## **CYBR 495B: Cybersecurity Design Project B (3 credits)**

This course is a continuation of Cybersecurity Design Project A, where students continue to work on their cybersecurity project from the previous course. The focus of the course is on implementing and testing the cybersecurity solution designed in Cybersecurity Design Project A, as well as evaluating the effectiveness and security of the implemented system.  *(Prerequisite: CYBR 395A)*

**Course Learning Outcomes:**

By the end of the course, students will be able to:

A1. Demonstrate critical understanding of technological advancements and computing solutions related to cybersecurity problems.

A2. Use effective research methods to gather data, demonstrating proficient use of programming languages, software and hardware solutions.

B1. Solve complex cybersecurity challenges through effective planning, design, and problem-solving.

B2. Model complex system architectures and structures within the context of a cybersecurity project.

B3. Implement the cybersecurity solution designed in Cybersecurity Design Project A.

B4. Conduct comprehensive testing and validation of the implemented cybersecurity system.

B5. Communicate effectively the cybersecurity design project both in written and oral forms to diverse stakeholders.

C1. Engage in life-long learning and self-development to foster professional, organizational, and time management skills via a project with a defined timeline.

C2. Follow research ethics and social responsibility, responding positively to the needs of society.

C3. Collaborate effectively with team members from diverse backgrounds to address complex cybersecurity challenges and meet project objectives.

**Course Learning Materials:**

* There are no specific textbooks required for Cybersecurity Design Project B, as the focus is on practical application of cybersecurity concepts and theories. However, students may be required to read and study relevant cybersecurity materials related to their project.

**Course Content:**

The specific topics covered in Cybersecurity Design Project A will vary depending on the nature of the project chosen by the students. However, typical topics may include:

1. Implementation and testing of the cybersecurity solution
2. Vulnerability assessment and penetration testing
3. Incident response and recovery planning
4. Compliance and regulatory requirements
5. Communication and documentation of the project.