

Networking and Information Security Degree Programs in a Four Year University



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Purpose

Describe and discuss our experience in developing and implementing security and networking degree programs at a small four year institution setting.

Question

What opportunity and challenge are there in developing a security degree program with limited resources?

Details:

Existing Degree Programs in CIS

- Computer Science
- Computer Programming and Information Systems
- Computer Graphics and Gaming
- **Networking and Data Communication**

New Courses

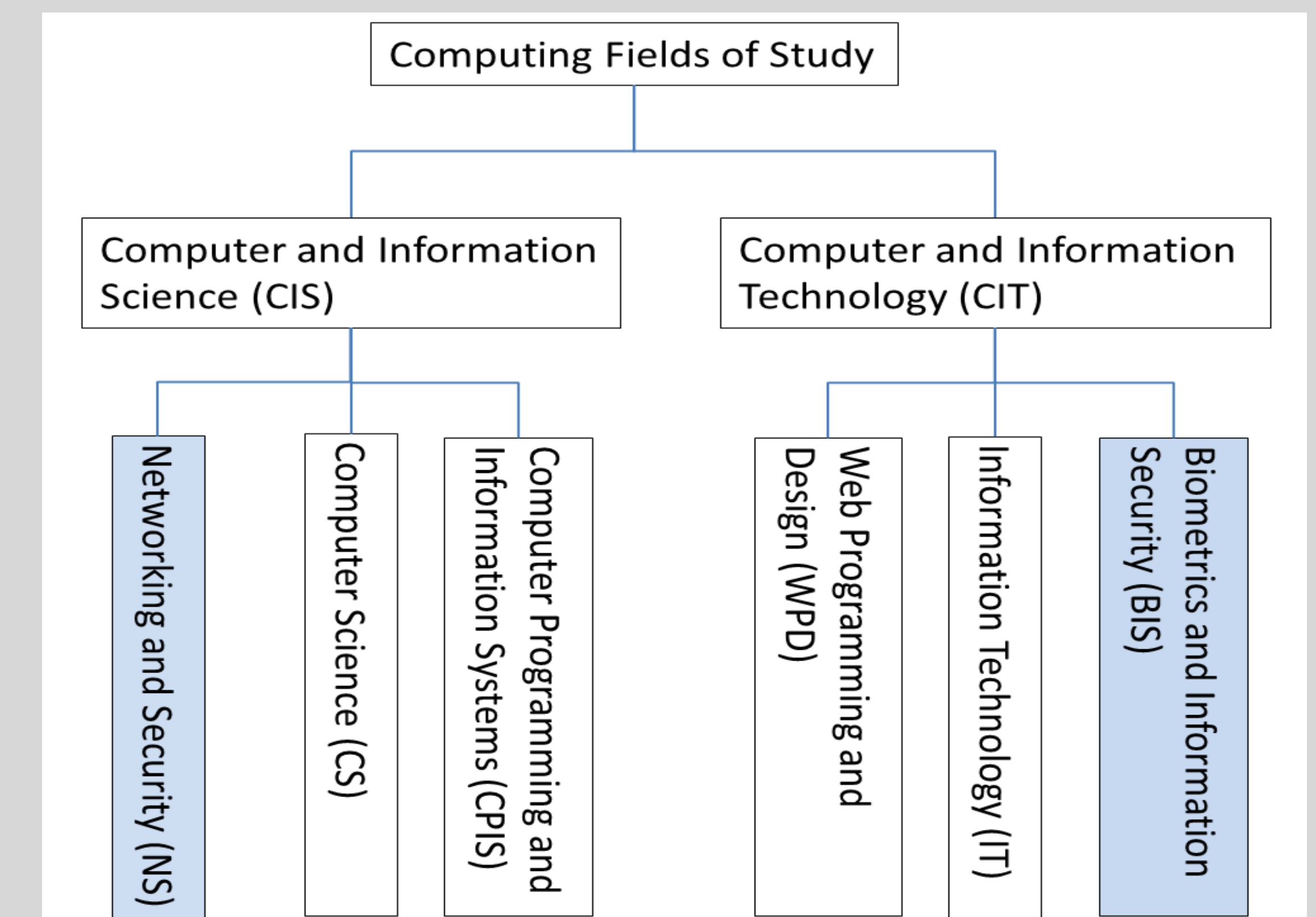
- The foundation courses were already in place, and security related subjects were covered in networking and data communication courses.
- New courses to focus on security issues:
 - Information Security
 - Biometric
 - Cryptography
- This also allows other classes to provide better coverage in contemporary topics in internet networking, cloud computing, pervasive computing, etc.

Revamping Networking with Security Focus

- The Networking and Data Communication was a mixture of network administration and data communication foundation. It lacks of focal point.
- A focus on security and cryptography would make it attractive to students and potential employers.
- The presence of government agencies around Shepherdstown area, such as US Coastal Guard, FBI, CIA makes the security degree a natural choice.

Laboratory Settings

- Two computer laboratories reserved for networking and security based classes and activities.
- Resources
 - Security cameras.
 - High-end Switches with firewall capabilities.
 - MegaMatcher Software Development Kit. Including 1 Cluster Server, 2 Cluster Nodes, 1 MegaMatcher Server and 2 Client licenses.
 - MegaMatcher additional Client License
 - Futronic Fingerprint scanners



Summary and Conclusion

Our security degree program has been successful from many aspects such as recruiting and retaining students, and job placement for graduates from this program. Security in networking computing is an ever-changing area so efforts are required to revise curriculum and lab facilities.