



SRHU/HSST/Int./Not/2024/208

November 16, 2024

## NOTICE

This is to inform all the registered students that the **Honeywell Cybersecurity Training Program**, organized as part of the ICT Academy's Youth Empowerment initiative, will be conducted from **18th November 2024 to 4th December 2024**.

**Details of the Program is given below:**

- **Venue:** Lab 6
- **Timing:** 9:00 AM to 4:00 PM

This program is an excellent opportunity to gain in-demand skills in the field of Cybersecurity and enhance your career prospects.

*For further details you can contact **Dr. Ashutosh Bhatt** (7895533079).*

Principal  
Himalayan School of Science & Technology  
Swami Rama Himalayan University  
Dehradun

*Pramod*  
16/11/2024

**Dr. Pramod Kumar**  
Principal

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**Honeywell**

**CYBERSECURITY  
TRAINING**

18 November 2024

Hosted by



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**SRHU**  
SWAMI RAMA HIMALAYAN UNIVERSITY  
DEHRADUN, UTTARAKHAND

INAUGURAL SPEAKERS



**Dr. Rajendra Dobhal**  
Vice Chancellor  
Swami Rama Himalayan  
University



**Dr. Pramod Kumar**  
Principal  
Swami Rama Himalayan  
University



**Dr. Ashutosh Bhatt**  
Assistant Professor, CSE  
Swami Rama Himalayan  
University



**Aaditya Singh**  
Senior Relationship Manager  
ICT Academy

[www.ictacademy.in/honeywell](http://www.ictacademy.in/honeywell)

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[www.ictacademy.in/honeywell/cybersecurity](http://www.ictacademy.in/honeywell/cybersecurity)



## Report

**Department:** Computer Science and Engineering

**Event Name:** ICT Academy & Honeywell- Cybersecurity

**Date:** 18<sup>th</sup> November 2024 – 4<sup>th</sup> December 2024

**No. of Participants:** 62

**Venue:** Computer Lab-6

**Coordinator:** Dr. Ashuthosh Bhatt

**Mentor:** Dr. Suman Pant / Ms. Shefali khatri

**Objective:** The cybersecurity workshop aims to equip participants with essential knowledge and practical skills to safeguard digital assets and mitigate cyber threats. It aims to raise awareness about cybersecurity risks, provide hands-on training in threat prevention, and introduce best practices and tools for securing systems and networks.

### **Introduction:**

The Cybersecurity Training Program was held from 18th November 2024, beginning with an inaugural session at 9:00 AM in the HSST Auditorium. The event included a warm welcome, a ceremonial lamp lighting, and an inspiring address by Principal Dr. Pramod Kumar, who emphasized the importance of cybersecurity. Trainer Mr. Salik Hayat outlined the course structure and stressed the growing demand for cybersecurity skills.

The ICT Academy recognized the institution as a Centre of Excellence (COE) in cybersecurity training and development. Hands-on sessions, conducted in a well-equipped lab, engaged 62 students in practical learning over 15 intensive days.

### **Training Session Details**

#### **Module 1: Introduction to Cybersecurity**

Introduction to Cybersecurity provided participants with a foundational understanding of cybersecurity, emphasizing the importance of protecting systems, networks, and data from cyber



threats. It introduced core concepts like the confidentiality, integrity, and availability (CIA) triad. The global scope of cybersecurity was explored, including trends in cybercrime and its impact on industries and society. Participants learned about organizational data types, their vulnerabilities, and best practices for safeguarding them. The module delved into the profiles and motivations of cyber attackers, such as hackers and state-sponsored actors, as well as the concept of cyberwarfare and its geopolitical implications.

Additionally, it examined communication technologies in a connected world, highlighting the risks and security protocols for technologies like IoT. Conducted through interactive lectures with real-world examples, the module enabled participants to understand cybersecurity principles, the evolving threat landscape, and the critical importance of data and communication security.

### **Module 2: Networking Basics**

This module provided participants with essential knowledge about computer networks and their components. It covered the types and functions of network devices like routers, switches, and hubs, along with various network types such as LAN, WAN, and PAN. The module explored wireless and mobile networks, including technologies like Wi-Fi and Bluetooth, highlighting their advantages, challenges, and security considerations. A practical session guided participants in designing and configuring a basic home network. Additionally, the module introduced communication principles, focusing on how data flows between devices, and explained the significance of network media such as cables and wireless signals. The Access Layer, which connects devices to the network, was also covered to ensure participants understood its role in network architecture. This module combined theoretical knowledge with hands-on practice to strengthen participants' networking fundamentals.

The module included Stage-1 Revision - Part 1, the main sessions, and Stage-1 Revision - Part 2 to reinforce the concepts learned.

### **Module 3: Networking Devices and Initial Configuration**

This module focused on foundational concepts and practical skills related to networking devices and their configuration. Participants learned about network design, covering the principles of creating efficient and scalable networks. The module introduced cloud computing and virtualization, emphasizing their role in modern IT infrastructure. Number systems, such as binary and hexadecimal, were explained as essential for understanding IP addressing. Ethernet



switching concepts, including how switches handle data within networks, were covered in detail. Participants also explored the structure and classification of IPv4 addresses, enabling effective network planning. Finally, hands-on sessions with the Cisco IOS command line provided participants with practical experience in configuring and managing network devices.

#### **Module 4: Endpoint Security**

This module delved into the various dimensions of cybersecurity threats, vulnerabilities, and attacks, providing participants with a comprehensive understanding of how adversaries exploit weaknesses. It covered strategies for securing networks, emphasizing proactive defenses against common and advanced threats. Sessions on "Attacking the Foundation" and "Attacking What We Do" focused on identifying and mitigating vulnerabilities at both structural and operational levels. Wireless network communication was explored, highlighting the risks and best practices for securing wireless networks. The module also examined network security infrastructure, including its design and deployment, across two focused sessions. Operating system fundamentals were introduced through sessions on Windows and Linux, providing insights into their role in cybersecurity. Participants gained practical skills in system and endpoint protection, reinforcing their ability to safeguard devices and applications. Finally, the module concluded with an overview of key cybersecurity principles.

The module included Stage-2 Revision Part 1, Stage-2 Revision Part 2, and a Formative Assessment 2 to review and evaluate participants' understanding.

#### **Module 5: Network Defense**

This module focused on advanced concepts and practical strategies for defense mechanisms in cybersecurity. It began with an overview of defense principles, followed by in-depth sessions on system and network defense, emphasizing layered security approaches and techniques for protecting infrastructure. Participants explored access control lists (ACLs) through three progressive sessions, learning how to restrict and manage traffic effectively. Firewall technologies, including traditional and zone-based policy firewalls, were covered to equip participants with the skills to implement robust network defenses. Cloud security concepts were discussed in two sessions, addressing the unique challenges and solutions for securing cloud environments. Cryptography was examined through multiple sessions, highlighting its importance



in ensuring data integrity and confidentiality. Technologies and protocols relevant to network security were explored, along with sessions on analyzing and securing network security data. The module also included practical exercises on evaluating alerts to detect and respond to threats. To consolidate learning, **Stage-3 Revision Part 1**, **Stage-3 Revision Part 2**, and **Formative Assessment - 3** were conducted, enabling participants to review concepts and demonstrate their understanding.

### **Module 6: Cyber Threat Management**

This module focused on advanced techniques for managing cybersecurity risks. It covered Governance and Compliance, exploring regulations and standards across three sessions. Participants learned Network Security Testing, combining lectures and hands-on exercises to assess network vulnerabilities. Threat Intelligence sessions taught how to collect and analyze threat data, while Endpoint Vulnerability Assessment focused on identifying device vulnerabilities. The module also covered Risk Management and Security Controls, ensuring participants understood how to protect assets. Digital Forensics and Incident Response sessions provided practical skills for analyzing and responding to security breaches. The module concluded with Full Course Revisions and a Summative Assessment to evaluate participants' knowledge and skills.

### **Conclusion**

The 15-day cybersecurity program was successfully completed, equipping participants with in-depth knowledge and practical skills in various aspects of cybersecurity, from foundational principles to advanced threat management. All participants will be awarded a certificate of completion for their active engagement in the program.

In addition, students have been provided with Cisco user IDs and passwords, granting them access to Cisco's learning platform. This resource enables participants to continue their education, complete assignments, and enhance their expertise. Upon fulfilling the required coursework and assignments, they will also receive an official Cisco certification, further validating their skills and enriching their professional credentials. This initiative ensures a continued learning journey and empowers students to excel in the field of cybersecurity.



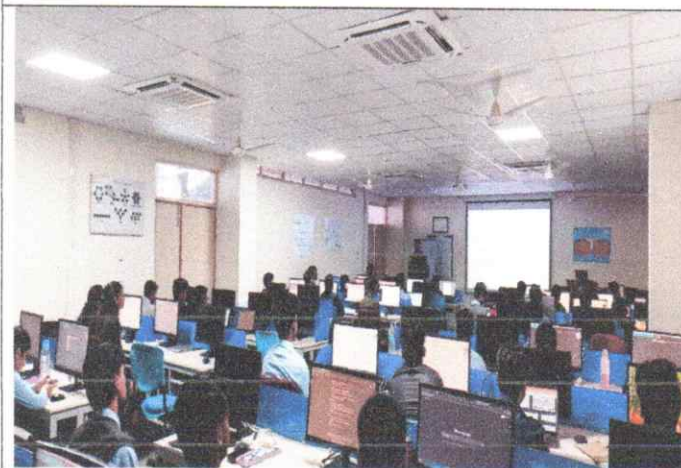
**Some glimpses of activity**



Together as one team with our guiding light,  
Principal Sir!



Building futures with our amazing students!



A productive session led by our inspiring  
trainer!



Closing one chapter with gratitude and  
memories!!

  
**Dr. Ashutosh Bhatt**  
Event Coordinator  
HSST

  
**Principal**  
**Himalayan School of Science & Technology**  
**Swami Rama Himalayan University**  
**Dehradun**  
**Dr. Pramod Kumar**  
Principal  
HSST

## Honeywell - Women Empowerment on Cyber Security



### Cyber Security - Session Plan - 100 Hours

Trainer Name : Salik Hayat Start Date : 18<sup>th</sup> Nov, 2024


Institution Name : Swami Rama Himalayan University, Dehradun End Date : 4<sup>th</sup> Dec, 2024

S.No	Chapter	Topic	Methodology	Duration (Hrs)	Date	Trainer Signature
<b>Stage - 1</b>						
1	Module 1: Introduction to Cybersecurity	Introduction to Cybersecurity	Lecture	1	18/11	<u>Salik</u>
2		World of Cybersecurity	Lecture	1	"	<u>Salik</u>
3		Organizational Data	Lecture	1	"	<u>Salik</u>
4		Cyber Attackers	Lecture	1	"	<u>Salik</u>
5		Cyberwarfare	Lecture	1	"	<u>Salik</u>
6	Module -2: Networking Basics	Communications in a Connected World	Lecture	1	"	<u>Salik</u>
7		Network Components, Types, and Connections	Lecture & Demo	1	"	<u>Salik</u>
8		Wireless and Mobile Networks	Lecture & Demo	1	19/11	<u>Salik</u>
9		Build a Home Network	Lecture, Demo & Exercise	1	"	<u>Salik</u>
10		Communication Principles	Lecture	1	"	<u>Salik</u>
11		Network Media	Lecture & Demo	1	"	<u>Salik</u>
12		The Access Layer	Lecture & Demo	1	"	<u>Salik</u>
13		The Internet Protocol	Lecture & Demo	1	"	<u>Salik</u>
14		IPv4 Addressing	Lecture & Demo	1	"	<u>Salik</u>
15		IPv6 Addressing	Lecture & Demo	1	20/11	<u>Salik</u>
16		Dynamic Addressing with DHCP	Lecture & Demo	1	"	<u>Salik</u>
17		Gateways to Other Networks	Lecture & Demo	1	"	<u>Salik</u>
18		Address Resolution	Lecture	1	"	<u>Salik</u>
19		Routing Between Networks	Lecture & Demo	1	"	<u>Salik</u>
20		Transport Layer	Lecture	1	"	<u>Salik</u>
21		Application Layer Services	Lecture	1	"	<u>Salik</u>
22		Network Testing Utilities	Lecture & Demo	1	21/11	<u>Salik</u>
<b>Stage-1 Revision - Part 1</b>				1	"	<u>Salik</u>
<b>Stage-1 Revision - Part 2</b>				1	"	<u>Salik</u>

- Incomplete  
- address

S.No	Chapter	Topic	Methodology	Duration (Hrs)	Date	Trainer Signature
Formative Assessment - 1				1	21/11	<u>Sabit</u>
<b>Stage - 2</b>						
1	Module - 3: Networking devices and initial configuration	Network Design	Lecture & Demo	1	"	<u>Sabit</u>
2		Cloud and Virtualization	Lecture & Demo	1	"	<u>Sabit</u>
3		Number Systems	Lecture	1	"	<u>Sabit</u>
4		Ethernet Switching	Lecture & Demo	1	22/11	<u>Sabit</u>
5		Network Layer	Lecture	1	"	<u>Sabit</u>
6		IPv4 Address Structure	Lecture	1	"	<u>Sabit</u>
7		IP Addressing Services	Lecture	1	"	<u>Sabit</u>
8		The Cisco IOS Command Line	Lecture & Demo	1	"	<u>Sabit</u>
9		Build a Small Cisco Network	Lecture, Demo & Exercise	1	"	<u>Sabit</u>
10		ICMP	Lecture & Demo	1	"	<u>Sabit</u>
11	Module - 4: Endpoint security	Cybersecurity Threats, Vulnerabilities, and Attacks -1	Lecture & Demo	1	23/11	<u>Sabit</u>
12		Cybersecurity Threats, Vulnerabilities, and Attacks -2	Lecture & Demo	1	"	<u>Sabit</u>
13		Securing Networks	Lecture & Demo	1	"	<u>Sabit</u>
14		Attacking the Foundation	Lecture	1	"	<u>Sabit</u>
15		Attacking What We Do	Lecture	1	"	<u>Sabit</u>
16		Wireless Network Communication	Lecture & Demo	1	"	<u>Sabit</u>
17		Network Security Infrastructure -1	Lecture & Demo	1	"	<u>Sabit</u>
18		Network Security Infrastructure -2	Lecture & Demo	1	25/11	<u>Sabit</u>
19		The Windows Operating System	Lecture & Demo	1	"	<u>Sabit</u>
20		Linux Overview	Lecture & Demo	1	"	<u>Sabit</u>
21		System and Endpoint Protection	Lecture, Demo & Exercise	1	"	<u>Sabit</u>
22		Cybersecurity Principles, Practices, and Processes	Lecture	1	"	<u>Sabit</u>
Stage-2 Revision Part 1				1	"	<u>Sabit</u>

S.No	Chapter	Topic	Methodology	Duration (Hrs)	Date	Trainer Signature
Stage-2 Revision Part 2				1	"	<u>Salik</u>
Formative Assessment - 2				1	26/11	<u>Salik</u>
<b>Stage - 3</b>						
1	Module - 5: Network defense	Understanding Defense	Lecture & Demo	1	"	<u>Salik</u>
2		System and Network Defense -1	Lecture & Hands on	1	"	<u>Salik</u>
3		System and Network Defense -2	Lecture & Hands on	1	"	<u>Salik</u>
4		System and Network Defense -3	Lecture & Hands on	1	"	<u>Salik</u>
5		Access Control Lists -1	Lecture & Hands on	1	"	<u>Salik</u>
6		Access Control Lists -2	Lecture & Hands on	1	"	<u>Salik</u>
7		Access Control Lists -3	Lecture & Hands on	1	27/11	<u>Salik</u>
8		Firewall Technologies -1	Lecture & Hands on	1	"	<u>Salik</u>
9		Firewall Technologies -2	Lecture & Hands on	1	"	<u>Salik</u>
10		Zone-Based Policy Firewalls -1	Lecture & Hands on	1	"	<u>Salik</u>
11		Zone-Based Policy Firewalls -2	Lecture & Hands on	1	"	<u>Salik</u>
12		Cloud Security -1	Lecture & Hands on	1	"	<u>Salik</u>
13		Cloud Security -2	Lecture & Hands on	1	"	<u>Salik</u>
14		Cryptography -1	Lecture & Hands on	1	28/11	<u>Salik</u>
15		Cryptography -2	Lecture & Hands on	1	"	<u>Salik</u>
16		Cryptography -3	Lecture & Hands on	1	"	<u>Salik</u>
17		Technologies and Protocols -1	Lecture & Hands on	1	"	<u>Salik</u>
18		Technologies and Protocols -2	Lecture & Hands on	1	"	<u>Salik</u>
19		Network Security Data -1	Lecture & Hands on	1	"	<u>Salik</u>
20		Network Security Data -2	Lecture & Hands on	1	"	<u>Salik</u>
21		Evaluating Alerts -1	Lecture & Hands on	1	29/11	<u>Salik</u>
22		Evaluating Alerts -2	Lecture & Hands on	1	"	<u>Salik</u>
Stage-3 Revision Part 1				1	"	<u>Salik</u>
Stage-3 Revision Part 2				1	"	<u>Salik</u>
Formative Assessment - 3				1	"	<u>Salik</u>

S.No	Chapter	Topic	Methodology	Duration (Hrs)	Date	Trainer Signature
<b>Stage - 4</b>						
1	Module - 6: Cyber threat management	Governance and Compliance	Lecture	1	11	<u>Sabir</u>
2		Governance and Compliance	Lecture	1	11	<u>Sabir</u>
3		Governance and Compliance	Lecture	1	30/11	<u>Sabir</u>
4		Network Security Testing	Lecture	1	11	<u>Sabir</u>
5		Network Security Testing	Lecture & Hands on	1	11	<u>Sabir</u>
6		Network Security Testing	Lecture & Hands on	1	11	<u>Sabir</u>
7		Threat Intelligence	Lecture & Hands on	1	11	<u>Sabir</u>
8		Threat Intelligence	Lecture & Hands on	1	11	<u>Sabir</u>
9		Threat Intelligence	Lecture & Hands on	1	11	<u>Sabir</u>
10		Endpoint Vulnerability Assessment	Lecture & Hands on	1	2/12	<u>Sabir</u>
11		Endpoint Vulnerability Assessment	Lecture & Hands on	1	11	<u>Sabir</u>
12		Endpoint Vulnerability Assessment	Lecture & Hands on	1	11	<u>Sabir</u>
13		Risk Management and Security Controls	Lecture & Hands on	1	11	<u>Sabir</u>
14		Risk Management and Security Controls	Lecture & Hands on	1	11	<u>Sabir</u>
15		Risk Management and Security Controls	Lecture & Hands on	1	11	<u>Sabir</u>
16		Digital Forensics and Incident Analysis and Response	Lecture & Hands on	1	11	<u>Sabir</u>
17		Digital Forensics and Incident Analysis and Response	Lecture & Hands on	1	3/12	<u>Sabir</u>
18		Digital Forensics and Incident Analysis and Response	Lecture & Hands on	1	11	<u>Sabir</u>
19	Full course Revision - Part 1			1	11	<u>Sabir</u>
20	Full course Revision - Part 2			1	11	<u>Sabir</u>
21	Full course Revision - Part 3			1	11	<u>Sabir</u>
22	Full course Revision - Part 4			1	11	<u>Sabir</u>
23	Full course Revision - Part 5			1	11	<u>Sabir</u>
<b>Summative Assessment</b>				2	4/12/24	<u>Sabir</u>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p><u>Sabir</u> Signature of the Trainer 4/12/24</p> </div> <div style="text-align: center;"> <p><u>A. A. 12/24</u> Spoc Signature &amp; College seal</p> </div> <div style="text-align: right;">  </div> </div>						









S.No	Student Name												
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Seal & Signature of the SPOC



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