



**PRACTICUM IN I.T.**  
 2024-2025 COURSE SYLLABUS  
 INSTRUCTOR: PETE BARCENEZ

**CYBERDAWGS**  
**CODE CLUB**

**WELCOME!** to the **Practicum in I.T.** course. This is the 4<sup>TH</sup> of four courses in the IT/Cyber Security Pathway. It is often very exciting for students to enroll in a technology course. Practicum students will primarily focus on IT projects in computer programming and coding. One of the most beneficial outcomes of this course is the possibility of employment or a career in the high demand high wage market of IT, especially the Cyber Security Market. Practicum students will have the opportunity to gain an entry-level IT certification.

**INSTRUCTOR**

Contact	Conference period	Tutoring hours	Prerequisite courses
Email: pbarcenez1@saisd.net	3rd (1:15-2:50 pm) "A" Day only	4:35pm - 5:15pm Wed <i>Or by appointment</i>	Networking & AP CS Principles

**TUTORING**

Students are welcome to stay for tutoring afterschool. I am available from 4:35-5:15 pm on Wednesday. Please have student email or talk to me to schedule an appointment. I will confirm with the parent.

**SUPPLIES**

Classroom	Electronic	(2) most important supplies
<ul style="list-style-type: none"> <li>Pen and Pencils to write with</li> <li>A composition book for notes</li> <li>½" to 1" binder with pocket folders</li> </ul>	<ul style="list-style-type: none"> <li>A personal device or chrome book from library</li> <li>Personal earbuds/headphones</li> <li>No USB drives or DVD's from home</li> </ul>	The most important supplies your child can bring are these: <ol style="list-style-type: none"> <li><b>EFFORT</b></li> <li><b>GOOD ATTITUDE</b></li> </ol>

**COURSE CURRICULUM**

In the Practicum in IT course, students will gain advance knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of digital products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concept and standards are essential to prepare students for success in a technology-driven society. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Students will build a class portfolio and work on capstone projects.

**COURSE OUTLINE**

Python Programming	Basic IT+ Domains	TEA Standards for Practicum in IT	
Beginning in Computer Science	IT Concepts and Terminology	Employability and Employment Opportunities	Researching problems in IT
Number Calculations and Data	Infrastructure	Academic Knowledge in IT	Defining problems in IT
Making Decisions	Applications and Software	Researching Digital projects	Developing solutions in IT
Repetitions and loops	Software Development	Developing Digital projects	Creating solutions in IT
Functions, Arrays, 2D Arrays	Database Fundamentals		Implementing solutions in IT
Graphics and the Internet	Security		Personal Portfolios

**PURPOSE**

The purpose of the Practicum course is to build upon a student's computer literacy skills and to increase their knowledge of the practical processes for problem-solving in the IT field. My personal purpose in this course is to make students better at using computers as tools to accomplish their work as students. By broadening their digital workflow



and capacity as a student of technology, they will have opportunities to explore entry-level employment and gain industry certifications that will lead to careers in the field of Information Technology.

### ELECTRONIC CURRICULUM

#### TestOut



The TestOut **IT Fundamentals Pro** course was designed for students who are interested in Information Technology but have limited technical knowledge of computing systems. We'll explore foundational concepts related to computer hardware and software, networking, databases, programming, Information Systems, and data security.

The course includes over 100 hands-on labs to reinforce important concepts. As you perform real-world tasks associated with various IT fields, you'll gain a broad understanding of career options that will help you refine your interests and make vocational choices. **The course also covers all objectives necessary to pass the TestOut IT Fundamentals Pro and CompTIA IT Fundamentals (FC0-U61) certification exams. There are eleven chapters in the course.**



This course is designed to offer an introduction to computer science. Students will learn the basics of computer programming along with the basics of computer science. This course covers the basic building blocks of programming along with other central elements of computer science



The primary language for the course is Python. The course will consist of video lectures, daily programming exercises, longer coding assignments, regular quizzes, projects, and exams. One major element of the content is the Code-Along videos. In these videos, students are asked to follow along with the instructor as they code.

### INSTRUCTIONAL METHODS

The recommended methods of Instruction for this course will be a combination of lecture, discussion, and demonstrations, followed by applied skills activities. Students are expected to prepare for lectures and discussions by reading and viewing the assigned videos and notes. The instructor can then present content by lecture and discussion regarding theories, principles and concepts relating to the topic. This is followed by demonstrations of the various skills that will be developed. Students are then given practical application activities. Once all activities, and/or projects have been completed, students will then be evaluated on completed works.

### ASSIGNMENTS

It is the goal of this class to be paperless in as many areas as possible. That means that electronic assignments will be posted on the CANVAS Learning management system where students will be able to download the assignment and its instructions. Turning in completed works will involve upload files from the local PC to a student's cloud storage or the hosting sites electronic storage. There will be some assignments intended for pen and paper such as journaling and creative discovery applications where students can brainstorm, share and discuss new ideas, a premium grade will be reserved for students who are able to leverage their visual capabilities through drawings, sketches, sketchnotes

### ASSESSMENTS

Methods of assessment will be derived from the following, online objective tests, pre and post objective tests, classwork, and computer assignments. Each student will take a baseline exam of the CompTIA ITF+ and demonstrate growth on the end-of-year exam. Formative assessments will be utilized to determine areas to remediate.



### EVALUATION

Grade Distribution	Grading Scale	Late Work	Make up Work	Work Corrections
60% Daily Assignments	A= 90-100% B= 80-89% C= 75-79%	Students will be able to submit late work without penalty, but the highest grade that can be earned is an 85.	A student is allowed two instructional days for each day missed during which make up work may be permitted, or they can schedule a make-up assessment	Students can correct work that is below an 85. At other times, work will be handed back to students to complete at a higher level.
40% Assessments	D= 70-74% F= 69%-50%			

### COMPUTER USE

Computers are to be used for educational purposes only. To use a computer, the students must agree to follow the computer usage agreement as well as the SAISD Student Acceptable Use Policy for the Electronic Communications Systems. If they break the agreement, the student will be given an alternate assignment that is related to the topic being covered in class. Using a computer in the lab is a privilege, I will ask that all students please take care of the equipment assigned to them.

CLASSROOM RULES	COMPUTER LAB RULES
<ul style="list-style-type: none"> <li><i>Respect is given to you in this class, you keep that Respect by earning it. Show respect to teacher, peers.</i></li> <li><i>Cell phones are permitted in the lab while working on a project, a distracting phone will become confiscated</i></li> <li><i>Students will not use computers as personal devices for entertainment. You will be asked to log out.</i></li> <li><i>Please ask for a pass to leave the room</i></li> <li><i>Please keep conversations to a minimum, side conversations should stop when teacher is talking</i></li> </ul>	<ul style="list-style-type: none"> <li><i>No food or open container drinks in the lab, - gum, potato chips or snacks while using computers in the lab</i></li> <li><i>Please do not relocate furniture in the classroom or move any</i></li> <li><i>Do not swap any devices such as keyboards or mice</i></li> <li><i>Do not use USB devices in the lab</i></li> <li><i>Please use your own earbuds in class, do not share</i></li> </ul>

### Rule Violations

There are some instances for which removal from class and an immediate referral are non-negotiable, as outlined in the campus handbook. If these instances occur, the teacher will work with administration at an appropriate time to resolve the situation. These situations may include, but are not limited to physical aggression and engaging in unsafe behavior, minor insubordination and other infractions will be handled using the following steps:

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Warning	Private conversation	Parent phone call	After school detention	Parent student teacher conf.	Office referral

### INTERNET ACCESS POLICY

When accessing a school district computer, do not expect any privacy during use. Use of the school's network constitutes consent to monitoring, retrieval and disclosure of any information stored with the network for any purpose including criminal prosecution.



**PARENT COMMUNICATION**

Parents, teachers, and students work together to promote learning. It is important to me to communicate with you on a regular basis concerning your child’s progress in learning required concepts and standards. I will either email, text, or call when appropriate. Please feel free to email me at any time. My email is listed on the top section of this syllabus.

To further promote efficient communications to the home, I would ask that you fill in the required information regarding your preferred contact methods.

Parent/Guardian 1 name	Lives with student	Cell phone	e-mail
	<input type="checkbox"/> YES <input type="checkbox"/> NO	( ) _____ - _____	

Parent/Guardian 2 name	Lives with student	Cell phone	e-mail
	<input type="checkbox"/> YES <input type="checkbox"/> NO	( ) _____ - _____	

PARENT/GUARDIAN 1 -- I PREFER TO BE CONTACTED BY:     PHONE  TEXT                       EMAIL  
 PARENT/GUARDIAN 2 -- I PREFER TO BE CONTACTED BY:     PHONE  TEXT                       EMAIL

**PARENT ACKNOWLEDGEMENT OF SYLLABUS**

- I have received the Practicum in I.T. syllabus.
- I am aware of the class subject and the topics that my child will be learning.
- I have been made aware of how my child’s classwork will be graded.
- I have been made aware of what the procedures are for making up missed work.
- I have been made aware of the responsibility my child has for reviewing work where they have received a low grade.
- I have reviewed the classroom management procedures, expectations, rules, and consequences for the course.
- I understand that for my child to be successful, the teacher, the student, and the parent all must do their part.
- I will support the teacher’s efforts with my child to maintain an environment conducive to learning.

Student Name: \_\_\_\_\_ Student Signature: \_\_\_\_\_

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

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