

CS 2021-2022 Classes

Each course taken can be used to satisfy only one degree plan requirement. For example, you can take CSE 4380 as your security elective, but it will not also count as a technical elective. If you take CSE 4380 and CSE 4381, CSE 4380 can satisfy your security elective and CSE 4381 can count as a technical elective.

Mathematics Electives

- MATH 2326 - Calculus III (Fall, Spring, & Summer)
- CSE 4345 - Computational Methods (Fall & Spring)

Technical Electives

- CSE 4303 – Computer Graphics
prereqs: CSE 3318 and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4305 – Compilers
prereqs: CSE 3302 and CSE 3315 (Fall & Spring)
- CSE 4309 – Fundamentals of Machine Learning
prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4310 - Fundamentals of Computer Vision
prereqs: CSE 3318, IE 3301 or MATH 3313, CSE 3380 or MATH 3330 (Spring only)
- CSE 4321 – Software Testing and Maintenance
prereqs: CSE 3310 (Fall, Spring, & Summer)
- CSE 4322 – Software Project Management
prereqs: CSE 3310 (Fall & Spring)
- CSE 4323 – Quantitative Computer Architecture
prereqs: CSE 3320 (Fall & Spring)
- CSE 4331 – Database Implementation and Theory
prereqs: CSE 3330 (Fall, Spring, & Summer)
- CSE 4334 – Datamining
prereqs: IE 3301 or MATH 3313 and coreq: CSE 3330 (Fall & Spring)
- CSE 4340 – Fundamentals of Wireless Networks
prereqs: CSE 4344 or CSE 4352 (Fluctuates)
- CSE 4345 – Computational Methods
prereqs: CSE 3318, IE 3301 or MATH 3313, and CSE 3380 or MATH 3330 (Fall & Spring)
- CSE 4351 – Parallel Processing
prereqs: CSE 3320 (Fall & Spring)
- CSE 4360 - Autonomous Robot Design and Programming
prereqs: CSE 3318, CSE 3320, and CSE 3380 or MATH 3330 (Fall only)
- CSE 4361 – Software Design Patterns
prereqs: CSE 3311 (Fall & Spring)
- CSE 4378 – Intro to Unmanned Vehicles
prereqs: Department consent (Fall only)

- CSE 4379 – Unmanned Vehicles Development
prereqs: B or better in CSE 4378 (Spring only)
- CSE 4380 – Information Security
prereqs: CSE 3320 (Fall & Spring)
- CSE 4381 – Information Security 2
prereqs: CSE 3320 and coreq CSE 4344 (Fall & Spring)
- CSE 4382 – Secure Programming
prereqs: CSE 3320 (Fall & Spring)
- CSE 3311 – Object-orientated Software Engineering
prereqs: CSE 1325, CSE 3318, and CSE 3310 (Fall, Spring, & Summer)
- CSE 3313 – Signal Processing
prereqs: CSE 3318 and CSE 3380 or MATH 3330 (Fall & Spring)
- IE 3315 – Operations Research I
prereqs: coreq MATH 2326 (Fall & Spring)

Language, Philosophy & Culture

- ANTHROPOLOGY (ANTH) 2322
- ARABIC (ARAB) 2310, 2314
- ARCHITECTURE (ARCH) 2300
- ART & ART HISTORY (ART) 1317
- American Sign Lang. (ASL) 2314
- CHINESE (CHIN) 2310, 2314
- CLASSICS (CLAS) 1300
- ENGLISH (ENGL) 2303, 2309, 2319, 2329
- FRENCH (FREN) 2310, 2314
- GERMAN (GERM) 2310, 2314
- GLOBAL (GLOBAL) 2301
- GREEK (GREK) 2314
- HISTORY (HIST) 2377
- INTERDISCIPLINARY STUDIES (INTS) 1310
- KOREAN (KORE) 2310, 2314
- LATIN (LATN) 2314
- LINGUISTICS (LING) 2371
- MEXICAN AMERICAN STUDIES (MAS) 2300
- PHILOSOPHY (PHIL) 1304, 2300, 2314
- RUSSIAN (RUSS) 2310, 2314
- SOCIOLOGY (SOCL) 1310
- SPANISH (SPAN) 2310, 2314, 2315
- WOMEN'S & GENDER STUDIES (WOMS) 2310

Creative Arts Electives

- ARCHITECTURE (ARCH) 1301
- ART & ART HISTORY (ART) 1301, 1309, 1310
- DANCE (DNCE) 1300
- ENGLISH (ENGL) 1375
- MUSIC (MUSI) 1300, 1302, 1304, 2300, 2301
- THEATER ARTS (THEA) 1342, 1343

History Electives

- HIST 1301
- HIST 1302
- HIST 1331
- HIST 1332

Student Name: _____

UTA ID#: _____

General Education/Core Curriculum

Course	Hours Earned	Hours
US History*		3
US History*		3
POLS 2311		3
POLS 2312		3
ECON 2305 or IE 2308		3
Creative Arts*		3
Language, Philosophy, and Culture*		3
ENGL 1301		3
COMS 2302		3
TOTAL General Education/Core		27

Mathematics

Course	Hours Earned	Hours
MATH 1426 Calculus I		4
MATH 2425 Calculus II		4
IE 3301 or MATH 3313 Engr. Probability		3
CSE 3380 or MATH 3330 Linear Algebra		3
Math Elective **		3
TOTAL Mathematics		17

Science

Course	Hours Earned	Hours
PHYS 1443 Technical Physics 1		4
PHYS 1444 Technical Physics 2		4
TOTAL Science		8

COE Foreign Language

___ Earned in High School,

___ Earned in College, or

___ Exempt (ESL)

Total Hours for CSE Degree Plan 2021: 123 Hours

* Refer to the UTA catalog for options (<https://catalog.uta.edu/degreerequirements/generalcorerequirements/>)

** Refer to flowcharts on website for options (<https://www.uta.edu/academics/schools-colleges/engineering/academics/degree-plans>)

Engineering Success

Course	Hours Earned	Hours
ENGR 1101 or UNIV 1131		1
TOTAL Engineering Success		1

Major: Computer Science

Course	Hours Earned	Hours
CSE 1106 Introduction to CSE		1
CSE 1310 Introduction to Programming		3
CSE 1320 Intermediate Programming		3
CSE 1325 Object-Oriented Programming		3
CSE 2312 Computer Organization		3
CSE 2315 Discrete Structures		3
CSE 3318 Algorithms & Data Structures		3
CSE 3302 Programming Languages		3
CSE 3310 Intro to Software Engineering		3
CSE 3314 Professional Practices		3
CSE 3315 Theoretical Concepts		3
CSE 3320 Operating Systems		3
CSE 3330 Database Systems		3
CSE 4303 or 4305 or 4360		3
CSE 4308 Artificial Intelligence		3
CSE 4316 Senior Design I		3
CSE 4317 Senior Design II		3
CSE 4344 Computer Networks		3
CSE 4380 or 4381 or 4382		3
Technical Elective**		3
Technical Elective**		3
Technical Elective**		3
Technical Elective**		3
Technical Elective**		3
TOTAL Computer Science		70

BS in Computer Science Course Pre/Co-requisite Requirements 2021-2022

- This document lists all courses required for a BS degree in Computer Science along with any required pre-requisites and co-requisites.
- For Texas Common Course Number (TCCN), visit <https://www.uta.edu/admissions/apply/transfer/transfer-guides>. Scroll down the page to view “Current Transfer Guides.” Prior to registering, confirm with your UTA advisor any courses you plan to take outside of UTA.
- This document lists three categories of course requirements: 1. General Education; 2. Pre-professional; and 3. Professional.
- To be eligible to enroll in College of Engineering (COE) pre-professional and/or professional level courses, must be in “[good standing](#)” with the College

1. General Education

U.S. History

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
Any U.S. History course from the UTA approved list	None	ENGL 1301 (HIST 1301/2)	None
Any U.S. History course from the UTA approved list	None	ENGL 1301 (HIST 1301/2)	None

Political Science

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
POLS 2311 – Government of the United States	None	None	None
POLS 2312 – State and Local Government	None	None	None

Social/Behavioral Science

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
IE 2308 – Economics for Engineers or ECON 2305 – Principles of Macroeconomics	MATH 1426 (for IE 2308)	None	None

Creative Arts

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
Any Creative Arts course from the UTA approved list	Varies	None	None

Language, Philosophy, Culture

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
Any Language, Philosophy, Culture course from the UTA approved list	Varies	None	None

Communication

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
ENGL 1301 – Rhetoric and Composition 1	None	None	None
COMS 2302 – Professional and Technical Communication	ENGL 1301 & 30 hrs. completed	None	None

Mathematics

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
MATH 1426 – Calculus 1	MATH 1421 or ALEKS scores	None	None
MATH 2425 – Calculus 2	MATH 1426	None	None
IE 3301 – Engineering Probability or MATH 3313 – Intro to Probability	For IE 3301 – MATH 2425 (or concurrent enrollment) For MATH 3313 – C or better in MATH 2326, or student group	None	None
CSE 3380 or MATH 3330 Linear Algebra	For CSE 3380- C or better in CSE 2315 For MATH 3330- C or better in MATH 2425	None	None
Math Elective	Varies	Varies	Varies

Science

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
PHYS 1443 – Physics 2 with Lab	MATH 1426	None	None
PHYS 1444 – Physics 2 with Lab	PHYS 1443	MATH 2425	None

Engineering

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
Transfer Students: ENGR 1101 – Entrance to Engineering or Freshmen: UNIV 1131 – Student Success	None	None	None

2. Computer Science Pre-Professional Engineering Courses

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
CSE 1106 – Introduction to Computer Science and Engineering	CSE 1310	None	None
CSE 1310 – Introduction to Computers and Programming	C or better in MATH 1302 or C or better in (or concurrent enrollment in) a subsequent mathematics course (MATH 1421, MATH 1426, MATH 2425, MATH 2326, MATH 3330, HONR-SC 1426 or HONR-SC 2425) and C or better in UNIV 1131 (or concurrent enrollment) or ENGR 1101 (or concurrent enrollment)	ENGR 1101 or UNIV 1131	None
CSE 1320 – Intermediate Programming	C or better in CSE 1310 or C or better in CSE 1312, and C or better in (or concurrent enrollment) (MATH 1421, MATH 1426, MATH 2425, MATH 2326, MATH 3330, HONR-SC 1426, or HONR-SC 2425) and C or better in UNIV 1131 (or concurrent enrollment) or ENGR 1101 (or concurrent enrollment)	ENGR 1101 or UNIV 1131	None
CSE 1325 – Object-Oriented Programming	CSE 1320	None	None
CSE 2312 – Computer Organization and Assembly Language Programming	C or better in CSE 1320 and a C or better in CSE 1106	None	None
CSE 2315 – Discrete Structures	C or better in CSE 1310 and MATH 1426 (or C or better in or concurrent enrollment in MATH 2425)	None	None
CSE 3318 – Algorithms and Data Structures	CSE 1320 and CSE 2315	None	None

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
CSE 3302 – Programming Languages	C or better in each of the following: CSE 1325, CSE 2312, and CSE 3318	None	None
CSE 3310 – Fundamentals of Software Engineering	C or better in each of the following: CSE 1320, CSE 1325 and CSE 2315	None	None
CSE 3314 – Professional Practices	COMS 2302 & CSE 3318	None	None
CSE 3315 – Theoretical Concepts in Computer Science and Engineering	C or better in CSE 2315	None	None
CSE 3320 – Operating Systems	C or better in CSE 2312	None	None
CSE 3330 – Database Systems and File Structures	C or better in each of the following: CSE 1325 and CSE 3318	None	None

3. Computer Science Professional Courses: MUST BE ADMITTED INTO A CSE PROFESSIONAL PROGRAM

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
CSE 4303 – Computer Graphics or CSE 4305 – Compilers for Algorithmic Languages or CSE 4360 – Autonomous Robot Design and Programming	CSE 4303: C or better in each of the following: CSE 3318, and either CSE 3380 or MATH 3330 CSE 4305: C or better in CSE 3302 and CSE 3315 CSE 4360: C or better in CSE 3318, CSE 3320 and CSE 3380 (or MATH 3330)	None	None
CSE 4308 – Artificial Intelligence	C or better in each of the following: CSE 3318 and (IE 3301 and MATH 3313)	None	None
CSE 4316 – Computer System Design Project I	For academic plan CS_CS or SE_SE, C or better in CSE 3310 and CSE 3320, and C or better in CSE 3314 (or concurrently). For academic plan CSE_CP, C or better in CSE 3320 and CSE 3442, and C or better in CSE 3314 (or concurrently)	CSE 3314	None
CSE 4317 – Computer System Design Project II	C or better in CSE 4316 and continuation with the same team	None	None
CSE 4344 – Computer Network Organization	C or better in CSE 3320	None	None
CSE 4380 – Information Security or CSE 4381 – Information Security II or CSE 4382 – Secure Programming	CSE 4380: C or better in CSE 3320 CSE 4381: C or better in CSE 3320 and C or better in CSE 4344 CSE 4382: C or better in CSE 3320	CSE 4381: CSE 4344	None

Course Required	Prerequisites	Corequisites*	UTA Alternative Course Options
Technical Elective 1	Varies	Varies	Varies
Technical Elective 2	Varies	Varies	Varies
Technical Elective 3	Varies	Varies	Varies
Technical Elective 4	Varies	Varies	Varies
Technical Elective 5	Varies	Varies	Varies

*In order for a course to be considered a co-requisite, both courses must be registered for at UTA.