TXST Local at Collin College - Guided Pathway
Associate of Science in Computer Science & Information Technology
Bachelor of Science with a major in Computer Science

First Year - Collin College

FIRST SEMESTER	SECOND SEMESTER
C ENGL 1301 Composition I (Core 010; Prerequisite for TXST coursework))	C ENGL 2311 Technical and Business Writing (Core 010; Prerequisite for TXST coursework)
C MATH 2413 Calculus I (Core 020; Prerequisite for TXST coursework)	C MATH 2414 Calculus II (Core 090; Prerequisite for TXST coursework)
C Creative Arts (Core 050) (see list below)	COSC 1437 Programming Fundamentals II (Prerequisite for TXST coursework)
COSC 1436 Programming Fundamentals I	C GOVT 2305 Federal Government (Core 070)
C PHIL 2306 Intro to Ethics (Core 040; Prerequisite for TXST Coursework)	C SPCH 1311 (Core 090; Prerequisite for TXST coursework)
US 1100 University Seminar	
18 credit hours	**17 credit hours**

Second Year - Collin College

FIRST SEMESTER	SECOND SEMESTER
MATH 2305 Discrete Mathematics (Prerequisite for TXST coursework)	MATH 2415 Calculus III (Applied Math minor)
C Life/Physical Science with Lab (Core 030; See list below)	COSC 2325 Computer Organization (Prerequisite for TXST coursework)
C GOVT 2306 Texas Government (Core 070)	C Life/Physical Science with Lab (Core 030; See list below)
COSC 2436 Programming Fundamentals III (Prerequisite for TXST coursework)	C HIST 1302 US History II (Core 060)
C HIST 1301 United States History I (Core 060)	CS 3358 Data Structures
17 credit hours	**17 credit hours**

Third Year - Texas State University/Collin College

Texas State University courses to be taught at Collin College Allen Technical Campus

FIRST SEMESTER	SECOND SEMESTER
MATH 3398 Discrete Math II (Applied Mathematics minor)	CS 3339 Computer Architecture
CS Advanced Elective I (CS 3320 Internet Software Development	CS 3360 Computer Systems Fundamentals
CS 2315 Computer Ethics (Writing Intensive Course)	CS Advanced Elective 2 (See complete list of TXST Computer Science Advanced Elective Options below)
3-hour Elective	CS 3354 Introduction to Object-based Design
C Social/Behavioral Sciences (see list below)	
15 credit hours	**12 credit hours**

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Fourth Year – Texas State University/Collin College

FIRST SEMESTER	SECOND SEMESTER
MATH 3305 Introduction to Probability and Statistics (Applied Mathematics minor)	CS 4371 Computer Systems Security
CS 3378 Theory of Automata (CS Advanced Elective 3; satisfies Applied Mathematics minor)	CS Advanced Elective 4 (See complete list of TXST Computer Science Advanced Elective Options below)
CS 3398 Software Engineering (Writing Intensive Course)	CS 4326 Human Factors of Computer Systems (Writing Intensive Course)
Life/Physical Science (see list below)	3-hour Elective with TXST (Students must complete 24 of their last 30 hours with TXST)
13 credit hours	**12 credit hours**

Collin College Course Selections

Creative Arts – choose one from: **DANC** 2303, **MUSI** 1306, 1307, 1310, **DRAM** 1310, 2361, 2362, 2366, **ARTS** 1301, 1303, 1304, 1313

Social/Behavioral Sciences – choose one from: **ANTH** 2302, 2346, 2351, **ECON** 2301, 2302, **PSYC** 2301, **SOCI** 1301, 1306

Life/Physical Sciences – choose TWO from one area and ONE from another (THREE total): **CHEM** 1411 & 1412; **PHYS** 1401 & 1402; **PHYS** 2425, 2426*; **GEOL** 1403, 1404

*PHYS 2425 may not be combined with PHYS 1401 to satisfy core or degree requirements at Texas State University. A maximum of 8 hours of physics will apply to the natural science requirement for the CS major.

TXST Computer Science Advanced Elective Options

CS Advanced Elective Options (check prerequisites)					
Fall Offerings			Spring Offerings		
TXST Course	**TXST Title**		**TXST Course**	**TXST Title**	**Hours**
CS 3320	Internet Software Development		CS 4310	Computer Networks	3
CS 3378	Theory of Automata (will also apply to the Applied Math minor)		CS 4315	Intro to Data Mining and Information Retrieval	3
CS 4332	Introduction to Database Systems		*Students may take additional project courses to satisfy CS Advanced Electives*		3
CS 4347	Introduction to Machine Learning				

[C] Fulfills core requirement

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Collin College/TXST Applied Math Minor courses in this degree pathway

The minor in Applied Mathematics requires 20 semester credit hours. For full course options, visit the TXST Catalog.

- Required:
  - TCCN MATH 2413 (TXST MATH 2471) Calculus I
  - TCCN MATH 2414 (TXST MATH 2472) Calculus II
- Prescribed Electives:
  - TCCN MATH 2315* (TXST MATH 2393) Calculus III (*Collin College offers MATH 2415, which will transfer as MATH 2393 + 1 hr MATH ELNA)
  - TXST MATH 3398 Discrete Mathematics II
  - TXST MATH 3305 Introduction to Probability and Statistics
  - TXST CS 3378 Theory of Automata

TXST Bachelor of Science in Computer Science Degree Requirements:

- Computer science students must complete a total of 12 hours of natural science courses (3 hours and their corresponding labs). Six hours will satisfy the Life/Physical Sciences Texas Core Curriculum requirement.
- In addition to satisfying the University graduation requirements, students must earn a grade of C or higher in all computer science, English, and mathematics courses used to satisfy the requirements of the computer science major.
- Students pursuing this B.S. degree program are required to complete 3 hours of technical or scientific writing. A grade of C or higher is required in these hours to satisfy the graduation requirements of the computer science major. ENGL 2311 – Technical and Business Writing at Collin College will satisfy this requirement; alternatively, students may select from ENG 3303 or ENG 3313.
- The required courses for this major include 14 of the 20 hours of coursework required for the Applied Mathematics minor. Therefore, this degree plan includes two additional courses needed to complete the Applied Mathematics minor.
- Nine hours of writing intensive (WI) coursework are required for graduation. For this degree pathway, the following courses will satisfy this requirement: CS 2315 Computer Ethics; CS 3398 Software Engineering; CS 4326 Human Factors of Computer Systems.
- Students must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- Students must complete 43 hours of Computer Science courses, including one CS project course from: CS 4318, CS 4326, CS 4380, or CS 4398. At Collin College, CS 4326 Human Factors of Computer Systems will be the project course offered.
- The number of free electives a student will complete varies, depending on the number of hours needed to satisfy the 120 and/or the 36 advanced or 9 hours writing intensive requirements. Students should consult with the academic advisor before enrolling in any free elective courses to ensure that electives are needed.

Students should review the catalog entry for the Bachelor of Science (B.S.) Major in Computer Science and meet with an advisor before enrolling in TXST coursework. .

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Admission Requirements:

Any student admitted to Texas State may initially declare and be admitted to the Computer Science program under a temporary status, pre-Computer Science. Once a student is qualified to enroll in Texas State's MATH 2471 Calculus I they will be fully admitted to the program. Once admitted, students will be considered a "full" major, rather than a "pre" major. For more information, please refer to the full policy on the TXST College of Science and Engineering website.

Important Note: This pathway map is intended for planning purposes only and does not guarantee course availability or fulfillment of degree requirements. Requirements may vary based on individual circumstances. Students are strongly encouraged to meet with an academic advisor regularly to ensure they are on track to complete their academic program.