

# Ethical Hacking & Cyber Security



Certification 2-8 Weeks / 30-40 Hours  
Job oriented exhaustive program  
**Internship & Training Program**  
Make Projects & Get Trained

Official Partner



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# Techniche

The annual Techno-Management Festival  
IIT Guwahati

## Internship & Training Program

### About Edu-Vitae Services

**Edu-Vitae Services** (Run by IITians & Industry Experts) is a renowned provider of education and training programs, with a global presence. We offer a wide range of courses and training opportunities in the areas of computer science and IT, animation and multimedia, and soft skills, as well as engineering and advanced technology. Our programs include workshops, internships, corporate training, certificate courses, and faculty development programs, all designed to meet the needs of students, professionals, academic institutions, and industry. Our reputation as one of the top technology training providers in India is a testament to our commitment to helping our clients acquire the skills and knowledge they need to succeed in their careers.

### Our Clientele/Collaborations

Some of the **top** institutions and corporates where directly/indirectly we already felt our presence are given below:

Indian Institute of Technology, Kanpur

Indian Institute of Technology (Banaras Hindu University), Varanasi

Indian Institute of Technology (ISM), Dhanbad

Indian Institute of Technology, Jodhpur

Indian Institute of Technology, Bhubaneswar

Indian Institute of Technology, Guwahati

Indian Institute of Management (IIM), Indore

National Institute of Technology, Surat

IISc, Bangalore

Chandigarh University

Design Innovation Centre, Department of Applied Arts (Visual Arts), Banaras Hindu University, Varanasi

Madan Mohan Malaviya University of Technology, Gorakhpur

Maharaja Agrasen Institute Of Technology, Delhi

Thapar Institute of Engineering & Technology, Punjab

Kendriya Vidyalaya, India

DAV School, India

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#### Industry/Corporate/Startups

Accenture

Capgemini

Rabbixel

CreativeHatti

F1 Digitals

MapsCrew

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and many more tech & non-tech colleges/universities/institutes/schools & startups/companies across India and globe.

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### Achievements & Milestones

- ✓ Our alumni / students are working in top notch company of India & MNCs **VMware, Infosys, Cognizant, CGI, Fidelity, Razorpay, EXL, CARS24, Tata Steel, NVIDIA, MyKaarma, Oyo Rooms, Samsung, Walmart Labs, L&T, JIO, Citibank, TCS, Accolite, BNY Mellon**, and many more.
- ✓ Conducted a number of workshop/training/internship programs in many colleges/universities/schools of India like **IITs, NITs, IISc & other prestigious colleges & universities** of India & with the corporate industry too.
- ✓ Trained many college/university/school students, some of them have created a milestone for **Edu-Vitae Services** by meeting with **Shri Narendra Damodardas Modi** (Prime Minister of India) related to some robotics projects.
- ✓ Collaborating with Industries / Corporates / Startups to provide them hiring services (helping them to **hire fresh trained talent with us**).
- ✓ Signed MOUs / worked with top notch colleges / universities / schools like **Techkriti IIT Kanpur, Technex IIT (BHU) Varanasi, Wissenaire IIT Bhubaneswar, Techniche IIT Guwahati, Concetto IIT (ISM) Dhanbad, Pravega IISc Bangalore, IGNUS IIT Jodhpur, Ranbhoomi IIM Indore, MMMUT Gorakhpur, NIT Surat, Chandigarh University** and many other colleges / universities / schools for professional / industry ready skills training / workshop / internship programs.

### Prerequisites

Participants from 1<sup>st</sup> year/ 2<sup>nd</sup> year / 3<sup>rd</sup> year / 4<sup>th</sup> year of CSE/IT/MCA/BCA/MSc/BSc-IT/ECE/EE/Other branch/stream will get more benefit after joining this program and other interested students can also participate in that as per their requirement.

### What is required before joining this training program?

Here's the checklist

1. A laptop with Microsoft Windows (7 or later) configuration along with smartphone as per need/requirement.
2. Laptop Charger/Adapter for charging purpose.
3. USB Mouse for designing purpose (if required).
4. Internet Connectivity (Typically to be able to do video call / conferencing, if the program is in online mode)
5. Notepad & Pen/Pencil for important notes.

### Training Deliverables & Takeaways

Every participant will get

- ✓ Industry Ready Curriculum
- ✓ Interactive & Doubt Session (online & offline)
- ✓ Certification Program
- ✓ Mini & Major Projects
- ✓ Career Guidance
- ✓ Projects Based Learning

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### Course & Content

All of the sessions will be practical oriented, so it will be really great if participant(s) can look on the syllabus which we are going to cover during training days.

### Ethical Hacking & Cyber Security

#### Brief Introduction About Course:

- The Course is specifically design in a way that even a non-technical person can look for future scope in ethical hacking
- During it's initiation we will go from scratch and soon you will be good enough to touch skies.
- As an ethical hacker there are some norms and procedure which are necessary to follow and that's what makes a hacker the ethical hacker, so our role starts from there.
- We have a bundle of hands on work to do along with that we will make sure you know what are the different roles and ethical hacker plays at job.

#### Module 1: Introduction to Ethical Hacking [4 hours]

##### Session #1

##### Ethical Hacking Overviews

- Hacking concept, what is hacking?
- Terms we use in hacking.
- Need of Ethical hacking.
- Cases of Hacking in India & across the globe

##### Session #2

##### Principles of Ethical hacking

- Basic Principle
- Commandments of Ethical Hacking

##### Session #3

##### Hacking Methodologies

- Types of Hacking.
- Building the foundation for Ethical hacking
- Hacking Phases

##### Session #4

##### Role of Ethical Hacker

- Types of Hackers
- Roles and Responsibilities
- Introduction of Red team, Blue Team, White team and Black team.

##### Session #5

##### Scope & limitations of hacking.

- Advantages & scope for hacking
- Drawbacks & Limitation of hacking

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- Universal Laws applicable
- Job responsibility allocated

### Assignment Quiz-1

#### Project 1: Creating a report on the methodologies of hacking

### Module 2: Methodologies and Tools

#### Section#6: Hacking tools and techniques

- Common Hacking Tools [Command prompt, Python powershell, nmap, etc.]
- Hacking Techniques & Approaches Policies and Controls [ network, mobile, over system, Cryptography etc.]

#### Section#7: Overview of PT / VA.

- Concept of Penetration testing
- Types of Penetration testing
- Phases of Penetration testing
- Vulnerability Assessment by Penetration testing

#### Section#8: Malware Overviews

- Introduction to Malware.
- Different Ways a Malware Can Get into a System.
- Common Techniques Attackers Use to Distribute Malware on the Web
- Components of Malware

#### Section#9: Virus Worm & Trojan Concepts

- Introduction to Viruses, Worms & Trojan
- Types of Viruses, Worms & Trojan
- Fake Antiviruses
- How Did Antivirus Works.

### Assignment 2: Quiz 1

#### Project 2: create at list 3 malware and report them.

### Module 3: Foot printing and Reconnaissance Cycle [8hr]

#### Section#13: Stage 1 of a hack: Foot printing

- Google Hacking and Google Dorking
- Open-Source Intelligence: OSINT
- (Gathering Information)

#### Stage2 of hack: Enumeration

#### Stage3 of hack: Scanning

- ping, hping3, nmap
- Scan types and their results: SYN, TCP, ACK, FIN etc.

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**Assignment3:** Reconnaissance, Scanning and Enumeration Lab Assignment

**Quiz3: Scanning and Enumeration**

### Section#14: Stage4 of hack: Sniffing

- Techniques for Enumeration, Services and Ports to Enumerate
- NetBIOS, SNMP, LDAP Enumeration
- Information Gathering Using Groups, Forums, and Blogs.

### Stage4 of hack: Social Engineering

- Social Engineering Concepts
- Social Engineering Techniques
- Insider Threat / Insider Attack.
- Social Engineering Countermeasures

**Assignment4:** Client-side Exploitation and Social Engineering Lab Assignment

**Assignment Quiz4:** Social Engineering and APT

## Module 4: SQL Injection, DOS Attacks, Session hijacking and System hacking [12hours]

### Section#15: SQL Injection

- Basics to the SQL queries
- How Injection Can be done
- Cross Site Scripting Attacks

### Section#16: DOS Attacks

- DoS/DDoS Attack Techniques.
- DDoS Case Study
- DoS/DDoS Attack Tools

### Section#17: Session Hijacking

- Session Hijacking Concepts,
- Network Level Session Hijacking
- Client-side Hijacking.

### Section18: System Hacking

- System Hacking Concepts
- Cracking Passwords
- Escalating Privileges
- Hiding Files and Covering tracks

**Assignment5:** Penetration Test Report Assignment

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### Assignment Quiz5: Wireless and Physical Exploitation

#### Module 5: Malware Analysis

- Introduction to Malware Analysis
- Malware Analysis Procedure
- Malware Detection Method

### Assignment 6: Presentation on any of the above topic

#### Practical Lab:

1. Conduct detailed reconnaissance using document metadata, search engines, and other publicly available information sources to build a technical and organizational understanding of the target environment.
2. Network scanning techniques and scanning countermeasures
3. System hacking methodology, steganography, steganalysis attacks, and covering tracks
4. Different types of Trojans, Trojan analysis, and Trojan countermeasures
5. Working of viruses, virus analysis, computer worms, malware analysis procedure, and countermeasures
6. Packet sniffing techniques and how to defend against sniffing
7. Social Engineering techniques, identify theft, and social engineering countermeasures
8. Presentation on DoS/DDoS attack techniques, botnets, DDoS attack tools, and DoS/DDoS countermeasures
9. Using tools for Various types of penetration testing, security audit, vulnerability assessment, and penetration testing roadmap

**Assignment:** Make a report using any of the above forensic tool on a vulnerable site using the above pen testing tool what are the vulnerability in it.

#### Final Test:

1. **Quiz 1: Theoretical Quiz**
2. **Quiz 2: Practical Quiz**
3. **Analysis report on file applying above techniques as per questions asked.**

#### Disclaimer

Please make sure that this training/internship will be organized by Edu-Vitae Services, it is to note that if any IIT/NIT/Organization is EVS partner then it's responsible for providing certification to attending students/professionals, marketing, publicity and rest operations, scheduling, payment processing, training, content development etc. will be taken care by Edu-Vitae Services. All of the matters/disputes related to internship/training/workshop needs to be addressed to Edu-Vitae Services team only. See our terms and conditions on [www.eduvitae.co.in](http://www.eduvitae.co.in) and fees once paid is non-refundable and non-transferrable. Company reserves full right to withdraw any offer/discount anytime without any prior notification, also it's important to understand that center & batches date of internship can be changed as per requirements in India.

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