



Cybersecurity: CIT-253 & CIT-182 Syllabus | FALL 2021 & SPRING 2022

instructor:	Eric C. Darsow CCAC North CIT Department Faculty Instructor Dan Marshall West Allegheny HS Instructor
office Hours:	Periods 5,6, & 8 by appointment (get a pass)
semester:	Fall 2021 Spring 2022
instructor Contact methods:	In-person preferred, followed by phone calls: 412.894.3020 , then email: edarsow@westasd.org dmarshall@westasd.org
CIT Dept chair	Professor Rebecca Elinich relinich@ccac.edu
CIT Dean	Conroy, Sara J. sconroy@ccac.edu
course Credits	CIT-253: 3.0 credits CIT-182: 3.0 credits
prerequisites	For CIT-253: CIT-182 For CIT-182: Instructor approval

I: Course Descriptions

CIT-253: Infrastructure Security: This course provides students with knowledge and skills required to install and configure systems to secure applications, networks and devices. Students perform these tasks in support of the principles of confidentiality, integrity and availability. Topics include threat analysis and response using appropriate risk mitigation activities and an awareness of applicable policies, laws and regulations. In conjunction with CIT-182, the course objectives are consistent with many of the outcomes specified for CompTIA Security+ certification.

CIT-182: Principles of Cybersecurity- This course provides students with knowledge of information and network security principles related to threats, attacks and vulnerabilities. Topics include security technologies and tools, architecture and design principles, identity and access management concepts, risk management and cryptography. In conjunction with CIT 253, course objectives are consistent with many of the outcomes specified for CompTIA Security+ certification.

II: Learning Outcomes

CIT-253: Upon successful completion of the course, the student will:

1. Configure hardware and software-based network components that support organizational security.
2. Troubleshoot common security issues using output from security technologies.
3. Deploy mobile devices securely.

4. Implement secure protocols, network architecture concepts and secure systems design.
5. Configure identity and access services.
6. Employ identity and access management controls and policies.
7. Explain incident response procedures.
8. Install and configure wireless security settings.
9. Implement public key infrastructure.

CIT-182: Upon successful completion of the course, the student will:

1. Contrast types of attacks, threat actor types and attributes.
2. Explain penetration testing concepts.
3. Establish impacts associated with types of vulnerabilities.
4. Relate cloud and virtualization concepts.
5. Identify risk management processes, resiliency and automation strategies used to reduce risk.
6. Contrast physical security controls and access management concepts.
7. Explain the importance of policies, plans and procedures related to organizational security.
8. Summarize basic concepts of forensics, disaster recovery and continuity of operation.
9. Relate basic concepts and characteristics of cryptography.

III: The nitty gritty

textbook & materials

Course website: Master course website with session-specific content, submission portals, and assignment details: Canvas & <https://technologyrediscovery.net>

letter Grades

A point-based system will be used to assign letter grades according to the district staff handbook. Each 9-weeks grade will be based on two major inputs:

- 1) 60%: Quality and effort on weekly work bundles which consist of
 - a) Skills practice artifacts and
 - b) Culminating questions and/or tasks
 - c) Daily class engagement & peer help

2) 40%: Quality and effort on quarter projects which require synthesis of the core concepts of the quarter

These two values will be mathematically combined to assign a letter grade based on the official West Allegheny SD scale:

90-100% = A ; 80-89.99% = B

70-79.99% = C ; 60-69.99% = D

<= 59.99% = F

In the spirit of this college-level course *****NO EXTRA CREDIT***** opportunities exist; instead, a lenient makeup work policy is provided to encourage a sole focus on course content.

due dates

Our weekly work cycle **begins on Monday** and proceeds **through Friday**. Completed weekly cycle documents and artifacts should be placed in your student

	<p>folder for review Monday and Tuesday evenings by your instructor. You'll get feedback before submitting your next cycle's work.</p> <p>For at least the first two 9-weeks, Eric Darsow will be present in class Monday, Tuesday, and Wednesday for primary instruction. Thursdays and Fridays provide a chance for independent practice of core skills and thoughtful completion of:</p> <p>a) Weekly work culminating questions b) Skills practice with online Canned Test Out materials available via a browser.</p>
attendance & tardiness	<p><i>Attend class per West Allegheny High School's official attendance policy.</i></p> <p>Instructors will not provide remediation for content that students missed due to unexcused absences unless extenuating circumstances dictate a more lenient approach.</p>
tests:	<p>The only high-stakes test will be the Test Out certification test taking place in the 4th 9-weeks period. Low-stakes, mini assessments and projects will constitute the bulk of your submitted work</p>
technology	<p>All necessary computers are supplied by West Allegheny HS in our lab classroom</p>
Academic Honesty	<p>Provide written credit to all relevant authors of all code, writing, and project work for this course, including yourself and folks who help you (but who may not be published authors). Include direct URLs of websites consulted.</p> <p>Honor the copyrights associated with all content used in this course.</p> <p>Consequences: Students suspected of academic dishonesty will be asked to produce documentation to support any attributions (or, non-attributions). The West Allegheny School District's academic honesty policy applies in this course.</p>

	<p>pregnancy or pregnancy related condition, or a religious observance, and for reporting unlawful discrimination and harassment.</p> <p>The Student Handbook is available to view and download along with the full text of the College's <i>Policy Manual</i>, <i>Administrative Regulations Manual</i>, and the Civil Rights Complaint Procedure:</p> <p>https://www.ccac.edu/academic-rules-and-regulations/rules-and-regulations.php</p> <p>https://www.ccac.edu/president/policies-and-regulations.php</p>
diversity	<p>Title IX of the Education Amendments 1972 (20 U.S.C. 1681 et seq.) and its implementing regulations, 34 C.F.R. Part 106, prohibit discrimination on the basis of sex in education programs or activities operated by recipients of Federal financial assistance. It is the landmark legislation that bans gender based discrimination in schools and colleges.</p> <p><i>"No person in the U.S. shall, on the basis of sex be excluded from participation in, or denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal aid."</i></p> <p>https://www.ccac.edu/diversity/title-IX.php</p> <p>https://www.ccac.edu/diversity/notices.php</p>
disability	<p>Information concerning the process and documentation required to request a disability-related accommodation can be obtained by contacting the campus' Office of Supportive Services for Students with Disabilities (OSSSD) or by visiting the OSSSD information page</p> <p>https://www.ccac.edu/supportive-services/suppotive.php</p>

V: Content licensing and sharing

licensing	<p>All non-computer code content on technologyrediscovery.net (course content, images, media) is licensed under the Creative Commons Share-Alike license (CC BY-SA 4.0); no attribution required.</p> <p>https://creativecommons.org/licenses/by-sa/4.0/</p> <p>Computer code is licensed by file; most course code is copylefted under the GNU Public License</p>
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IV: Official CCAC notices

my.ccac.edu	<p>Students are reminded that they can access their course information and CCAC email account, the CCAC Academic Calendar (including add/drop/withdrawal deadlines), the Student Handbook, the College's Incident Report Form, and many other College services through the MyCCAC portal: https://my.ccac.edu</p>
student handbook	<p>All students are expected to read and comply with the policies and regulations set forth in the CCAC Student Handbook, including without limitation the College's policies regarding academic and behavioral conduct, the procedures for requesting an accommodation based upon a disability,</p>