CYBER THREAT ANALYTICS AND PREVENTION GRADUATE CREDIT CERTIFICATE PROGRAM

Person-in-Charge: Robin Qiu
Program Code: CTAP
Campus(es): Great Valley, World Campus

This 12-credit certificate helps students understand the core of diverse and global cyberattacks, cyber laws and regulations, vulnerabilities, threats, and surveillance systems, while gaining certain fundamental skills to plan, prevent, protect, detect, analyse, respond, mitigate, and recover from threats and attacks in a sophisticated and large-scale basis.

Effective Semester: Summer 2018
Expiration Semester: Summer 2023

Admission Requirements
Applicants apply for admission to the program via the Graduate School application for admission (http://gradschool.psu.edu/prospective-students/how-to-apply/). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (http://gradschool.psu.edu/graduate-education-policies/). International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/) for more information.

Certificate Requirements
Requirements listed here are in addition to requirements listed in Graduate Council policy GCAC-212 Postbaccalaureate Credit Certificate Programs (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-212-postbaccalaureate-credit-certificate-programs/).

Students must maintain a minimum grade point average of 3.0 (B) throughout the program.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSC 561</td>
<td>Web Security and Privacy</td>
<td>3</td>
</tr>
<tr>
<td>IST 554</td>
<td>Network Management and Security</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
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<tr>
<td>Select at least two of the following:</td>
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<tr>
<td>IST 454</td>
<td>Computer and Cyber Forensics</td>
<td></td>
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<tr>
<td>DAAN 871</td>
<td>Data Visualization</td>
<td></td>
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<tr>
<td>INSC 846</td>
<td>Network and Predictive Analytics for Socio-Technical Systems</td>
<td></td>
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<tr>
<td>IST 820</td>
<td>Cybersecurity Analytics</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
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<td>12</td>
</tr>
</tbody>
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Courses
Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes
Students will be able to:

1. Effectively communicate cyber security knowledge, including vulnerability, threat, cyberattack analysis, and suspicious and attack findings in written formats in a manner appropriate to the audience.
2. Collect and Analyze data to uncover, detect, and analyse network suspicious activities and cyberattacks.
3. Demonstrate understandings and skills to plan, protect, respond, mitigate, and recover from cyber threats and attacks.

Contact

Graduate Program Head
Guanghua Qiu

Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)
Guanghua Qiu

Program Contact
Sharon V. Patterson
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(610) 648-3318

Campus
Great Valley

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Campus
World Campus

Program Website
https://www.worldcampus.psu.edu/degrees-and-certificates/penn-state-online-cyber-threat-analytics-prevention-certificate/overview/