



Biocertification - CertFirst Division



**CERTIFIED BIOMETRICS SECURITY
DEVELOPER (CBSD)**

<https://biocertification.com/>

www.certfirst.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. Do you want to build a career based on cutting edge technologies? Do you want to solve real world challenges using biometric technologies?

Certified and Highly
Experienced Instructors

Biocertification Flexible
Scheduling
(Day / Evening / Weekends)

Delivery Methods:
Virtual live / In-Class /On-siet /
1 on 1/ On-Demand

Biocertification High Quality,
Extensive and Industry
Standard Curriculum



Partial List of Our Clients Since 2005





OUR DELIVERY METHODS



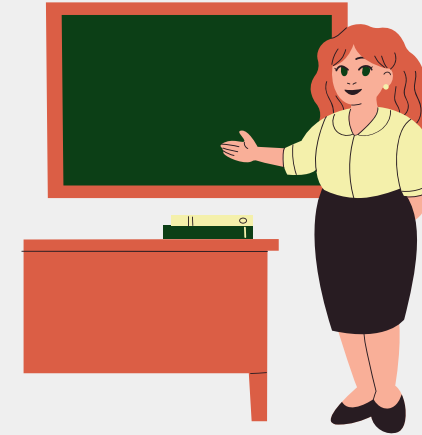
Group Training



**Individual
Training**



**Instructor-Led
Virtual live**



**Instructor-Led
Classroom**



On Demand



Program Details

Certified Biometric Security Developer – CBSD 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 COTS tools to improve logical and physical access control in identity management systems. Ideal candidates for this program include security architects, Software & Application Developers, Security Engineers, information assurance consultants, Program & Project Managers, and other individuals with experience and expertise in information security-related domains. Prior application and software programming experience is required.



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 BIOMETRIC SECURITY DEVELOPER (CBSD)

Exam Details

- Course Name - Certified Biometrics Security Developer (CBSD)
- Course Number - CBSD
- Required exam – CBSD-021
- Exam Code(s): 1) CBSD-W (Thus online or on-site proctored exam consists of multiple choice questions. Candidates must pass this exam prior to attempting the practical exam where candidate(s) must develop a working biometric application which will be reviewed and evaluated by our SMEs and evaluators.
 - 2) CBSD-D (Practical exam – Develop a biometric enabled app)
- 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





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**

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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 PROFESSIONAL (CBSP)



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**

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- 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

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

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

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

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12.0 Gait Detection

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

13.0 Keystroke Dynamics

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



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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

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

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

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19. Biometric Technology Integration

20. Biometrics, Smartcards & PKI

21. Privacy Concerns

22. Government Implementations

23. Private Sector Implementations



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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](#)

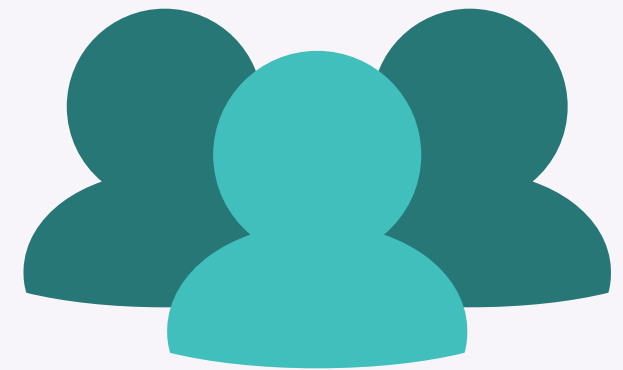
- DNA Recognition
- Hand Geometry Recording
- Vein Recognition-VPR
- Iris Detection
- Face Recognition
- Fingerprint Recognition
- Biometric Standards
- FBI-NGI-IAFIS
- Biometric System Performance
- Biometrics Systems



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



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Embark on a journey to become a highly skilled and sought-after cybersecurity professional with CertFirst. Gain access to a comprehensive curriculum and expert instruction to prepare you for success in the ever-evolving field of cybersecurity.

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www.certfirst.com

www.biocertification.com

Ph: 630-684-0355

E-mail: training@certfirst.com

E-mail: info@biocertification.com

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