

12th Grade - Independent Study in Technical Applications 2026 – 2027 | Instructional Plan

Course Overview	Independent Study in Technical Applications (ISTA) is a capstone-level computer science course that develops students' programming skills through Python instruction, certification preparation, and applied learning. Using a structured curriculum aligned to the Industry-Based Certification, students build proficiency in coding, problem-solving, and computational thinking through hands-on practice and performance-based tasks. The course is delivered in a blended-centered model, allowing for self-paced progression with targeted teacher support. In addition to certification preparation, students complete a capstone unit focused on physical computing with Raspberry Pi, where they apply programming skills to design and build real-world solutions. Overall, ISTA prepares students for industry certification, advanced coursework, and careers in programming and technology by emphasizing both technical skill development and authentic application.
Course Standards	Rule §127.720 - Independent Study in Technology Applications

Scope & Sequence

Units/Modules & Instructional Days	Assessments & Scanning Deadlines	Standards
Pre-Test Exam Window	ALL Regions: Aug 24 – Sep 12, 2026	
Unit 1: Basic Python & Console Interaction 18 days	TX_CTE_12thIndependentStudyinTechnicalApplications_F26_UE1 Scanning Deadline: September 24 th , 2026	Unit Standards
Unit 2: Conditionals 12 days	TX_CTE_12thIndependentStudyinTechnicalApplications_F26_UE2 Scanning Deadline: October 8 th , 2026	
Unit 3: Looping 13 days	TX_CTE_12thIndependentStudyinTechnicalApplications_F26_UE3 Scanning Deadline: October 29 th , 2026	
Unit 4: Functions & Exceptions 19 days	TX_CTE_12thIndependentStudyinTechnicalApplications_F26_UE4 Scanning Deadline: December 3 rd , 2026	
Unit 5: Strings 17 days	TX_CTE_12thIndependentStudyinTechnicalApplications_S27_UE5 Scanning Deadline: January 21 st , 2027	
Unit 6: Creating & Altering Data Structures 13 days	TX_CTE_12thIndependentStudyinTechnicalApplications_S27_UE6 Scanning Deadline: February 11 th , 2027	
Unit 7: Extending Data Structures 16 days	TX_CTE_12thIndependentStudyinTechnicalApplications_S27_UE7 Scanning Deadline: March 11 th , 2027	
Practice IBC Exam Window: February 22-25, 2027 Scanning Deadline: February 26, 2027		
Unit 8: IBC Certification Preparation 10 days	N/A	
IBC Exam Window: March 30 - April 2, 2027 Scanning Deadline: April 5, 2027		
Unit 9: Capstone – Physical Computing 14 days	N/A	
Post-Test Exam Window		
EP & HOU:	May 10 - 14, 2027 Scanning Deadline: May 14, 2027	
SA:	May 12 - 18, 2027 Scanning Deadline: May 18, 2027	
RGV, AUS, PB, DFW:	May 17 - 21, 2027 Scanning Deadline: May 21, 2027	

TEKS Alignment

Instruction in this course is aligned to the Texas Essential Knowledge and Skills (TEKS) as adopted by the State Board of Education and implemented in accordance with Texas Education Code Chapter 28.

Instructional Materials

Primary Texts (if applicable)

Supplemental instructional materials may be used to support instruction. Supplemental materials do not replace board-approved core instructional materials.

Additional information regarding instructional programs, assessments, and parent access to instructional materials is available on the district website.

Instructional Expectations

Instruction is delivered using board-approved instructional materials and aligned to the scope and sequence outlined above. Teachers are expected to ensure all required standards are taught within the course timeframe.

Assessment Overview

Student learning is monitored through formative and summative assessments aligned to course standards. Assessment results are used to inform instruction and student supports. Students participate in required state assessments when applicable.