

1. **COURSE TITLE*:** Advanced Cybersecurity
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION*:** CYBR 2230
3. **PREREQUISITE(S)*:** CYBR 2210 **COREQUISITE(S)*:** None
4. **COURSE TIME/LOCATION:** (Course Syllabus – Individual Instructor Specific)
5. **CREDIT HOURS*:** 3 **LECTURE HOURS*:** 3
LABORATORY HOURS*: (contact hours) **OBSERVATION HOURS*:**
6. **FACULTY CONTACT INFORMATION:** (Course Syllabus – Individual Instructor Specific)
7. **COURSE DESCRIPTION*:**

This course covers the duties of cybersecurity analysts who are responsible for monitoring and detecting security incidents in information systems and networks, and for executing a proper response to such incidents. The course introduces tools and tactics to manage cybersecurity risks, identify various types of common threats, evaluate the organization's security, collect and analyze cybersecurity intelligence, and handle incidents as they occur. Ultimately, the course promotes a comprehensive approach to security aimed toward those on the front lines of defense.

8. **LEARNING OBJECTIVES*:**

1. Assess information security risk in computing and network environments.
2. Analyze reconnaissance threats to computing and network environments.
3. Analyze attacks on computing and network environments.
4. Analyze post-attack techniques on computing and network environments.
5. Implement a vulnerability management program.
6. Collect cybersecurity intelligence.
7. Analyze data collected from security and event logs.
8. Perform active analysis on assets and networks.
9. Respond to cybersecurity incidents.
10. Investigate cybersecurity incidents.
11. Address security issues with the organization's technology architecture.

9. **ADOPTED TEXT(S)*:**

CompTIA CySA+ (CSO-003)3rd Edition, 2025 Cengage Learning MindTap
ISBN 9798214011493

9a: SUPPLEMENTAL TEXTS APPROVED BY FULL TIME DEPARTMENTAL FACULTY (INSTRUCTOR MUST NOTIFY THE BOOKSTORE BEFORE THE TEXTBOOK ORDERING DEADLINE DATE PRIOR TO ADOPTION) *.**

10. OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)**

11. GRADING SCALE*:**

Grading will follow the policy in the catalog. The scale is as follows:

- A: 90 – 100
- B: 80 – 89
- C: 70 – 79
- D: 60 – 69
- F: 0 – 59

12. GRADING PROCEDURES OR ASSESSMENTS: (Course Syllabus – Individual Instructor Specific)

<i>Category</i>	<u>EXAMPLE ONLY</u> <i>Total Points</i>	<i>% of Grade</i>
Chapter Assignments (10x30)	300	30%
Quizzes (10x20)	200	20%
Unit Exams (3x100)	300	30%
Assignments (5x10)	50	5%
Annual Report Project (100)	100	10%
Attendance	50	5%
Total	1000	100%

13. COURSE METHODOLOGY: (Course Syllabus – Individual Instructor Specific)

May include but not limited to: Lectures, independent and group projects, in-class and home assignments, tests, quizzes and lab exercises. This course must be offered on campus. Attendance is required.

14. COURSE OUTLINE: (Course Syllabus – Individual Instructor Specific)

(EXAMPLE)

Week	Topics	Chapters	Learning Objectives
1	Assessing Information Security Risk	1	1
2	Analyzing Reconnaissance Threats to Computing and Networking Environments	2	2
3			
4	Analyzing Attacks on Computing and Network Environments	3	3
5	Analyzing Post-Attack Techniques	4	4
6	Managing Vulnerabilities in the Organization	5	5
7	Collecting Cybersecurity Intelligence	6	6
8	Mid Term Exam		
9	Analyzing Log Data	7	7
10	Performing Active Asset and Network Analysis	8	8
11	Responding to Cybersecurity Incidents	9	9
12			
13	Investigating Cybersecurity Incidents	10	10
14	Addressing Security Architecture Issues	11	11
15	Final Exam Prep		
16	Final Exam		

15. SPECIFIC MANAGEMENT REQUIREMENTS*: None**

16. FERPA: *

Students need to understand that their work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

17. ACCOMMODATIONS: *

Students requesting accommodations may contact Ryan Hall, Accessibility Coordinator at rhall21@sscc.edu or 937-393-3431, X 2604.

Students seeking a religious accommodation for absences permitted under Ohio's Testing Your Faith Act must provide the instructor and the Academic Affairs office with written notice of the specific dates for which the student requires an accommodation and must do so no later than fourteen (14) days after the first day of instruction or fourteen (14) days before the dates of absence, whichever comes first. For more information about Religious Accommodations, contact Ryan Hall, Accessibility Coordinator at rhall21@sscc.edu or 937-393-3431 X 2604.

18. OTHER INFORMATION*:**

SYLLABUS TEMPLATE KEY

* Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

** Any alteration or addition must be approved by the Curriculum Committee

*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.