



## Principles of Security CIT-180 & CIT-181 Syllabus | FALL 2021 & SPRING 2022

instructor:	<b>Eric C. Darsow</b> CCAC North CIT Department Faculty Instructor <b>Dan Marshall</b> West Allegheny HS Instructor
office Hours:	<b>Periods 5,6, &amp; 8</b> by appointment (get a pass)
semester:	<b>Fall 2021</b> <b>Spring 2022</b>
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CIT Dept chair	<b>Professor Rebecca Elinich</b> relinich@ccac.edu
CIT Dean	<b>Conroy, Sara J.</b> sconroy@ccac.edu
course Credits	<b>CIT-180: 3.0 credits</b> <b>CIT-181: 4.0 credits</b>
prerequisites	<b>CIT-180 &amp; CIT-181: CIT-115</b>

### I: Course Descriptions

**CIT-180: Computer Forensics 1**-This course introduces students to the fundamentals of the computer forensics field and technology. Students obtain essential knowledge of the computer forensics profession, legal issues and procedures of computer investigations, digital evidence management, industry-standard computer forensic tools, file systems, data recovery, data collection and sample case evaluations.

**CIT-181: Principles of Information Security**- This course provides students necessary background in the technical realities and legal and theoretical principles of computer and information security to help them identify and evaluate computer security crimes and incidents. Topics include information security components and models, legal and ethical issues in information security and privacy, basics of computer networks and data communication, common computer and network system threats, attacks, and vulnerabilities, as well as information security risk and damage analysis and assessment.

### II: Learning Outcomes

**CIT-180:** Upon successful completion of the course, the student will:

1. Define basic terminology involved with computer forensics and digital evidence.
2. Describe the role of computer forensics and relevant laws in a criminal investigation.
3. Summarize procedures for public and private investigations of computer crimes or incidents.

4. Prepare a computer forensic investigation plan that secures digital evidence.
5. Explain relevant legal ground or corporate policies for pursuing digital evidence.
6. Identify legal or business needs for computer forensic hardware and software tools.
7. Use common industry-standard computer forensics tools.
8. Manage digital evidence using proper retention, storage and documentation techniques.
9. Describe the underlying concepts of data storage and operating system file systems.
10. Perform basic steps in data acquisitions of disk files using a software tool.

**CIT-181:** Upon successful completion of the course, the student will:

1. Define information security and describe major information security models.
2. Discuss needs for information security and procedures of information security auditing.
3. Identify major national and international laws that protect privacy and information security.
4. Discuss legal, ethical and financial ramifications of information security violations.
5. Explain the basic concepts of IP addressing and the TCP/IP protocol.
6. Analyze network traffic and configure various Internet security settings.
7. Identify and describe common computer and network threats, attacks and vulnerabilities.
8. Evaluate the strengths and weaknesses of current information security solutions.
9. Analyze and assess the risks and damage of business information systems.
10. Develop information security policies or plans that address potential crimes or incidents.

### 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

	<p>70-79.99% = C ; 60-69.99% = D          &lt;= 59.99% = F</p> <p>In the spirit of this college-level course  <b>***NO EXTRA CREDIT***</b> opportunities exist; instead, a lenient makeup work policy is provided to encourage a sole focus on course content.</p>
due dates	<p>Our weekly work cycle <b>begins on Monday</b> and proceeds <b>through Friday</b>. Completed weekly cycle documents and artifacts should be placed in your student 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 <b>primary instruction</b>. Thursdays and Fridays provide a chance for <b>independent practice</b> 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><b>The only high-stakes test will be the Test Out certification test taking place in the 4th 9-weeks period.</b> 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><b>Provide written credit to all relevant authors</b> 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><b>Honor the copyrights</b> associated with all content used in this course.</p> <p><b>Consequences:</b> 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>

edu	<p>(including add/drop/withdrawal deadlines), the Student Handbook, the College's Incident Report form, and many other College services through the MyCCAC portal: <a href="https://my.ccac.edu">https://my.ccac.edu</a></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, 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><a href="https://www.ccac.edu/academic-rules-and-regulations/rules-and-regulations.php">https://www.ccac.edu/academic-rules-and-regulations/rules-and-regulations.php</a></p> <p><a href="https://www.ccac.edu/president/policies-and-regulations.php">https://www.ccac.edu/president/policies-and-regulations.php</a></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><a href="https://www.ccac.edu/diversity/title-IX.php">https://www.ccac.edu/diversity/title-IX.php</a></p> <p><a href="https://www.ccac.edu/diversity/notices.php">https://www.ccac.edu/diversity/notices.php</a></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><a href="https://www.ccac.edu/supportive-services/suppotive.php">https://www.ccac.edu/supportive-services/suppotive.php</a></p>

## V: Content licensing and sharing

licensing	<p>All non-computer code content on <a href="http://technologyrediscovery.net">technologyrediscovery.net</a> (course content, images, media) is licensed under the Creative Commons Share-Alike license (CC BY-SA 4.0); no attribution required.</p> <p><a href="https://creativecommons.org/licenses/by-sa/4.0/">https://creativecommons.org/licenses/by-sa/4.0/</a></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.	<p>Students are reminded that they can access their course information and CCAC email account, the CCAC Academic Calendar</p>
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