

KOENIG SOLUTIONS • COURSE OUTLINE

Digital Identity: Biometrics & Multi-Factor Auth

Learn to apply identity and access management principles, from authentication protocols and biometric modalities to privacy, risk and compliance.

24 Hours

DURATION

9

MODULES

31

TOPICS

COURSE OVERVIEW

In an increasingly digital world, safeguarding identity has become more critical than ever. This course offers a comprehensive overview of modern identity and access management (IAM) frameworks with a focused exploration of biometrics, identification, and authentication technologies. Participants will gain in-depth knowledge of how identification and authentication mechanisms operate, the role of biometrics in strengthening access control, and the associated privacy and ethical implications. The course also highlights emerging trends, common tools, and the risks organizations must manage while implementing these systems. This foundational course is designed to build awareness and understanding of the principles, challenges, and future of identity security in enterprise environments.

WHO THIS COURSE IS FOR

IT professionals and system administrators

Information security officers

Risk and compliance teams

Identity and access management (IAM) specialists

Professionals responsible for privacy, cybersecurity, and digital transformation initiatives

LEARNING OBJECTIVES

- Explain identification, authentication and authorisation components
- Compare single-factor, two-factor and multi-factor authentication
- Describe authentication protocols such as SAML, OAuth and OpenID
- Identify biometric modalities such as fingerprint, iris and face
- Assess the strengths and limitations of biometric systems
- Explain biometric enrolment, verification and template protection
- Analyse privacy, consent and ethical issues in biometric data use
- Evaluate risks and mitigation strategies for identity systems

9 Modules, 31 Topics

01

Introduction to Identity and Access Management (IAM)

TOPICS

- Definition and Purpose of IAM
- **Key Components:** Identification, Authentication, and Authorization
- Role of Biometrics in Modern IAM Systems

02

Understanding Identification

TOPICS

What is Identification? · Identification vs. Authentication · User Identity Lifecycle

03

Authentication Methods

TOPICS

- Types of Authentication (Single-Factor, Two-Factor, Multi-Factor)
- Knowledge, Possession, and Inherence Factors
- Authentication Protocols (e.g., SAML, OAuth, OpenID)

04

Biometrics: Concepts and Applications

TOPICS

- What is Biometric Authentication?

TYPES OF BIOMETRIC MODALITIES

- Fingerprint
- Iris/Retina Scan
- Face Recognition
- Voice Recognition
- Behavioral Biometrics
- **Real-World Applications:** Airports, Banking, Consumer Devices

05

Strengths and Limitations of Biometrics

TOPICS

Accuracy, Usability, and Cost Factors · False Acceptance and False Rejection Rates · Spoofing and Anti-Spoofing Techniques

06

Biometric System Architecture

TOPICS

Biometric Enrollment and Verification Process · Storage and Template Protection · Integration with IAM Systems

07

Privacy and Ethical Considerations

TOPICS

- Data Protection Regulations (e.g., GDPR, PDPL, HIPAA)
- Consent and Transparency in Biometric Data Collection
- Ethical Issues and Bias in Biometric Systems

08

Trends and Future of Biometric Authentication

TOPICS

- Advancements in AI and Machine Learning in Biometrics
- Multimodal Biometrics
- Contactless and Remote Biometric Systems

09

Risk Management in Biometric and Authentication Systems

TOPICS

- Threats to Identity Systems (Phishing, Spoofing, Insider Attacks)
- Mitigation Strategies
- Policy and Compliance Considerations

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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