

CCY4204 Advanced Penetration Testing**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
CCY4202	4	7/8	2	--	2	3

COURSE AIM

To get the students to:

- Demonstrate a deep understanding of advanced web application attacks and their mitigation strategies.
- Execute hand-crafted multi-stage and non-tool-based attacks to assess and enhance network security.
- Identify, simulate, and defend against layer two attacks and social engineering tactics.
- Develop expertise in exploit generation and delivery, physical attacks, insider threats, and ethical considerations, enabling them to provide valuable red teaming services to organizations.

COURSE WEEKLY CONTENTS

- 1 Introduction to Advanced Penetration Testing
- 2 Advanced Web Application Attacks
- 3 Multi-Stage and Non-Tool-Based Attacks
- 4 Layer Two Attacks and Mitigation
- 5 Social Engineering Techniques
- 6 Techniques for Stealth and Evasion
- 7 7th week Assessment
- 8 Exploit Generation and Delivery
- 9 Physical Attacks and Security
- 10 Insider Threats and Mitigation
- 11 Rules of Engagement and Legal Considerations
- 12 Reporting and Documentation
- 13 12th week Assessment
- 14 Professional Ethics in Penetration Testing
- 15 Red Teaming and Simulation

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17			Final Exam				40

REFERENCES

Textbook Wil Allsopp, Advanced Penetration Testing, Wiley