"Dissemination of Education for Knowledge, Science & Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

RAJE RAMRAO MAHAVIDYALAYA, JATH

Dist. Sangli (Maharashtra) 416 404

Estd : June 1969

Department of B.C.A

"Certificate Course in Cyber Security & Ethical Hacking"

By

Coordinator

Mr.Mali Prakash D.

Raje Ramrao Mahavidyalaya, Jath.

Academic Year

(2022 – 2023)

Course Syllabus

1.Program of Study:-   All B.C.A students

2.Faculty/Institute/College:-   Raje Ramrao Mahavidyala, Jath**.**

3.Course Title:-   Certificate Course in Cyber Security & Ethical Hacking

4.Type of Course:-   IT Education

5.Duration :-   3 Months

6.Course Objectives:

. 1Students will learn about web app security loopholes (vulnerabilities) and their exploitation techniques.

2. This course will also teach how a cyber criminal can take advantage of security vulnerabilities.

3. They will learn how an individual user can become victim of cyber attacks by just clicking on any malicious link.

7.**Ethical Hacking Course Curriculum:-**

This ethical hacking course is for network security officers, site administrators, IS/IT specialists and analysts, IS/IT auditors, IT operations managers, IT security officers, network specialists, and other personnel in associated computer support and information technology departments.

8.Course Outcomes:

1.Students will be able to perform web application penetration test.

2. They can work with organizations as Penetration Test Engineers or on personal capacity.

3. Students can work as bug bounty hunters

4. They will be able to learn advanced cyber security

1.   Evaluation:-

All Students performance will be evaluated through

    a. Attendance   10 Marks
    b. Assignments   20 Marks
    c. Class Test   20 Marks
    d. Written test   50 Marks
                                   100 Marks

2. Syllabus of the Course:

Content   Duration: 48 hours
Month:-3

Unit	Syllabus	Duration in Hrs
Unit I	**Introduction & Information Gathering** : Why web ?, Understanding the web tech	2hrs
	Web app hackers tool kit, Interception proxies	2hrs
	Whois & DNS harvesting ,OSINT	2hrs
	HTTP protocol & methods ,HTTP status code ,Web socket	2hrs
	HTTPS protocol ,Testing for weak ciphers , Heartbleed	2hrs
Unit II	**Configuration, Identity & Authentication Testing** :Network scanning with nmap	2hrs
	Testing application configuration ,Shellshock	2hrs
	Spidering web applications , Analyzing spidering results	2hrs
	Web fuzzing , Identifying information leakage	1hrs
	Authentication testing , Username harvesting	1hrs
Unit III	**Injection Attacks** : Session tracking , Session Fixation	2hrs
	Bypass Flaws ,Vulnerable web apps (Mutllidae)	2hrs
	Command injections ,File inclusion (LFI/RFI)	2hrs
	Discovering SQL injection, Exploiting SQLi vulnerability, SQLi tools	2hrs
Unit IV	**JavaScript & Cross Site Scripting (XSS):** Java script ,Document object model	3hrs
	Cross-site scripting , XSS tools ,XSS fuzzing	2hrs
	XSS exploitation ,BeEF Framework , Ajax	2hrs
	API Attacks , Data Attacks	2hrs
Unit V	**CSRF, Logic Flaws & Advance Tools** : Cross-site request forgery , Logic attacks.	3hrs
	Python for hackers , WPScan	2hrs
	W3AF, Metaspolit framework	2hrs
	When tools fail ? Pentest prepration	2hrs
	Effective reporting	2hrs
	Catch the flage (CTF) challenge	2hrs

3. References:-

a)Gray Hat Hacking The Ethical Hackers Handbook, 3rd Edition---

Dr. AllHarper, Daniel Regalado

b) Security Information and Event Management (SIEM) Implementation (Network Pro Library)---

David Miller, Shon Harris

c) gray hat hacking the ethical hacker's handbook -----

Allen harper, chris eagle