

NATIONAL UNIVERSITY
“YURI KONDRATYUK POLTAVA POLYTECHNIC”

DEPARTMENT OF COMPUTER AND INFORMATION TECHNOLOGIES
AND SYSTEMS

Y.O. ZHYVYLO, I.O. GOSSELIN

ETHICAL HACKING WITH KALI LINUX



STUDY MANUAL

POLTAVA – 2025

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According to the editors Y.O. ZHYVYLO

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UDC 004.056.53

LBC 32.988-5

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The study manual was developed by an associate professor of the Department of Computer and Information Technologies and Systems, a candidate of sciences in public administration, Associate Professor Y.O. Zhyvylo.

Ethical Hacking with Kali Linux: study manual / [Y.O. Zhyvylo, I.O. Gosselin]; According to the editors Y.O. Zhyvylo. – Poltava: National University “Yury Kondratyuk Poltava Polytechnic”, 2025. – 76 p.

The textbook covers the program material for the training of students in the field of knowledge 12 “Information Technologies” in the specialties 122 - Computer Science, 123 - Computer Engineering, and 125 - Cybersecurity and Information Protection. The educational publication is based on the materials from lectures, group and practical sessions on the discipline “Fundamentals of Information and Cybersecurity”, as well as on the subjects “Cybersecurity”, “Information security”, “Information Protection in Infocommunication Systems”, and “Theory of Information Warfare”. The manual is intended for students studying in the specialties of the field of knowledge 12 “Information Technologies” and for independent assessment and testing of the security of organizational systems to identify vulnerabilities.

This manual is dedicated to the study of the basics of cybersecurity and practical skills that will help better understand how to protect information systems and, at the same time, identify vulnerabilities in networks and systems. Each chapter covers essential aspects of the topic, starting with the basics and progressing to more complex issues such as penetration testing and hacking.

The mentioned chapters address key aspects of cybersecurity and provide an opportunity to learn how to use tools employed by security specialists to detect and eliminate threats.

Recommended for publication by the Scientific and Methodological Council of the National University “Yury Kondratyuk Poltava Polytechnic”
Protocol №. 23 of January 2025

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