UNT COLLEGE OF ENGINEERING
EST. 1890

BS IN COMPUTER SCIENCE
DEGREE IN THREE ACADEMIC MAP
2018-2019 CATALOG YEAR

This is an unofficial simplified checklist effective Fall 2018. Degree requirements may change. You may need elective courses to help reach a minimum of 120 Total Hours & 42 Advanced Hours. Check with your advisor.

Must earn at least a grade of "C" in each course above except for most University Core courses.

COMPUTER SCIENCE
(Bachelor of Science (B.S.) degree with a major in Computer Science)

Department of Computer Science & Engineering	Engineering Advising Office
Discovery Park F-201; (940) 565-2767	Discovery Park A-101; (940) 565-4201
Faculty Advisors: Dr. Mark Thompson	Academic Advisors: Heather Burrow, Beverly Wilks
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University Core	**Major Requirements** (Grades with a C or better)

University Core

COMMUNICATION
- 3 Hours approved course
  Grade of "C" or better is required

AMERICAN HISTORY
- 1 Course (3 Hours)

GOVERNMENT/POLITICAL SCIENCE
- 1 Course (3 Hours)

CREATIVE ARTS
- 1 Course (3 Hours)

LANGUAGE, PHILOSOPHY, & CULTURE
- 1 Course (3 Hours)

Major Requirements (Grades with a C or better)

ELECTRICAL ENGINEERING
- EENG 2710, Digital Logic Design (3 Hours)

COMPUTER SCIENCE and ENGINEERING
- CSCE 1030, Computer Science I (4 Hours)
- CSCE 1040, Computer Science II (3 Hours
- CSCE 2100, Computing Foundations I (3 Hours)
- CSCE 2110, Computing Foundations II (3 Hours)
- CSCE 2610, Assembly Lang. & Computer Organization (3 Hours)
- CSCE 3110, Data Structures (3 Hours)
- CSCE 3600, Principles of Systems Programming (3 Hours)
- CSCE 4010, Social Issues in Computing (3 Hours)

SOCIAL & BEHAVIORAL SCIENCE
- 1 Course (3 Hours)

COMPONENT AREA
- 1 Course (3 Hours)

Major Requirements (Grades of C or better)

TECHNICAL COMMUNIICATION
- TECM 2700, Technical Writing (3 Hours)

1 advanced TECM course chosen from:
- TECM 4100, Writing Grants & Proposals (3 Hours) TECM 4180, Advanced Technical Writing (3 Hours) TECM 4190, Technical Editing (3 Hours)
- TECM 4200, Research Methods (3 Hours)
- TECM 4250, Writing Procedures & Manuals (3 Hours)
- TECM 4300, Usability & User Experience (3 Hours)
- TECM 4700, Writing in the Sciences (3 Hours)

MATHEMATICS
- MATH 1710, Calculus I (4 Hours)
- MATH 1720, Calculus II (3 Hours)
- MATH 1780, Probability Models (3 hours)
- MATH 2700, Linear Algebra (3 Hours)

SCIENCES
- PHYS 1710, Mechanics (3 Hours) & PHYS 1730, Mechanics Lab (1 Hour)
- PHYS 2220, Electricity & Magnetism (3 Hours) & PHYS 2240 Electricity & Magnetism Lab (1 Hour)

- CSCE 4110, Algorithms (3 Hours)
- CSCE 4444, Software Engineering (3 Hours)
- CSCE 4901, Computer Science Capstone (3 Hours) or CSCE 4999, Senior Thesis (3 Hours)

COMPUTER SCIENCE and ENGINEERING CORE ELECTIVES
- 1 CSCE Core course (3 Hours) chosen from list options below
- 1 CSCE Core course (3 Hours) chosen from options below
CSCE 3530, Introduction to Computer Networks (3 Hours)
CSCE 4115, Formal Lang., Automata & Computability (3 Hours)
CSCE 4430, Programming Languages (3 Hours)
CSCE 4600, Introduction to Operating System (3 Hours)
CSCE 4650, Introduction to Compilation Techniques (3 Hours)

Choose a specialty area & complete 3 courses from the approved options below:

COMPUTER SCIENCE and ENGINEERING BREADTH ELECTIVES
- 1 CSCE Breadth course (3 Hours) chosen from list options below
- 1 CSCE Breadth course (3 Hours) chosen from list options below
CSCE 4210, Game Programming I (3 Hours)
CSCE 4230, Introduction to Computer Graphics (3 Hours)
CSCE 4240, Introduction to Digital Image Processing (3 Hours)
CSCE 4290, Introduction to Natural Language Processing (3 Hours)

1 Lab science and lab chosen from list options below	CSCE 4310, Introduction to Artificial Intelligence (3 Hours)
▪ CHEM 1410, General Chemistry I (3 Hours) & CHEM 1430, General Chemistry I Lab (1 Hour) **or** CHEM 1415, Chemistry for Engineers (3 Hours) & CHEM 1435, Chemistry for Engineers Lab (1 Hour)	CSCE 4350, Fundamentals of Database Systems (3 Hours)
	CSCE 4460, Software Testing & Empirical Methodologies (3 Hours)
▪ CHEM 1420, General Chemistry II (3 Hours) & CHEM 1440, General Chemistry II Lab (1 Hour)	CSCE 4550, Introduction to Computer Security (3 Hours)
▪ BIOL 1710, Biology I (3 Hours)	
▪ BIOL 1720, Biology II (3 Hours)	COMPUTER SCIENCE and ENGINEERING FREE ELECTIVES
▪ BIOL 1760, Biology Lab (2 Hours)	▪ CSCE 3*** or 4*** (3 Hours) course not already applied above
	▪ CSCE 3*** or 4*** (3 Hours) course not already applied above
	▪ CSCE 3*** or 4*** (3 Hours) course not already applied above
	Maximum of 6 hours may take from CSCE 4890, 4920, 4930, 4940, 4950.

Year 1 at UNT

FALL	Hrs.
MATH 1780	3
CSCE 1030 (see note 3)	4
CHEM 1410 or 1415 (see note 2)	3
CHEM 1430 or 1435 (see note 2)	1
TECM 2700	3
Total Hours	*14*

SPRING	Hrs.
MATH 2700	3
CSCE 1040	3
BIOL 1710 (see note 2)	3
BIOL 1760 (see note 2)	2
EENG 2710	3
Total Hours	*14*

SUMMER	Hrs.
CSCE 2100	3
Total Hours	*3*

Year 2 at UNT

FALL	Hrs.
CSCE 2110	3
CSCE 2610	3
CSCE 3600	3
TECM 4*** (TECM 2700)	3
Total Hours	*12*

SPRING	Hrs.
CSCE 3110	3
CSCE 4010	3
CSCE Core Elective (see note 4)	3
CSCE Advanced Elective (see note 4)	3
Total Hours	*12*

Year 3 at UNT

FALL	Hrs.
CSCE 4110	3
CSCE 4444	3
CSCE Core Elective (see note 4)	3
CSCE Breadth Elective (see note 4)	3
Total Hours	*12*

SPRING	Hrs.
CSCE 4901 or CSCE 4999, (see note 5)	3
CSCE Breadth Elective (see note 4)	3
CSCE Advanced Elective (see note 4)	3
CSCE Advanced Elective (see note 4)	3
Total Hours	*12*

Required prerequisite (s) indicated in parentheses

Notes:

Note 1: MATH 1710 requires one of the following as prerequisite: completion of MATH 1650 with a grade of "C" or higher; or completion of MATH 1610 with a grade of "C" or higher; or Freshman Math Group Level 3; or approval authorized by score via mathematics testing; or earned credit for a math course at or above the MATH 1710 level.

Note 2: BIOL 1710 & 1760 has no prerequisite. CHEM 1410 & 1430 requires MATH 1100, College Algebra (or higher) as prerequisite. CHEM 1415 & 1435 requires MATH 1650, Pre-Calculus (or higher) as prerequisite.

Note 3: CSCE 1030 requires completion of or *co-enrollment* in MATH 1710, Calculus I (or higher).

Note 4: Must complete appropriate prerequisite(s) for each CSCE Core, Breadth and/or Free elective course.

Note 5: CSCE 4901 requires TECM 2700 and CSCE 4444 as prerequisite as well as CSCE 4110 as corequisite or prerequisite. CSCE 4999 requires professor consent as prerequisite.

Must earn at least a grade of "C" and a minimum 2.5 GPA in CSCE 1030, CSCE 1040, CSCE 2100, CSCE 2110, & MATH 1710 as foundations to enroll in advanced courses.

Credits Which Could Be Earned Prior to Enrollment at UNT –AP, IB, CLEP, DC, Transfer:	*Credits Which Should Be Earned Prior to Enrollment at UNT –AP, IB, CLEP, DC, Transfer:*
Communications Core HIST 2610 HIST 2620 PSCI 2305 PSCI 2306 Creative Arts Core Language Philosophy Culture Core Social Behavioral Sciences Core	MATH 1710 MATH 1720 PHYS 1710 & 1730 PHYS 2220/2240

This is an unofficial sample schedule. Requirements, prerequisites, etc. may change. Students should meet with an advisor each semester for individual scheduling, program decisions, etc. Engineering admissions requirements must be met & a degree audit must be created in order to progress in the program to a timely graduation.