectively and efficiently. Review our Career Pathway blog posts to learn more.

- [Mapping Your IT Networking Career Pathway](#)
- [Mapping Your IT Networking Career Pathway Infographic](#)
- [Unlocking Your IT Security Career Pathway](#)
- [Decoding Your IT SysAdmin Career Pathway](#)
- [Plan the Perfect IT SysAdmin Career Path Infographic](#)
- [Charting Your IT Cloud and Virtualization Career Pathway](#)

### **Roadmap to Success: Certified Ethical Hacker (CEH)**

Learn more about the Certified Ethical Hacker certification from the CBT Nuggets blog. The [Roadmap to Success: Certified Ethical Hacker \(CEH\)](#) is part of a [series of blog posts](#) designed to help learners better understand certification pathways, career opportunities associated with those certifications, and next steps beyond certification.

## THE NEXT STEP

For learners seeking additional certification(s) with the EC-Council, most typically, the next step is to pursue the [EC-Council Licensed Penetration Tester \(LPT\)](#) certification. However, many learners choose to diversify their certification resumes by earning other security-related certifications. Learners often choose:

- [CCNA Security](#) (made up of two exams: [ICND1 100-105](#) and [IINS 210-260](#)),
- [CCNP Security](#) (made up of four exams: [300-208 SISAS](#), [300-206 SENSS](#), [300-209 SIMOS](#), and [300-210 SITCS](#)), or
- [\(ISC\)<sup>2</sup> CISSP](#) (made up of one exam: [CISSP 2015](#)).