

Programme	B.Sc. IT Honours (Cyber Security)			Branch	Computer Applications				
Semester	VI			Version	1.0.0.0				
Effective from Academic Year		2026-27		Effective for the batch Admitted in		June 2024			
Subject code	U66A3OSN	Subject Name		OPEN SOURCE NETWORK					
Teaching scheme				Examination scheme(Marks)					
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CCE	SEE	Total
	L	TU	P	TW					
Credit	2	-	2	-	4	Theory	50	50	100
Hours	2	-	4	-	6				

Objective:

To explore foundational and applied concepts of Open Source Intelligence (OSINT), offering practical exposure to information discovery, analysis, and reporting using publicly available digital sources for cyber security investigations.

Pre-requisites:

A fundamental understanding of computer networks, information security, and operating system concepts is essential.

Learning Outcome:

Name of CO	Description
CO1	Understand foundational OSINT concepts, ethics, and frameworks.
CO2	Apply search and metadata techniques to discover and analyze public data.
CO3	Conduct domain and network footprinting and infrastructure profiling.
CO4	Collect and correlate human-centric intelligence from public and social sources.
CO5	Structure investigations, maintain ethics, and create formal OSINT reports.

Mapping of CO and PO:

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	1	1	3	2	1	2	2	1	1
CO2	3	3	2	2	3	2	2	1	1	1	1	1
CO3	3	3	3	2	3	2	2	1	1	1	1	1
CO4	2	2	2	2	3	3	2	1	2	2	2	1
CO5	2	2	2	2	2	3	3	2	3	2	2	1

Content:

Unit	Content	Hrs.
1	Introduction to OSINT and Open Source Network Concepts Definition and Scope of Open Source Intelligence (OSINT), Ethical and Legal Considerations in OSINT, Overview of the OSINT Framework, OSINT vs Closed Source Intelligence, Introduction to Intelligence Cycles.	06
2	Search Techniques and Metadata Analysis Fundamentals of search engine techniques and query structuring, Use of advanced search operators for data discovery, Analysis of archived, cached, and deleted content, Metadata extraction from documents and images, Interpreting file structure and embedded information, Validating sources and assessing data authenticity.	06
3	Domain, Network, and Infrastructure Intelligence Understanding domain name systems and registration data, Performing WHOIS lookups and domain footprinting, DNS and subdomain enumeration techniques, IP address resolution and geolocation analysis, Network mapping and infrastructure profiling, Techniques for passive and active reconnaissance.	06

4	Social and Human Intelligence Gathering Collection and analysis of social media information, Username and email identity correlation, Cross-platform profile enumeration techniques, Investigating breach data and exposed credentials, People search strategies and public record analysis, Behavioral profiling through digital footprints	06
5	Workflow, Ethics, and OSINT Reporting Planning and structuring OSINT investigations, Defining scope, objectives, and targets, Documenting observations and data sources, Report writing: format, clarity, and objectivity, Evidence preservation and data integrity considerations, Ethical responsibilities and regulatory compliance in OSINT practice	06
Practical Content:		
List of practical specified by subject teacher based on above mentioned topics		
Reference Books:		
1	Open Source Intelligence Techniques: Resources for Searching and Analyzing Online Information by Michael Bazzell;2016	
2	OSINT Techniques: Resources for Uncovering Online Information by Michael Bazzell , Jason Edison;2024	
3	OSINT Hacker's Arsenal: Metagoofil, Theharvester, Mitaka, Builtwith by Rob Botwright;2024	
Web Reference:		
1	https://osintframework.com/	
MOOC/Certificate Course:		
1	https://learn.eccouncil.org/course/osint-open-source-intelligence	
2	https://www.sans.org/cyber-security-courses/practical-open-source-intelligence	
Question Paper Scheme:		
	End Semester Examination Duration: (2 Hours Theory Examination)	
	Note for Examiner: - Q-1 Any Five out of Seven (25 Marks) Q-2 Any Two out of Three (06 Marks) Q-3 Mandatory question (05 Marks) Q-4 Any Two out of Three (08 Marks) Q-5 Any Two out of Three(06 Marks)	
	*The question paper must comprehensively address all Course Outcomes (COs), align with Bloom's Taxonomy levels, and ensure complete syllabus coverage	