Cybersecurity
Network Attack Detection

iZen

Certificate Program

Learn from Dr. Fred Cohen, "Father of the Computer Virus"
who devised defenses used in 80% of computers worldwide

Cybersecurity Landscape

The world is undergoing significant digital-transformations, drastically changing the way we conduct business and carry out daily transactions. Cybersecurity assures the proper operation of everything from financial transactions to power generation, affects every size and scale of business, government, and everyday lives. It has become increasingly critical in the cyber-age.

Cyber-attacks can be extremely expensive, and cost lives, fortunes, and the future of nations. Attacks are getting more sophisticated, more frequent, and reaching more people around the world. That makes it important for you to become aware of the effects of cybersecurity issues.

HIGH DEMAND
Organizations are losing millions of dollars to network attacks. They are fighting back by hiring Cybersecurity experts.

HUGE SUPPLY GAP
Demand for Cybersecurity experts far exceeds supply. That means less competition and more salary for experts.

BRIGHT FUTURE
3.5 million unfilled Cybersecurity jobs projected by 2022. Unlike many others, Cybersecurity jobs are not going away.

BENEFITS OF THIS PROGRAM

- Kickstart or re-kindle your career:
  This is an "Outcome-based training" with a focus on employability, designed to prepare you for employment opportunities to work at a Security Operations Centre (SOC/NOC)
- Learn from the best in the world expert instructor, who earned the title "Father of the Computer Virus" and devised defenses used in more than 80% of computers worldwide
- Get practical insights from an (ISC)² Fellow, with over 40 years of experience in the cybersecurity industry and academia
- Real-life use-cases and case studies to give you practical insights
- Receive a Certificate upon successfully completing the course
- Learn by doing: Access iZen's cyberlabs for lab exercises to reinforce the understanding of concepts. Get hands-on experience

WHO IS THIS PROGRAM FOR?

✓ If you are a student seeking employment to kickstart your career, this is a great opportunity for you to build a rewarding, future-proof, and meaningful career

✓ If you are already employed but are trying to rekindle your career in the exciting world of cybersecurity, this program is perfect for you

✓ Prerequisites: Basic knowledge of computers and networking. No programming skills needed

WHAT WILL YOU LEARN?

MODULE 1 **Basics of network operations and mechanisms**

1. Physical and logical layers
2. Protocols and IP, Sniffing, TCP, UDP, DNS
3. How does the traffic flow?
4. Governance, Flow of traffic and SMTP
5. Live Lab-exercises

MODULE 2 **Fundamentals of network attack methods**

1. Components, and attack mechanisms
2. Attacker objectives, capabilities
3. Attacker methods and mechanisms
4. Defender's viewpoints and objectives
5. Attack methodologies
6. Starting position and attack progression
7. Passive and active attack tools
8. Design basis threat
9. Live Lab-exercises

MODULE 3 **Essentials of network attack detection mechanisms**

1. The magnitude of the problem
2. Attacks on Vs. through networks
3. Detecting known attack sequences
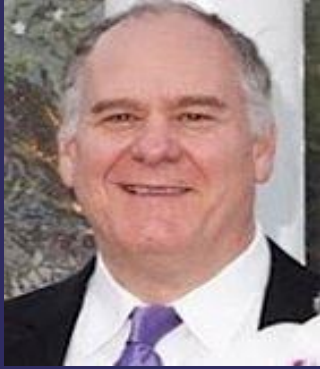4. Live Lab-exercises

MODULE 4 **Automated detection tools, and operational methodologies**

1. A general approach to detection
2. Loss of accountability
3. Detection and response in a NOC
4. Live Lab-exercises

PROGRAM FACULTY

Dr. Fred Cohen has 40+ years of experience building companies and supporting risk management and strategic decision making for enterprises of all sizes and sorts. He is globally recognized as an innovative expert in information protection and cybersecurity. He is one of the only 20 Cybersecurity experts in the world, recognized as a fellow of (ISC)² at "Cybersecurity and IT Security Certifications and Training". Dr. Cohen works closely with global experts to help bring knowledge of all things Cyber to program attendees from around the World.

LinkedIn profile: https://www.linkedin.com/in/dr-fred-cohen/

The more detailed profile can be found at http://fc0.co/

Dr. Cohen has a long history of being ahead of the curve:

- Won several international awards for his work in Cybersecurity
- Led the team that defined the information assurance problem as it relates to critical infrastructure protection
- Did seminal research in the use of deception for information protection
- His "Deception for Protection" series of papers is widely cited, and the techniques he pioneered are now in global use
- A leader in advancing the science of digital forensic evidence examination
- Top-flight information protection consultant and industry analyst for many years
- Authored more than 200 invited, refereed, and other scientific and management research articles
- Wrote monthly articles on cyber since 1995 and wrote several books on information protection
- His "Enterprise Information Protection Architecture", "Challenges to Digital Forensic Evidence", and "Digital Forensic Evidence Examination" are used in graduate classes and other venues worldwide
- Leading security practitioners around the globe have used his "Chief Information Security Officers ToolKit" series of books and booklets
- His "Frauds Spies and Lies and How to Defeat Them" book has been the subject of radio talk shows
- The research community has widely used his series of "Infosec Baseline" studies as stepping off points for further research
- His "50 Ways" series is very popular among practitioners looking for issues to be addressed
- His "World War 3 ... Information Warfare Basics" is highly regarded among the thinkers in this arena
- Founded the College Cyber Defenders program at Sandia National Laboratories that ultimately led to the formation of the CyberCorps program
- Taught and testified on issues of digital forensics as an admitted expert in local, State, Federal, and other courts in criminal and civil matters
- Was named the "most famous hacker" of all time by ABC News in 2009

Dr. Cohen has a Ph.D. in Electrical Engineering (University of Southern California), MS in Information Sciences (University of Pittsburgh), and a BS in Electrical Engineering (Carnegie-Mellon University).

HOW WILL YOU LEARN?

- ✓ Online using Desktop, Laptop or Mobile devices
- ✓ Learn at your own convenient time, and pace
- ✓ Video lectures delivered from a cloud LMS platform
- ✓ Quizzes online remote
- ✓ Hands-on projects, and industry case studies for the reinforcement of the learning

WHAT IS THE DURATION OF THE PROGRAM?

A total of around 60-75 hours depending on your background/experience.

The course can be completed in 8-weeks / 12-weeks depending on how much time you can dedicate per week for this course.

ABOUT iZen

iZen is a Talent Empowerment company, offering end-to-end solutions for skill development and employability, leveraging the power of AI and other digital technologies. The company was founded in Silicon Valley, California with a global vision to incubate innovation and to provide a platform that gives access to knowledge, skills, and advisory to empower the next generation workforce and students. iZen brings you internationally recognized standard programs, to set you apart and to future-proof your career.
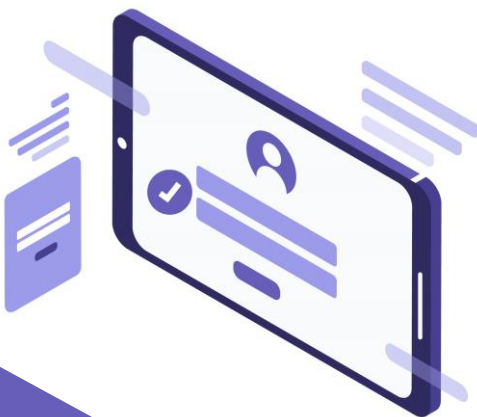
HOW DO I ENROLL IN THE COURSE?

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