Biocertification

Certified Biometrics Security Professional Institute

Certified Biometrics Security Engineer (CBSE)

https://biocertification.com/

About Biocertification

Biocertification offers an international, vendor-neutral biometric security training and certification program for technology professionals in one of the fastest-growing areas of information security.

- **Experience**
  Providing certification and training programs since 2003 - Check out our Success Stories!
- **Credibility**
  Receive a vendor-neutral and independent certification that demonstrates your competency.
- **Flexibility**
  Choose from a variety of instruction methods, including instructor-led and virtual live.
- **Applicability**
  Ensure that you receive in-depth knowledge that you can immediately apply to real-world challenges.
- **Expertise**
  The program is managed and delivered by a team of subject matter experts and security industry professionals with extensive industry experience.

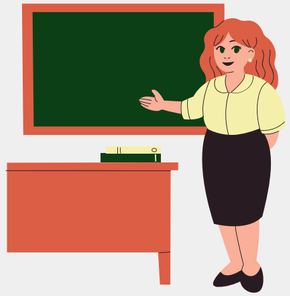
Partial List of Our Clients

OUR DELIVERY METHODS

Group Training

Individual Training

Instructor-Led Virtual live



Instructor-Led Classroom

On Demand

Program Details

CBSE designates knowledgeable technology professionals in the field of biometric security. This program is designed for those who wish to gain a solid understanding of biometric technologies and apply concepts and design principles to improve logical and physical access control in identity management systems. Ideal candidates for this program include security architects, security engineers, information assurance consultants, program managers, and other individuals with experience and expertise in information security-related domains.

Pre Requisites

Certified Biometrics Security Professional (CBSP) and CompTIA Security+ training or certification are highly recommended but not required. Candidates who wish to gain knowledge in CompTIA security+ may attend our online course to gain the required knowledge.

Why Choose Biocertification

Real World Applicability Ensure that you receive in-depth knowledge which you can immediately apply to real world challenges

Flexibility Choose from a variety of instruction methods including instructor led and virtual live

Credibility Receive a vendor neutral and independent certification which demonstrates your competency

Experience Providing certification and training program since 2003 - Check out our Success Stories!

Expertise Program managed and delivered by a team of Subject Matter Experts and security industry professionals with extensive industry experience

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

Exam Details

- Course Name: Certified Biometric Security Engineer (CBSE)
- Course Number: CBSE
- Required exam – CBSE-022
- Number of questions – Maximum of 100
- Types of questions – Multiple-choice and performance-based
- Length of test – 180 minutes
- Passing score – 70% – This test has no scaled score; it's pass/fail only.
- Languages – English
- Retirement – Usually three years after launch
- Testing Provider – Online proctoring: ExamIT.com
- Certification Exam Voucher – $395 USD

Prerequisites

- CBSP and 2 years of technical experience with a focus on information security.

Course Content

1.0 Introduction to Biocertification

- Certified Biometrics Security Professional Introduction
- How to prepare for the Exam
- How to get Certified
- Recertification Process

2.0 Biometric System Concepts

- Biometric system model
- Data capture, signal processing, data storage, matching, and decision making
- Biometric processes
- Enrollment, verification, identification
- Current Happenings
- Future Happenings

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

3.0 Analysis of System Performance

- Accuracy/Efficiency
- Criteria
- Performance Metrics
- FTA, FTE, FAR, FRR, FMR,FNMR
- EER, DET Curves, CMC

4.0 IAFIS Materials

- IAFIS
- NGI Timeline
- How IAFIS works
- What is NGI
- NGI Capabilities
- NGI Technical Components

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

5.0 Biometric Standards

- Why Standards
- National and International Standards
- Formal and Informal Standards
- Market Adoption

6.0 Fingerprint Recognition Modality

- Henry Classification System
- Fingerprint Characteristics
- Fingerprint Capture Methods
- Fingerprint Sensor Companies
- Touchless Sensors
- Fingerprint Information
- Fingerprint Image Quality
- Poor Quality Fingerprints
- Fingerprint Image Compression
- Fingerprint Matching
- AI and Fingerprint Scanners
- Prominent Implementations

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

7.0 Face Recognition

- Strengths of Facial Recognition
- Weaknesses of Facial Recognition
- Face Recognition Process
- Face Capture
- Face Detection & Segmentation
- Variables Affecting Image Quality
- Feature Extraction and Matching
- Appearance Based Method - Eigenfaces
- Elastic Bunch Graph Matching
- Classification Approaches
- 2D Face Challenges
- 3D Face Challenges
- Image Capture Best Practices
- Storage – Impact of Compression
- 3D Face Recognition
- 3D Model Illustration
- Prominent Implementations
- Facial Recognition Vendors
- Face Recognition Concerns

8.0 Iris Recognition

- Iris Capture
- Iris feature extraction
- Challenges
- Standards
- Prominent implementations

9.0 Iris Recognition

- History of vein capture/market trends
- Basics of vein pattern capture
- Feature Extraction
- Strengths and Weaknesses
- Challenges
- Prominent Implementations

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

10.0 Hand Geometry

- History
- Image Capture
- Feature Extraction
- Operational Challenges
- Future Trends

11.0 DNA Recognition

- DNA Biometric Introduction
- DNA Recognition Concerns
- Creating a DNA Profile
- DNA Patterns Security Package
- Types of DNA
- Strengths and Weaknesses
- Common Applications
- Prominent Implementations

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

12.0 Gait Detection

- Gait Recognition History
- Gait Recognition Research
- Gait Recognition Methodologies
- Acquiring Samples
- Feature Extraction
- Gait Matching
- Gait Recognition Groups
- Gait Strenghts and Weaknesses

13.0 Keystroke Dynamics

- Keystroke Dynamics - History
- Capture Devices
- Advantages
- Challenges
- Prominent Implementations
- Applications of Keystroke Dynamics
- Strengths and Weaknesses/Suitability

14.0 Multimodal Biometrics

- Multi Modal Systems
- Design Conditions for Multimodal
- Different Scenarios for Multimodal
- Limitations of Unimodal Systems
- Advantages of MultiModal
- Disadvantages of Multimodal
- Capture Methods/ Types of Multimodal systems
- Synchronous/Simultaneous Capture
- Asynchronous/Sequential Capture
- Hybrid Systems
- Enrollment and Training
- Fusion
- Sensor Level Fusion
- Feature Extraction Level
- Matching Score Level
- Rank Level Fusion
- Decision Level Fusion

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

15.0 Palm Printing

- History of Palm Print
- Palm Print
- Palm Print Methodology
- Palm Print Applications
- Strengths and Weaknesses

16.0 Privacy Concerns

- Concepts
- US Privacy Regulations
- State Regulations
- Key Takeaways
- International Regulations
- Criticisms of Biometric Technologies
- Privacy Concerns
- Artificial Intelligence
- Privacy Enhancing Technologies

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

17.0 Retina Recognition

- Retina Recognition History
- Retina Basics
- Prominent Implementations
- Strengths and Weaknesses/Suitability

18.0 Signature Biometrics

- Signature Biometrics - History
- Signature recognition
- Description
- Methodology
- Acquiring a Sample/Reference Data
- Strengths and Weaknesses
- Common Applications

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

19.0 Speech Detection and Voice Recognition

- History of Speech Recognition
- Speech Recognition vs. Voice Recognition
- Voice Recognition
- Description / Methodology
- Raw Data Acquisition
- How to Access
- Raw Data Analysis
- Factors that contribute to data analysis errors
- Strengths and Weaknesses Based on Seven Pillars

20.0 Biometric Systems and Cloud Biometrics as a Service

- Benefits of Cloud Computing
- Security Challenges of Cloud Computing
- How Cloud provides cost savings.
- Industry trends with Cloud
- Introduction to Artificial Intelligence/Machine Learning.
- How Can Biometrics as a Service Secure PaaS?

CERTIFIED BIOMETRICS SECURITY ENGINEER (CBSE)

21.0 Biometrics and Border Security

- Border Security
- ICE vs. CBP
- Immigration and Customs Enforcement.
- AFIS
- IDENT.
- IAFIS
- IDENT replaced by HART.
- EURODAC
- Biometrics and Identity Technology Center

22.0 Biometric Systems and Cybersecurity.

- Importance of Cybersecurity
- CIA Triad
- Defense in Depth Approach.
- Threats, Vulnerabilities, Exploits.
- Biometrics benefits to Cybersecurity.
- Biometric Security Issues
- Advantages and Disadvantages of Biometrics
- Biometric Security Issues.
- Biometrics benefits to Cybersecurity.

Biometrics Webinars

Biocertification offers a series of webinars addressing specific topics related to biometric applications. Biometric technologies are deployed in a variety of applications and industry sectors. These webinars are intended for technology professionals who want to learn about operational challenges and strategies for successful deployments of biometric technologies.

- Introduction to Biometrics
- Biometrics and Border Security
- Biometrics as a Service
- Speech and Voice Recognition
- Signature Biometrics
- Biometrics Privacy and Laws
- Palm Print
- Multi modal Systems
- Keystroke Dynamics
- Gait Recognition

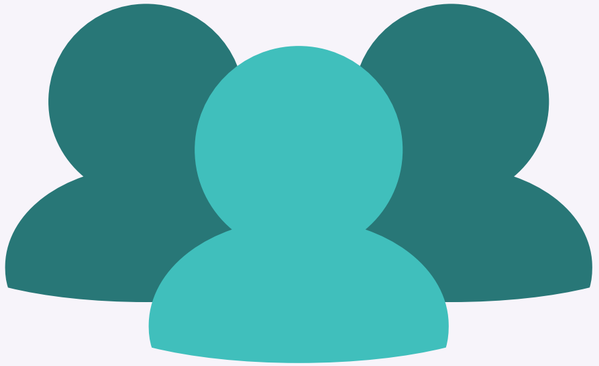
View more

- DNA Recognition
- Hand Geometry Recording
- Vein Recognition-VPR
- Iris Detection
- Face Recognition
- Fingerprint Recognition
- Biometric Standards
- FBI-NGI-IAFIS
- Biometric System Performance
- Biometrics Systems

Clients Testimonials

It was a great course where I have learned many things about the Biometrics Domain. Few things I knew few things I thought I know but everything combined was a great learning experience. Thank You.

James



Biocertification has successfully designed multiple, highly sophisticated, training plans for my organization; always keeping our goals and budget as top priorities

A. Ansari, Biometrics SME

50+ Certcamp Locations Across the Globe

www.biocertification.com