



# BUILD CYBER SECURITY TALENT FRAMEWORK

ATTRACTING PUBLIC & PRIVATE SECTOR INDUSTRIES

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# CYBER SECURITY IS BECOMING INCREASINGLY COMPLEX



Cybercrime sophistication

Cyber-enabled fraud on the rise, phishing and social engineering attack and identify theft becoming the top personal cyber risks

Al and Emerging tech Will affect cybersecurity in the next 12 month but only 37% have processes in place for safe Al deployment

# <u>Cyber Skill Gap</u>

Widen since 2024, only 14% of organizations are confident that they have the people and skill required

https://www.weforum.org/publications/global-cybersecurity-outlook-2025/

# **EC-Council**

### Emerging technologies will exacerbate long-standing challenges related to cyber re

In the next two years, will generative Al provide overall cyber advantage to attackers or defenders? What are you most concerned about in regards <sup>.</sup> generative Al's impact on cyber?



# **How AI impacting Education Sector**

# Positive Impact :

- Personalize Learnir
- Adaptive Learning
- Automate Grading
- Enhanced Teaching Strategies
- ✤ Accessibility
- Increase Efficiency
- Promoted Creativity and Critical Thinking

# Negative Impact :

- Over-Reliance on Technology
- Bias and equity concern
- Lack of Human Interaction
- Data privacy and security
- Cost of Implementation & maintenance
- Ethical consideration



# Example AI Education:

- Al powered learning platform
- Intelligence tutoring system
- ✤ Automate essay scoring
- Virtual reality & augmented reality
- Gamified learning platform
- AI-Power Learning Management System (LMS)
- ✤ AI-Driven content creation

# Emerging Technologies The cyber security industry has an urgent talent shortage



Two-thirds of organizations face additional risks because of cybersecurity skills shortages, yet only 15% of firms expect cyber skills to significantly ramp up by 2026, the white paper explains

Estimates suggest that by 2030 there could be a global talent shortage of more than 85 million workers leading to an estimated loss of \$8.5 trillion in unrealized annual revenue Asia Pasific is 2.5 mil,

dge

# **Cyber Threats** across the Value Chain

MULTIMATIL

Skills shortages make it difficult to secure the organization.

Executive Board Members, CEO, CFO, CRO, CISO

Security Operations, Security Architecture, Blue Team, Red Team, GRC, Forensics and Incident Response, Cloud Security, Network Security

Application Development, IT Operations, DevOps, SRE, SCRUM, QA/Testing, Tiger Team, Networks and Systems Administration, Application Management Stock Price, Reputation, Cost of Breach

# **Continuous Learning, Obsolete Skills**

# Lack of Cybersecurity Awareness

Human Resources, Business Development, Operations, Marketing, Sales, Legal, Accounting and Finance, Project Management, Quality Analysis, Customer Support

cybersecurity

Lack of Basic Security Awareness

Description (Control of Control of Control

調算 計算目 :

# EC-COUNCIL ACADEMIA TIMATICS

# BRINGING WORLDCLASS CYBER SECURITY ROGRAM and BUILDING A CYBER SECURITY TALENT FRAMEWORK TO YOUR CAMPUS

https://www.eccouncil.org

# Indultimatics EC-Council

# **People are your greatest asset!**



ILTIMATICS, 71% Reports Skills Shortage Organizations report that the cybersecurity skills shortage has impacted them.

60% Fear AI Threat Defense Shortfalls People fear that their organizations are not prepared to defend against Al-powered threats and attacks.

**Upskilling is the Key to Success** Stats to be added.

# **Enable Cyber Security Talent**

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### CIVIL SOCIETY

Civil society organizations enable cybersecurity workforce development by providing education and training, supporting under-represented groups, hosting networking events and advocating for supportive policies.



# EDUCATIONAL INSTITUTION

Formal and informal educational institutions provide relevant learning programmes and practical experience on cybersecurity.



### GOVERMENT

Government entities, such as national cybersecurity bodies and ministries, define cybersecurity policies, provide funding and resources for training programmes, etc.

### **PRIVATE SECTOR**

In addition to attracting and recruiting cybersecurity talent, the rivate sector provides training and development programmes.

### INTERNATIONAL & REGIONAL ORGANIZATION AND DEVELOPMENT AGENCIES

WORLD

ECONOMIC

FORUM

nternational bodies such as the EU, ITU, OAS, World Bank and UN aid in cyber workforce development through policy-making, capacity-building and financial support. Objective

Attracting talent into cyber security

- Educating & training professional
- Recruiting the right cyber security talent
- Retaining cyber security professionals

# Sample of activities

- 1. Digital Talent Scholarship
- 2. Campus Merdeka Program
- 3. Center of Excellence
- 4. Universities engagement
- 5. Association Engagement
- 6. Cyber Security Community

https://www.weforum.org/agenda/2024/04/cybersecurity-industry-talent-shortage-new-report/

# **EC-Council Business Unit**





# EC-Council | Academia

www.eccouncil.org/academia

# Turnkey Academic Programs Leading to Industry Certifications



# STUDENTS | ALUMNI | FACULTY | EMPLOYEES



# Setting the Industry Standard

The World's First Cybersecurity Program with a 4-Phase Learning Framework



# C E Maine Meeting Industry Expectation Core Strength of the C|EH

Training Pedagogy
Hands-on Labs
Practical Learning
CTF



EC-Council has achieved accreditation for the following certification : Certified Network Defender (CND), Certified Ethical Hacker (CEH), Computer Hacking Forensic Investigator (CHFI), EC-Council Incident Handler (ECIH), and Certified Penetration Testing Professional (CPENT). Candidates who complete these programs can earn college credit recommendations from the American Council on Education (ACE). Click here to see our information release policy

# International EC-Council

Battalion.....

# **GLOBALLY RECOGNISED AND ENDORSED**



# Induitinatics EC-Council

# Factors that reduced the average breach cost

In this analysis, **IBM** looked at 28 contributing factors.

Al and automation lowers costs, High level of cyber skills shortage raises them.

# Key factors that reduced costs

# Employee training Use of AI and machine learning

# Organizations encounter general upskilling challenges

Finding the right training (42%), ensuring training is the right fit for the AI tool (49%) (pluralsight)

https://www.ibm	.com/downloads/	cas/1K73XE9D
111105.// 00 00 00 10111	.com/uowmoaus/	Cas/ INZSALSD

### Factors that reduced the average breach of -258.629 Employee trainin AI, machine lear -258.538 driven insights Security information -255.932 event managem -248.072Incident respon -243,914 Encryption Threat intelligen -243,090 DevSecOps app -240,499 IR team -225.634 Identity and acc -222,883 management (IA Proactive threat -219.074Security orchest -214.603 automation and -206.344 Insurance prote Offensive secur -200.050 ASM -186.463 Endpoint detect -185.533response tools Gen AI security -167,430 Data security and -166.600 protection softw Board-level over -152,256 -144.365 CISO appointed Managed securi -92.734 service provider

# IBM Cost of Data Breach Report 2024.

cost	EC-Council's Solutions ECL Enterprise, EC-Council	Certifications and Trainings
irning	C EH, ECL AI Cybertool kit	
ation and nent (SIEM)	C SA, C EH, E CIH+CEH	
nse (IR) planning	CIEH + EICH	
.(	E CES + C EH, C HFI	EC-Council
nce	C TIA + CEH	has the
broach	E CDE + CCSE	solution for
P	E CIH + C ND	
cess AM)	C ND, C EH	many factors
t hunting	C TIA + CEH	responsible
tration, I response (SOAR)	C SA + CEH	for reducing
ection		the average
ity testing	C PENT, C EH	breach cost.
tion and	Tools related	
tool	Tools related	
nd ware	CIND	
ersight	C CISO Experience	$\leftarrow$
1	C CISO	
ity r (MSSP)	CICISO	

Figure 25. Cost difference from USD 4.88M breach average; measured in USD



# EC-COUNCIL | ACADEMIA

# ARTNERSHIP WITH UNIVERSITY GLOBALLY

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Specific Academia Syllabus

Based on 12-week courses that constitute 3 credit per course. Each course entails at least 100 hour of work (reading, online discussion, Forum Posting, Assignment, papers and supplementary requirement

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Gain Knowledge

rcentage	Points	Grade	Comments	Quality Points Earned
0-100%	360-400	А	Superior Attainment of Course Outcomes	4.0
80-89%	320–359	в	Good Attainment of Course Outcomes	3.0
70-79%	280-319	с	Acceptable Attainment of Course Outcomes	2.0
60–69%	240-279	D	Poor Attainment of Course Outcomes	1.0
0–59%	000-239	F	Non-Attainment of Course Outcomes	0.0

No.	Assessment	Details	Points
1	Course Discussion Threads	There are 13 discussion threads (each worth 4 pts.)	52
2	Assignments from Reading	There are 11 assignments from reading (each assignment is worth 6 pts.)	66
3	Lab Assignments	There are 24 lab assignments (each worth 4 pts.)	96
4	Course Quizzes	There are 36 quiz questions (each worth 1 pt.)	36
5	Research Project	There is 1 research project (worth 50 pts.)	50
6	Final Exam	There is 1 final exam (worth 100 pts.)	100
		Total Points:	400

Provide Official EC-Council Course Shells LMS solutions

No more manual entry of academia syllabus include course learning outcomes, Objective, weekly lesson plan, assignment, quizzes and more

	Course Shells Available Via:	
	(LMS License(s) Required. Terms and Conditions Apply.)	
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- Fully design EC-Council course
- Automation grading control
- Quiz question and weekly assignment
- Video
- Exam eligibility and Voucher information



# Military-grade **Enterprise Solutions**

### **8 CYBER ESSENTIAL**



**Network Defense Essentials** 

sons + Hends-on Labe + CTF Challenges + Proctored Exam

No IT/Cybersecurity Experience Required

NDE



No IT / Cybersecurity Experience Required

Lessons - Hands on Labs - CTF Challenges - Proclored Exam

https://www.eccouncil.org/train-certify/essentials/

Cybersecurity Experience Require

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We believe that the best way to **learn cybersecurity is by doing**. That's why we built the Hackerverse. Whether you're a beginner taking your first steps or a seasoned pro sharpening your skills, this platform is designed to challenge, inspire, and push you to think like a hacker.

CTFs are more than just puzzles; they're real-world scenarios that train you to think critically and solve problems under pressure. The Hackerverse is here to help you grow, compete, and connect with a global community of cyber enthusiasts.

Group President, EC-Council





# What is The Hackerverse?

Hackerverse is a global cybersecurity skills ecosystem designed by EC-Council to support and advance the cybersecurity - th Th MULTIN GLEARNING (MULTIN community worldwide.

- Hackerverse CTF
- **Certification Labs**
- **CEH Global Competition**
- Practice Labs & CTFs



### **Enhance Awareness of** Hackerverse CTF:

Expand reach among academic institutions, students, and the broader cybersecurity community at large with skills-based engagements.

# Active Engagement and **Participation:**

Drive engagement in the monthly Hackerverse CTF by leveraging communities, social media campaigns, and outreach.

### **Establish Credibility:**

Establish the Hackerverse CTF competition as a premier platform that connects academic knowledge with practical cybersecurity skills, empowering participants to excel in the field.



# CTF Competition Pillars



### **RELEVANT SKILLS**

Showcase how challenges replicate common cybersecurity scenarios, preparing participants for practical applications across industry-relevant topics.

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# AWARDS & RECOGNITION

Promote cash and in-kind prizes as well as certificates that incentivize participation and celebrate achievements.



### COMMUNITY ENGAGEMENT

Promote the sense of belonging in the cybersecurity community and networking through Discord.

# COMPETITIVENESS

Focus on the thrill of competing, leaderboard rankings, and the recognition gained by excelling in cybersecurity challenges, month after month, all year long.

### SHOWCASE SKILLS TO EMPLOYERS

Showcase skills to employers by bridging academic knowledge with practical expertise through CTFs, boosting resumes and career opportunities.

New challenges will be available last 9 days of each month, focusing on core themes in reverse engineering, malware analysis, forensics, cryptography, and offensive security.

Month	Theme
March	Reverse Engineering, Malware Analysis
April	Forensics, Cryptography
May	Offensive Security
June	Reverse Engineering, Malware Analysis
July	Forensics, Cryptography
August	Offensive Security
September	Reverse Engineering, Malware Analysis
October	Forensics, Cryptography
November	Offensive Security
December	Reverse Engineering, Malware Analysis

# CTF Awards:

Hackerverse CTF award winners are offered cash or in-kind rewards each month, along with a shot at the End of Season awards.

