FOUR RIVERS CAREER CENTER

PLTW-CS Cybersecurity
(Project Lead the Way Computer Science - Cybersecurity)
1.5 Units of Credit

School Year: 2023 – 2024

Instructor: Curt Beers
Office: 1305A
Office Hours: 8 – 8:25 AM; 2:20 – 3:10 PM; other by appointment
Phone: 636-231-2100 Ext. 2910
curt.beers@washington.k12.mo.us

Disclaimer: SYLLABI MAY BE MODIFIED AT ANY TIME WITHOUT PRIOR NOTICE

- **Course Description**

Cybersecurity introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in Cybersecurity, students solve problems by understanding and closing these vulnerabilities. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

Course Prerequisites

Highly Recommended: IT 0974 Information Technology I (IT Essentials and Network Essentials)

Required Textbook & Course Materials

Project Lead the Way Computer Science - Cybersecurity
TestOut LabSim – Security Pro
Cisco Networking Academy Programs – Cisco Certified Support Technician (CCST) Security
Pathway
Cyber.org – Cybersecurity, Cyber Society and Cyber Range

***Students will need 16GB (min) USB Flash Drive, Headphones or Earbuds, Single Subject
College Ruled Notebook and Class Fee of $50 – Includes SkillsUSA Membership and Polo
dress shirt. Fees can be paid online https://washington.revtrak.net/ (Be sure to include Student
Name and "IT Class Fee" at Payment.***

Technology

PC's, laptops, and various other technologies may be used/introduced. Students may bring their own devices at their own risk and responsibility. School provided devices may not be able to access all classroom resources due to administrative security configurations or device capabilities. Adequate class time is provided for assignments if students prioritize their time.

-   Competencies and Objectives

FRCC's Mission

In partnership with our communities, Four Rivers Career Center provides a quality education with real life experiences and opportunities to achieve a higher standard of living for a diverse student population using authentic hands-on learning modeled by knowledgeable and caring instructors.

Four Rivers Common Learning Objectives:

1)   increased student attendance
2)   increased academic attainment in communication arts and mathematics
3)   increased vocational and technical skill attainment
4)   increased communication with all sending school guidance departments, building-level administration, and district-level administration

Objectives:

-        Students will explore network cabling, network applications, and network operating systems. As part of the learning experience, students will troubleshoot network devices such as routers, switches, and servers. Students will prepare to test for the TestOut Network Pro Certification, CompTIA Network+ Certification and Cisco Certified Entry Networking Technician.

-        Students will have developed an awareness of the world of work in the Information Technology industry, explore career options in the associated fields, and relate personal skills, aptitudes and abilities to future career decisions.

-        Upon successful completion of the program, students will demonstrate mastery of the foundation skills and competencies essential for success in the rapidly changing computer industries.

Classroom Conduct and Behavior

Students are expected to adhere to the policies of the School District of Washington as laid out in the Four Rivers Career Center Student Handbook. More information may be found online at http://www.frcc.washington.k12.mo.us

Career Resources

Need help? Mrs. Iesha Maloney and Mrs. Lorna Griffen are here to help students. If you are struggling academically or have other needs, please see them in room 2216.

- Class Format

Part I – English Language Arts (ELA)

The ELA grade will be based on Essays, Internet Assignments, Forum Questions and Presentations. The average of these will be used for total ELA grade.

Part II - Labs

Labs will follow the LabSim software along with assigned labs from Cisco's Network Academy. Students may use the Network on Wheels (NOW) work center for labs and practical applications.

Part III - Tests

Unit exams will include multiple choice, short answer questions. Cisco unit tests will be summative. Checkpoint exams will be cumulative representing information from all units discussed at that time.

Part IV – Internship/Professionalism/Leadership

Internships are available to students that have attained the CompTIA A+ certification. Attempts will be made to select an Internship site that is in the homeschool area in cooperation with the student and instructor. Internships require that the student have a mode of transportation and obtained the proper permissions to participate. Internships will be conducted in the 2nd and 3rd quarters of FRCC's school calendar. Every attempt will be made to place students at a new location each quarter. Internships are not a paid position but may have an opportunity for part-time employment.

- Attendance

Good attendance is one of the keys to students' success.   The staff will ensure the opportunity for students to make up for lost class time. Activities could be, but are not limited to, intensified study time, Saturday school, before or after school learning labs, mentoring, tutoring, service learning, program related outside learning opportunities, and other projects as deemed related.

1.   **A parent or guardian should call, email or send a note to Four Rivers (in addition to notifying your home high school) on the day of absence or prior to the absence and provide a reason for the student missing school.** Students will be excused for personal illness, serious illness in the family, death in the family, and appointments that cannot be made outside of school hours. Other absences will be recorded as an unexcused absence. A doctor's excuse is needed to validate absences of three or more consecutive days.

a.   Four Rivers Attendance Contact Information:
Sabrina Light   Phone: 636-231-2100 Ext 2915
Email: sabrina.light@washington.k12.mo.us

2.   Students may not leave campus without permission. Students must sign out at the office, if they leave campus before the end of the regular school session.

3.   School sponsored or school sanctioned activities are exempt from and will not count toward the total absences allowed per semester.

4.   If a student is truant, consequences will comply with Board regulation JG-R.

5.   Students are to make up work according to the policies of the School District of Washington.

6.   After **four (4) absences** per semester: Instructor will contact parent or guardian regarding absences.

After **six (6) absences** per semester: Instructor will contact parent or guardian. A notification letter will be sent from our office to a parent or guardian.

After **ten (10) absences** per semester: Instructor will contact parent or guardian. A notification letter will be sent from our office to a parent or guardian.

Students may lose credit after their twelfth (12ᵗʰ) absence.

In order to be eligible for a Carnegie Unit of high school credit, a student must be in attendance for at least 72 complete class periods.
Poor attendance will be taken into consideration and could prevent a student from returning to the second year of a program.

7.   Tardies: Three (3) tardies will result in a student referral to the office by the instructor. Four (4) or more tardies may result in detention, Saturday School or other disciplinary action.

8. Appeals Process – A student has the right to appeal the assignment of "no credit" under Board Policy JFH.

9. Qualification to participate in internships, agency rotations (Health Occupations), and related opportunities outside of Four Rivers Career Centers' campus is partially based upon student attendance history.

Sending School Calendars:
All sending students are expected to attend Four Rivers according to the Career Center's school calendar. All absences by sending schools are arranged in advance with administrative and instructional staff in order that the education and training are not adversely affected.

Emergency Closing of School:
Weather conditions may cause one or more of the sending high schools to be closed. In the event your home high school is closed due to inclement weather, those students are excused. In the event that the School District of Washington is closed, Four Rivers Career Center is closed
East Central College students enrolled in Auto Technology, Building Construction, Machine Tool, and Welding will not attend these classes when the School District of Washington is closed. East Central students attending any other ECC class that meets at Four Rivers Career Center must check with the college regarding class cancellation.

-   Conduct

The Student Code of Conduct is designated to develop an appreciation of order, foster student responsibility and self-control, teach respect for proper authority, and to ensure the orderly operation of District schools. No code can be expected to list each and every offense which may result in the use of disciplinary action. However, it is the purpose of this code to list certain offenses which, if committed by a student, will result in the imposition of a certain disciplinary action. Disciplinary actions may include ISS (In-School Suspension) or OSS (Out-Of-School Suspension) In addition to the consequences specified below, school officials will notify law enforcement as well as document violations in the students' discipline file pursuant to law and Board policy.

Teachers shall have the authority to make and enforce necessary rules for the internal governance in the classroom, subject to review by the building director. Conferences with teachers, directors and parents should be effectively employed to bring about acceptable classroom behavior.

Further information about student conduct can be found in the student handbook at: **http://www.frcc.washington.k12.mo.us**

Academic Honesty and Plagiarism Policy

You are expected to conduct yourself honestly in all academic endeavors.

Academic honesty includes the following:
- Documenting all proprietary information that is received from outside sources, including books, articles, web sites, lectures, interviews, television, radio, etc.
- Putting quotation marks around the words that were written or spoken by someone other than oneself.
- Applying this standard to all assignments (papers, take home exams, presentations, etc.).

Plagiarism:

To present someone else's work or ideas as one's own is plagiarism. A student commits plagiarism by
- copying, word for word, someone else's writing without putting that passage in quotation marks and identifying the source.
- taking someone else's writing, changing some of the words, and not identifying the source;
- taking someone else's ideas or organization of ideas, putting them into his/her own words and not identifying the source;
- having someone else change the student's writing—a tutor, friend, or relative, for instance—and creating the impression that this is the student's own work; or
- purchasing or downloading papers or passages from the Web.

An instance of plagiarism may result in a grade of "0" for the assignment and all related assignments (in the case of an essay, all drafts and prewriting would also receive a zero).

Method of Student Evaluation

Re-grades

Upon receiving a graded item back from the instructor (excluding finals, tests, or computer generated grades), a student has the opportunity to turn that assignment back in for a higher grade, after correcting any mistakes. For all corrections, the student must give a detailed written explanation why their initial answer was wrong and their new one correct. When turning in work for a re-grade, make sure to attach the original to it. Students have the right and are strongly encouraged to challenge any grade they feel was scored in error.

Make-Up Work

Assignments are posted online using the Cisco Network Academy website for students to access; course materials, assignments and to submit assignments. In addition to the Cisco Network Academy, TestOut LabSim assignments are also online. Because of this availability all assignments are due on the due dates given, regardless of absence due to sickness or inclement weather. The only exception is for tests. Excused absences will be required to make-up missed tests upon return of class unless other arrangements have been made with the instructor. Unexcused absences will be treated as late work.

Late Work

Work will lose 10% for each day it is late up to three days. Assignments will be accepted up to five days late and given a score of a 50% full credit. Any assignments after five days late will receive no credit (NC).

Final Exam

A written final exam will be given at the conclusion of the semester consisting of 10% of the semester grade.

Semester 1st half = 45%

Semester 2nd half = 45%

Semester Final Exam = 10%

Certification

Students are personally responsible for any testing fees if they choose to take the CompTIA Security+ exam.

The CompTIA Security+ Certification consists of a single test at an approximate cost of $340.00 through VUE testing services. FRCC is an authorized partner with CompTIA, which allows us to purchase vouchers at approximately 50% off.

Cisco Certification Discount Voucher.

Cisco NetAcad provides certification exam discounts (vouchers) to qualified students who receive a score of 75% or higher on the FIRST attempt of the final exam in a qualifying course and a Pass in the Cisco NetAcad gradebook.

Additional certifications will also be given near the end of the second semester, these certifications include:

• Cisco Introduction to Cybersecurity (no fee) students will receive a certificate of completion and may receive a letter of merit upon successful completion of the course.
• Cisco Cybersecurity Essentials (no fee) students will receive a certificate of completion and may receive a letter of merit upon successful completion of the course.

Additional certifications are offered because they are relevant to the course and can be used to enhance the students resume when seeking employment or seeking additional certifications.

A student's grade will be determined according to the following breakdown and scale:

English Language Arts:	20%
Labs:	35%
Tests:	35%
Professionalism:	10%

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

-   Course Breakdown

PLTW-CS Cybersecurity	Unit Readings	Date
Personal Security	Unit 1	Oct 19, 20223
System Security	Unit 2	Dec 22, 2023
Network Security	Unit 3	Mar 7, 2024
Applied Security	Unit 4	Apr 26, 2024
Final Exam	Final Exam	May 1, 2024
TestOut Security Pro Certification	TSA Exam	May 3, 2024
CompTIA Exam	Exam	TBD

This page is intentionally blank

Four Rivers Career Center
Contract

IT 0975 Information Technology II

By signing this document I am stating that I have read and understand the Information Technology Course Syllabus and agree to the terms and agreements set by the Instructor.

As a parent or guardian I consent to my student accessing and using the Cisco Networking Academy, Cyber.org, US Cyber Range, TryHackMe.org, CyberStart America, National Cyber League, Cyber Patriot, and TestOut online course materials and education tools.

By signing your email address you will automatically be added to my mailing lists for important announcements. Please print the email address clearly!

Student Signature -   _____

Student Email Address -   _____

Parent Signature -   _____

Parent Email Address -   _____