

1. **COURSE TITLE*: Introduction to Cybersecurity**
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION*: CYBR 2210**
3. **PREREQUISITE(S)*: None** **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 introduces the concepts and understanding of the field of computer security and how it relates to other areas of information technology. Topics include security threats, hardening systems, securing networks, cryptography and organizational security policies.

8. **LEARNING OBJECTIVES*:**

1. Discuss some of the basic principles of security, such as CIA and AAA.
2. Discuss some basic threats and the ways to mitigate those threats.
3. Describe the various hats worn by hackers in our society.
4. Identify computer systems security threats.
5. Implement security applications.
6. Secure computer hardware and peripherals.
7. Discuss hardening operating systems.
8. Discuss virtualization technologies.
9. Discuss how to secure the browser and other applications.
10. Identify and stop malicious attacks.
11. Discuss firewall and network security.
12. Discuss how to secure wired and wireless networks and devices.
13. Discuss physical security.
14. Identify authentication models and components.
15. Implement rights, permissions and policies in security.
16. Conduct risk assessments.
17. Assess vulnerabilities with security tools.
18. Discuss monitoring methodologies.
19. Identify tools used to monitor systems and networks.

20. Explain how to conduct security audits.
21. Discuss cryptography concepts, hashing and encryption algorithms.
22. Discuss what a PKI (public key infrastructure) is used for.
23. Implement a disaster recovery plan and procedures.

9. ADOPTED TEXT(S)*:

Security Essentials
ISBN: 978-1-64564-637-2

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:

<i>Category</i>	<i>EXAMPLE ONLY</i> <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:

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)
 (Insert sample course outline with learning objectives tied to assignments / topics.**

Week	Topics	Chapters	Learning Objectives
1	Introduction to Security	1	1, 2
2	Computer Systems Security	2	3, 4
3	OS Hardening and Virtualization	3	6, 7, 8
4	Application Security	4	5, 9
5	Network Design Elements and Network Threats	5	11, 12
6	Network Perimeter Security	6	11, 12, 13
7	Securing Wired and Wireless Networks	7	10
8	Physical Security and Authentication Models	8	11, 12, 13, 14
9	Access Control Methods and Models	9	21
10	Vulnerability and Risk Assessment	10	10, 16
11	Monitoring and Auditing	11	15, 20
12	Encryption and Hashing Concepts	12	21
13	PKI and Encryption Protocols	13	20, 21, 22
14	Redundancy and Disaster Recovery	14	15, 23
15	Policies, Procedures and People	15	15, 23
16	Final Exam		

15. SPECIFIC MANAGEMENT REQUIREMENTS*:**

16. FERPA:*

Students need to understand that your 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. DISABILITIES:*

Students with disabilities may contact the Disability Services Office, Central Campus, at 800-628-7722 or 937-393-3431.

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.