

**Mecosta-Osceola Career Center**  
**Cybersecurity 2024-2025**  
**CIP Code - 11.1003 - Computer and Information Systems Security**  
**Course Syllabus**

**Instructor**

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**Course Description**

Cybersecurity is a one or two-year program at MOCC. First-year students will learn foundational concepts in hardware, software, operating systems, and exposure to networking. Second-year students will learn the fundamentals of computer and network security. Cybersecurity focuses on helping students become independent learners and problem solvers. Classroom exercises and procedures are designed to make students self-sufficient and efficient with the tools and resources available to help them figure things out.

Year 1 - Prepares students to manage the computer operations and control the system configurations emanating from a specific site or network hub. Includes instruction in computer hardware and software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures.

Year 2 - Prepares students to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

**Program Goals**

Students will receive instruction, training, and work-based learning opportunities that will result in the student's competence and preparation for employment in an entry level position and/or acceptance to a post-secondary institution to pursue an Information Technology degree.

**Course Prerequisites**

In order to assure the student a "reasonable probability of success" in this program, they should possess and maintain:

- Working knowledge of computers (although helpful, not required for enrollment)
- General math background is essential, with the ability to perform basic algebra
- Good reading and comprehension skills
- Critical thinking and problem-solving skills
- Self-paced study habits to ensure the successful passing of required certifications

## Course Objectives

Upon successful completion of this course, students will:

### **Year 1**

- Have the skills necessary to pass the TestOut PC Pro certification exam
- Have the skills necessary to pass the CompTIA IT Fundamentals+ certification
- Have the skills necessary to pass the TestOut Linux Pro certification exam
- Have advanced knowledge of how computers, mobile devices and networks operate.
- Be able to identify common security threats and vulnerabilities like malware, phishing, spoofing and social engineering
- Be able to apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, network equipment, and software
- Be Career Ready by learning and practicing essential employability skills such as being Professional, Safe, Respectful, and demonstrating Initiative

### **Year 2**

- Have the skills necessary to pass the TestOut Network Pro certification exam
- Have the skills necessary to pass the TestOut Security Pro certification exam
- Understand networking security fundamentals
- Ensure the physical security of file servers and network components
- Create a backup plan that guarantees data security
- Be able to deploy firewalls to provide network security
- Use encryption to protect data
- Understand and demonstrate how to monitor for network intrusion detection
- Be Career Ready by learning and practicing essential employability skills such as being Professional, Safe, Respectful, and demonstrating Initiative

## Grading Procedures & Components

**70%** of your grade is based on the technical skills learned in class. See the Certification by Term section for an explanation of the requirements for a technical skills grade.

**30%** of your grade is based on Career Readiness

**Other** activities such as labs, worksheets, and other documentation are required for completion of the course even though they will not attribute to your final grade. Failing to complete these tasks will result in an Incomplete for your grade.

### Grading Scale

A	100.00% 93.00%	B-	82.99% 80.00%	D+	69.99% 67.00%
A-	92.99% 90.00%	C+	79.99% 77.00%	D	66.99% 63.00%
B+	89.99% 87.00%	C	76.99% 73.00%	D-	62.99% 60.00%
B	86.99% 83.00%	C-	72.99% 70.00%	F	59.99% 0.00%

## **Textbook**

Instructional materials are provided online by the MICEK12.com curriculum using TestOut.com and supplemental books provided by the classroom. Each student is given an individual login.

## **Dual-Enrollment, Early-Middle College, Articulation & Direct Credit**

### **Dual-Enrollment**

The Cybersecurity class has partnered with Ferris State University to offer college credit during the students' time at MOCC. Students can earn up-to 12 college credits during a two-year enrollment with the CY program. For more information about this Dual-Enrollment opportunity, please contact the instructor or call 231-796-5805 and ask to speak with Shelly Harwell.

### **Early-Middle College**

In addition to dual-enrollment, incoming juniors have the option to enroll in Early-Middle College with Ferris State. With this opportunity, a student agrees to defer graduation at the end of their senior year and return for a full-year of study at FSU. This 13th year of public school/1st year of college is funded by the State of Michigan. The student participates in all senior year activities with their classmates - graduation ceremonies and activities provided by their home school, but they will not receive their official diploma. Upon successful completion of the 13th year of study, the student will receive their diploma and receive up-to an Associates Degree in Information Security and Intelligence. This is all provided with no out-of-pocket expense to the student for the tuition and books of the college courses. For more information about Early-Middle College opportunity, please contact the instructor or call 231-796-5805 and ask to speak with Shelly Harwell.

**\*Note** - to earn an Associates Degree at the end of the 13th year, students must coordinate additional dual-enrollment courses through their home school in order to complete all 61 required credits by the end of the 13th year. Without these additional dual-enrolled credits, students will finish the 13th year with only 42 of the 61 required credits.

### **Direct Credit**

None available at this time

### **Articulated College Credit:**

State-wide agreements with post-secondary partners. We are working to expand articulated college opportunities.

## **Clothing & Safety Equipment**

Students are expected to dress in business casual attire. Failing to dress appropriately will be reflected with a score of 1 in the Personal Management score of the Career Readiness evaluation. Examples of inappropriate attire are:

- Yoga Pants
- Ripped jeans
- Ripped shirts
- Flip-flops
- Sweatpants

If you are concerned an item of clothing may not be appropriate for class, it is best to not wear it to the Career Center. Exceptions will be made for school-based functions that allow for a fun-attire day at the home school.

## Certifications By Term

Industry recognized certifications are used for the exam of each of the 6 grading terms of the school year. Failing to certify during the term will result in an incomplete grade of the technical skill portion for that term. The instructor may adjust an incomplete grade for non-certification if the student has shown adequate effort or has extenuating circumstances that prevented successful certification.

### 1st year students -

Semester 1 - TestOut PC Pro (prep for CompTIA A+)

Semester 2 - TestOut Linux Pro (prep for CompTIA Linux+)

### 2nd year students -

Semester 1 - TestOut Network Pro (prep for CompTIA Network+)

Semester 2 - TestOut Security Pro (prep for CompTIA Security+)

**Note:** The TestOut courses and exams prepare students for taking CompTIA exams. Students who pass TestOut certification exams with a high score are given the opportunity to take the CompTIA exams. While both exams are industry-recognized, CompTIA is the exam that is more recognized and received. Students are encouraged to take the CompTIA exams when they are ready.

*Note:* The value of a certification is unparalleled by any other opportunities provided in the classroom. Obtaining certification demonstrates mastery of the information and knowledge of the subject. Therefore, a student may receive an automatic A grade for the technical skills portion of their grade for the term. To be eligible for this automatic A opportunity, a student must not have any missing assignments in any area of class, including career readiness. The student must also have a minimum grade of 80% in career readiness to be eligible for this opportunity.

*Note:* Students can accelerate their certifications faster than the required terms. Additional certifications are available to students and all students are highly encouraged to obtain as many certifications as they can while attending the CsIT class. Some examples of additional certifications are, but are not limited to:

<u>CompTIA</u>	<u>Certiport Information Technology Specialist</u>
Server+	Cloud Computing
Cloud+	Cybersecurity
CySA+	Network Security
PenTest+	Programming using Python
	Programming using JavaScript

## Career Readiness

### Introduction

The Career Readiness program was developed by members of the MOCC teaching staff for use in all programs and is aligned with the Advance CTE Career Ready Practices. Although it is a school policy that Career Readiness accounts for 30% of your grade, each teacher has a different approach to determining your Career Readiness grade. Career Readiness is scored using 3 categories:

Career Readiness is comprised of three main components

<u>Personal Management</u>	<u>Problem Solving</u>	<u>Teamwork</u>
<ul style="list-style-type: none"><li>● Attendance</li><li>● Respect and Ethics</li><li>● Organization</li><li>● Productivity</li><li>● Appearance</li><li>● Stewardship</li></ul>	<ul style="list-style-type: none"><li>● Perseverance</li><li>● Critical Thinking</li><li>● Technology, Creativity, and Innovation</li><li>● Research, academic and technical skills</li></ul>	<ul style="list-style-type: none"><li>● Participation</li><li>● Emotional Intelligence</li><li>● Communication</li><li>● Leadership</li></ul>

Every 3 weeks, students will submit a personal career-readiness self-evaluation to reflect upon the work performed throughout the period. Each of the three main categories will be rated based upon the Career Readiness rubric. There are four levels; Beginning-1 (well below standard), developing-2 (below standard), proficient-3 (at standard), and advanced-4 (above standard). A 4 is achieved when going above the normal standard in any one category, such as helping another student with a project you are not a part of. Students are required to explain their accomplishments on the evaluation and must provide data to support any level 4s they score themselves.

A score of 3 is the base standard to achieve. A 3 means that a student did everything that is expected for each of the categories. For example, a student arrived to class on-time and stayed focused on class work (Personal Management), utilized the resources available to overcome any issues you encountered (Problem Solving), and provided valuable input when working in a team (Teamwork).

Upon submission, the student's self-evaluation will be reviewed by the instructor and any necessary adjustments will be made and explained on the evaluation form. Points are subtracted for any noticeable and obvious infractions.

A few self-evaluation norms to follow are:

- A school-related absence is recorded as a 3 in all categories for that day
- Pre-arranged absences with notification more than 24 hours in advance are recorded as a 3 in all categories for that day
- Notifying the teacher of an unexpected absence at least 30 minutes before the start of class is recorded as a 2 in all categories for that day. Less than 30 minutes is a 1 in all categories.
- Being late to class is recorded as a 1 in Personal Management for that day
- Failing to notify the instructor of an absence is a 0 for all categories for that day

## Class Operation & Procedures

Learning targets will be discussed during class. Demonstrations and labs will be included to strengthen the student's understanding of the material. Each individual will be given the opportunity to practice "hands-on" applications during the learning process.

Reasonable deadlines are imposed throughout the school year. Failing to complete an assignment by the required deadline will result in a zero (0) being recorded for the assignment in the grade book. Any zero grade will require the student to email home, cc'ing the instructor, and explaining to the parent/guardian why the assignment was not completed on time and the corrective action the student will take to ensure future work is completed on time. The student will have 24 hours from the due date to send the email. Failure to send the required email will result in disciplinary action.

A student may receive full credit for the late assignment by completing the following:

- Completing the assignment in full within 5 days
- Receiving an email from the parent/guardian acknowledging the student email with 48 hours of it being sent to the parent/guardian

Failure to meet deadlines will result in a lower Career Readiness grade.

### Class work during absences

If you miss a day of class, it is your responsibility to complete any assignments and labs you missed once you return to class. Study guides and paper/pencil assignments can be made up after an absence on your own time. Other arrangements will be made for quizzes and tests if the absence was legitimate. Lab assignments may be made up upon your return after an absence if it does not interfere with the day's activity. Demonstrations/lectures *will not* be made up.

### 3-Before-Me

It is your responsibility to listen during lectures or when the instructor makes a classroom announcement. It is also your responsibility to take notes of the information as it is presented. If you do not understand something while the instructor is discussing an item, ask questions. If you have questions after the information is presented, it is your responsibility to find answers. 3-Before-Me means you ask 3 classmates your question before you ask the instructor. If 3 other people do not know the answer, the material was not clear and the instructor will explain the information to the group again to ensure everyone understands.

## **Personal Management & Attendance Policy**

The “Personal Management” category of the Career Readiness Rubric addresses attendance, punctuality, and safety; and therefore, a greater emphasis is placed on these behaviors. (Please note that this is the classroom attendance policy. For information on the school's attendance policies refer to the MOCC student handbook).

The Personal Management category is the only *objective* Career Readiness category. (The remaining two, Problem Solving and Teamwork are *subjective*). This means that you are here or you're not, you're on time or you're not, you're wearing appropriate clothing or you're not.

### **Absent**

Attendance is a MUST! You have to be in class to participate in and complete lectures, demonstrations, and labs. Every time you are absent, your Career Readiness grade goes down (unless it is a school-related absence). All missed learning and missed work is YOUR responsibility, not the instructors. You must first ask classmates what you missed (3-Before-Me). If you are still not clear on the subject matter, you may ask the instructor. If you do not call in when absent, we will be contacting your parent(s) or guardian(s).

The student is responsible to report any absences to the instructor, both pre-arranged and unplanned. Unplanned absences are the students responsibility to report. If someone other than the student contacts the instructor about the absence, the absence will be recorded in Skyward as “Absent without communication”. Career Ready means taking the responsibility to notify others of absences.

### **Tardy**

A tardy is defined as not being in your seat and ready to work at the start of class. Being late at work will eventually cost you your job! Your Career Readiness grade will be affected.

### **Signing Out / Leaving Early**

If you need to leave class early, you must fill out a “sign-out permission slip”. A note or phone call from your parent or guardian must be submitted to the instructor for early dismissal.

## **Microsoft Office 365**

The CsIT class utilizes the applications for Microsoft Office 365 (Word, Excel, PowerPoint, etc). While enrolled in CsIT, students are able to download and install, for free, Microsoft Office 365 on personal computers and devices. Students can login with their @mocc.tech email address at [office.com](https://office.com) to download and install Office. Individual apps (Word, Excel, etc) can be downloaded on smartphones and tablets by downloading the app from the devices app store. Once downloaded, students can login with their @mocc.tech email address to license the product.

When a student finishes or exits the CsIT program at MOCC, their @mocc.tech email address will be removed and access to Microsoft Office 365 will no longer be provided without paying for the service through Microsoft.

## **Annual Career Readiness Mock-Interview and Dress-for-Success Days**

To help prepare students for real-world job interviews, MOCC conducts multiple Dress-for-Success days throughout the year and provides a mock interview with business professionals in the spring. Students are required to dress in professional, business attire on these days. Students are expected to have for their attire:

<p><b><u>Males</u></b> Business Suit consisting of: Dress Slacks and Suit Jacket Button-up collared dress shirt Tie Leather Belt Dress Socks and Dress Shoes</p>	<p><b><u>Females</u></b> Business Suit consisting of: Pant suit or business skirt/dress Dress Blouse Pantyhose Office appropriate dress shoes</p>
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*Note:* If you do not have or are unable to afford business attire, let the instructor know. There are resources available to help you find the items you need. These items are **required** for these days. Failure to plan ahead and not have these items on dress-for-success days will result in a 0 for Personal Management and Problem Solving.

### **Career Technical Student Organizations (CTSOs)**

There are currently no Career Technical Student Organizations for IT at MOCC. Opportunities for student leadership are being explored and will be available to all students.

### **Cleaning and Organization**

IT professionals are expected to maintain clean and safe work environments. As part of classroom Career Readiness practices, students are required to help maintain a clean and safe classroom. Students are required to clean equipment, supplies, and furnishings after use. Cleaning supplies are placed around the room and students will clean their work area after each use. Tools or supplies will be wiped down and placed back in their designated area after each use.

### **Nondiscrimination**

Notice of Nondiscrimination In compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and the State of Michigan's Elliott-Larsen Civil Rights Act of 1977, Section 102(a) it is the policy of the Mecosta-Osceola Intermediate School District that no person shall, on the basis of race, color, religion, national origin or ancestry, gender, age, disability, height, weight, or marital status be excluded from participation in, be denied the benefits of, or be subjected to discrimination during any program or activity or in employment. In addition, arrangements can be made to ensure that the lack of English language skills is not a barrier to admission or participation. Inquiries regarding this policy should be directed to: Superintendent or superintendent designee, Mecosta-Osceola Intermediate School District, 15760 190th Avenue, Big Rapids, MI 49307, Telephone (231) 796-3543.



## Cybersecurity Rules of Conduct

- *The Golden Rule is first and foremost - Treat others as you want to be treated.*
- All MOISD rules appearing in the Student Handbook will be strictly adhered to
- Do not use profane language
- Students who are going to be absent are expected to notify the instructor in advance. Failure to do so will result in a 0 score for the day on the Career Readiness evaluation.
- A 10-minute break will be provided each day approximately half-way through the class. This is the appropriate time to use the restroom, get a drink, etc. It is your responsibility to ensure you are ready for class and able to work 1 solid hour until break-time each day.
- If you have an emergency, you must request permission from the instructor to leave the classroom. If emergencies become frequent, your career readiness grade will be affected. If you leave the classroom for an emergency, your cell phone must be left with the instructor.
- Absolutely no electronic devices (phones/tablets/etc) are to be visible during class, except at break. If you need to use your phone, you must receive permission from the instructor.
  - Students maintaining a Career Readiness score of 95% or better may have their phones out during class to use for music and may check them occasionally during lab work time. It is the teachers discretion to revoke this privilege at any time.
  - Music must not have obscene language. Headphones must be worn at computers.
- No Food is allowed at the desk unless permission is given by the instructor.
- Drinks are allowed at your desk but must remain on the floor. Drinks must have a closable top. If the drink is an open top, it must be kept on the sink counter.
- Wash your hands before operating the computers
- Business attire is required. Clothing drawing attention to a student or distracting others (revealing necklines, bare midriff, hemlines higher than the knee, distracting messages, artwork, sleeveless shirts are examples) will result in a Personal Management score reduction, a discipline notice, and a student/principal meeting. Students who can't meet the clothing requirements will be removed from the classroom.
- You are expected to have note-taking tools with you at all times. This includes a writing utensil and paper. Failing to have these items ready during class will deduct a point from your Personal Management Career Readiness score for the day.
- Failing to complete assignments and labs on-time will have a deduction in one or more Career Readiness areas
- You may begin shutting down computers and cleaning up work areas during the last 5 minutes of class. Finishing the day early will have a point deduction in both Personal Management and Problem Solving for that day.
- Grow and live by the Mecosta Osceola Career Center Core Values listed below.
  - **Honor** through integrity, responsibility, and accountability.
  - **Courage** to do the right thing, in the right way, for the right reasons.
  - **Commitment** through devotion to the program, fellow students, and citizens.
  - **Pride** in ourselves, our future professions, our appearance and our school.
  - **Professionalism** through education, training, and exemplary character.
  - **Respect** showing total respect in order to gain respect.
  - **Teamwork** by working as one, we are able to overcome all obstacles.

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# Student and Parent/Guardian Contact Information

You may fill this contact information out online at [parentcontact.mocc.tech](http://parentcontact.mocc.tech)

Student will receive 20 bonus points if contact info filled out online using link above

Signature and acknowledgement page is still required to be signed and returned

\_\_\_\_\_  
Student Name (print clearly)

\_\_\_\_\_  
Home School

\_\_\_\_\_  
Student personal email address (print clearly)

\_\_\_\_\_  
Student phone # (print clearly)

## Parent/Guardian 1 Information (at least 1 parent must sign-up for Remind)

\_\_\_\_\_  
Parent 1 Name (print clearly)

I have signed up for parent Remind  
text @csitparent to 81010 to sign up

\_\_\_\_\_  
Parent 1's email address (print clearly)

\_\_\_\_\_  
Best phone # to reach parent 1 (print clearly)

## Parent/Guardian 2 Information (if needed)

\_\_\_\_\_  
Parent 2 Name (print clearly)

I have signed up for parent Remind  
text @csitparent to 81010 to sign up

\_\_\_\_\_  
Parent 2's email address (print clearly)

\_\_\_\_\_  
Best phone # to reach parent 2 (print clearly)

Parent/Guardian 2 would like to be included on all direct contact regarding students

## Home computer/internet availability

Student has access to high-speed internet? (Capable of streaming video, such as Netflix)

Unlimited Internet       Data cap Internet       No high-speed Internet

Student has access to a computer (must be a computer, not a Chromebook or tablet).

# MOCC IT Syllabus Agreement

Initial to acknowledge each section

Student    Parent

\_\_\_\_\_    \_\_\_\_\_    I have read the section on college credit opportunities

\_\_\_\_\_    \_\_\_\_\_    I have read the section on required Dress for Success attire

\_\_\_\_\_    \_\_\_\_\_    I have read the section on Attendance and student's responsibilities

By signing and returning this portion of the syllabus, the student and parent agree that they have received, read, and understand the course requirements outlined in this syllabus.

\_\_\_\_\_  
Student Name (print clearly)

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Guardian 1 Name (print clearly)

\_\_\_\_\_  
Parent/Guardian 1 Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Guardian 2 Name (print clearly)

\_\_\_\_\_  
Parent/Guardian 2 Signature

\_\_\_\_\_  
Date