Information Assurance and Biometrics

Graduate Certificate in Information Assurance and Biometrics

CERTIFICATE CODE - CG09

The graduate level Information Assurance and Biometrics Certificate Program at West Virginia University (WVU) provides a student-centered learning environment to educate and train professionals to meet the changing needs of the industry, government, and academia in West Virginia and the nation. This program is offered to WVU students, government personnel (military and civilian), and contractor personnel who meet the program acceptance requirements. Potential career options for students completing this certificate program are in security related fields, most likely in the military, banking industry, or within various law enforcement agencies.

The graduate level Information Assurance and Biometrics Certificate Program offered at WVU provides a broad overview of the information assurance and biometrics field and addresses relative and recent advances and current research issues. It is interdisciplinary in nature and covers many educational materials. Included are the elements of biometrics technology, system security engineering, and principles of trusted systems. The course content of this program emphasizes ethical, economic, social, and legal impacts of biometrics technologies and information assurance techniques.

The goal of the graduate level fifteen Credit Hour Information Assurance and Biometrics Certificate Program is to provide students with the following:

• A solid understanding of biometrics technology, system security principles, and their scientific foundations, and
• An awareness of the social, psychological, ethical, and legal policies and requirements in the field of information assurance and biometrics (IAB), and
• The ability to communicate with professionals in the wide range of public services, including law enforcement, military, science, and those who employ the principles and techniques of IAB.

The coursework includes fifteen credit hours of classes. As part of the certificate coursework, students will be expected to take four required classes and choose the fifth class between two approved electives.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOM 426</td>
<td>Biometric Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 465</td>
<td>Introduction to Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>STAT 516</td>
<td>Forensic Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BIOM 693</td>
<td>Special Topics</td>
<td>3</td>
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Select one of the following:

- CS 665 Computer System Security
- EE 465 Introduction to Digital Image Processing

Total Hours 15

A capstone project will be required as part of the Advanced Biometrics course. Advanced Biometrics is a required capstone course taken after BIOM 426, CS 465, and STAT 516. This course includes a once-a-week advanced topics seminar series and a three-hour laboratory. The laboratory will have both formal laboratory exercises and time devoted to the project. The project will provide the students with an opportunity to integrate the knowledge gained from the core courses to the program.