CYBR-215 – Capstone Project: Security Solutions for Industry

Technology

Effective Term & Year: Fall 2027
Course Outline Review Date: 2032-03-01

Program Area: Information Technology

Description:

This course provides students with the opportunity to design, implement, and evaluate a cybersecurity solution that addresses an industry-relevant problem or organizational need. Working individually or in teams, students apply technical, analytical, and project management skills developed throughout the program to complete a comprehensive capstone project. Students document project activities, validate outcomes, and communicate findings through professional reports and presentations that demonstrate industry readiness and applied cybersecurity competencies.

Program Information:

This course is required for the Second Year of the Cybersecurity Operations program.

Delivery Methods: Hybrid – On-campus (Face-to-Face) and Online

Credit Type: College of the Rockies Credits

Credits: 4

Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	40
Seminar/Tutorials	
Laboratory/Studio	40

Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	80

Course Requisites:

Prior Learning and Recognition: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, work-based assessment or a combination of assessments that is appropriate to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR) or contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see https://www.bctransferguide.ca/ or https://transferalberta.alberta.ca . For more transfer credit information, please visit https://www.cotr.bc.ca/Transfer

All requests for course transfer credit from institutions in British Columbia or elsewhere should go to the College of the Rockies Enrollment Service office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Please see the instructor's syllabus or check COTR's online text calculator https://textbook.cotr.bc.ca/ for a complete list of the currently required textbooks.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- implement a cybersecurity solution that addresses a defined organizational requirement or

industry-relevant problem;
- apply project management, research, and technical skills to support the successful completion of a cybersecurity project;
- evaluate the effectiveness of cybersecurity solutions through testing, validation, and analysis of results;
- produce professional technical documentation that records project objectives, methodologies, implementation activities, and outcomes;
- communicate project findings, recommendations, and lessons learned to technical and non-technical stakeholders; and
- reflect on project outcomes, professional practices, and continuous improvement opportunities within cybersecurity environments.

Course Topics:

- Project Implementation
- Cybersecurity Solution Development
- Project Management and Progress Monitoring
- Security Testing and Solution Validation
- Data Analysis and Results Evaluation
- Technical Documentation and Reporting
- Professional Communication and Stakeholder Engagement
- Project Presentation and Knowledge Transfer
- Reflection and Continuous Improvement

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face) and Online, or Hybrid

Assessment Type	% of Total Grade
Concept presentation	20%
Progress Report	20%
Progress Milestone	20%
Final Project	40%
Total	100%

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F

>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

Evaluation Notes: A grade of “D” grants credit, but may not be sufficient as a prerequisite for sequential courses.

Evaluation Notes Comments:

Please see the instructor’s syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments and use of electronic aids.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a “0” on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at https://cotr.bc.ca/about-us/college-policies/ and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.