



DSU North Central Region Cyber Training Center (CTC) for Cybersecurity

The gap between necessary Cybersecurity skills and the demands placed on Cybersecurity professionals is not only a challenge for the information technology industry, but also a challenge for the scientific research enterprise of the nation. The North Central Region (NCR) Cyber Training Center (CTC) for cybersecurity at Dakota State University is created and funded by the National Science Foundation (NSF OAC 1730105). The goal of CTC is to create a scalable online cyber training program to assist with the development of scientific cyberinfrastructure professionals in cybersecurity. The CTC includes three programs, i.e., CyberTraining Students, CyberTraining Faculty, and CyberTraining Professionals.

The CyberTraining Faculty program is offered to post-docs, research scientists, and faculty researchers and educators from 2-year and 4-year colleges in the North Central Region. The program will offer online summer courses to help faculty develop expertise in cybersecurity. The program also includes funds to help participating faculty host cybersecurity workshops on their campuses and develop new courses in cybersecurity. **These summer courses are free to all faculty participants!** We are now accepting applications participating in CyberTraining Faculty Program for Summer 2018. Please check the steps below about how to register cybersecurity courses for Summer 2018.

Cybersecurity Courses for Summer 2018

There will be three graduate cybersecurity courses offered at DSU for the CyberTraining Faculty program in Summer 2018. These three cybersecurity courses include:

INFA792 Special Topic Cybersecurity for Advanced

Cyberinfrastructure (Instructor: Dr. Yong Wang): This course discusses cybersecurity issues in advanced cyberinfrastructure, especially cybersecurity issues in advanced cyberinfrastructure for science, engineering, and public policy. The course includes four topics: introduction to advanced scientific cyberinfrastructure, cybersecurity issues in advanced scientific cyberinfrastructure, identity and access control, compliance issues.

INFA792 Special Topic Web Security (Instructor: Dr. Sulabh Bhattarai):

This course will make use of hands-on exercises in compiled and web-based software to illustrate attack methodologies and techniques that lead to software vulnerabilities that violate fundamental security principles. Attacks and mitigation strategies related to filter evasion, session management, database interaction, path traversal, and file inclusion will be emphasized. Some concepts on network security will be covered.

INFA792 Special Topic Cloud Security (Instructor: Dr. Jason Nikolai):

This course examines cloud computing and security topics based on



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sound architecture design and best practices applied in modern cloud computing environments. It includes four topic areas, i.e., cloud infrastructure, cloud security, cloud platforms, and cloud management. At the end of this course, students will be knowledgeable in cloud computing security from both the cloud provider and cloud tenant perspective, including: architecture models, compliance, privacy, data protection, security engineering, secure deployment, risk management, and operational security.

Our cybersecurity courses emphasis hands-on labs and assignments in cybersecurity. Faculty participants in these classes will be able to access our cloud-based Information Assurance (IA) Lab and other online resources.

Summer Schedule

- The summer courses are 3-credit courses.
- The 12-week summer courses starts from May 14, 2018 to August 3, 2018.
- Each course has a capacity of 25 students.
- Faculty participants will register as DSU students to take summer courses.
- These courses are free for faculty participants.
- All the courses are online. The course materials including class videos, slides, assignments, labs, projects will all be available through Desire to Learn (D2L) system at DSU.

Eligibility

- Post-docs, research scientists, and faculty researchers and educators from 2-year and 4-year colleges.
- Bachelor in Computer Science, Cyber Operations, or related field.
- Priority will be given to faculty members who teach cybersecurity related courses in your home institutions.

Benefits

- The summer courses are free to faculty participants.
- Funds are available to support faculty participants to host cybersecurity workshops in their institutions and develop new curriculums in cybersecurity.
- DSU offers two master programs, i.e., Master Science in Applied Computer Science and Master Science in Information Assurance and Computer Security, and one doctoral program, i.e., Doctoral of Science in Cyber Security. The credits a faculty participant earned through the CyberTraining Faculty program could be transferred to credits towards graduate degrees at DSU if the participant is admitted to one of the graduate programs at DSU and the credits are approved by the participant's plan of study.

Important Dates

- Application deadline: April 15, 2018
- Notification of acceptance: May 1st, 2018
- Summer program: May 14 - August 3, 2018

How to Apply

Application can be found at: <https://goo.gl/forms/fZzlrDzkaHwuKgzf1>. Contact Dr. Yong Wang (yong.wang@dsu.edu) for application procedures.