



# Department of Computer Science and Engineering

## **BS in Computer Science** **BS in Computer Engineering**

- Advising Information
- Core Curriculum
- Course Descriptions
- Degree Plan Information

UNT Discovery Park (NTDP) F201  
(940) 565-2767

[www.cse.unt.edu](http://www.cse.unt.edu)

Valid only for those on Catalog Year 2017-18

**ADVISING INFORMATION:**  
**<http://www.cse.unt.edu/site/node/418>**

UNIVERSITY *of* NORTH TEXAS

# Educational Objectives

## **Educational Objectives for the B.S. in Computer Science**

*Graduates will:*

- Pursue graduate studies in computer science or related disciplines, and/or a career in a technology field utilizing skills from the computer science areas studied during the undergraduate program.
- Act responsibly and ethically in their professional conduct and successfully engage in life-long learning.
- Work effectively in multi-disciplinary teams and exhibit the ability to communicate effectively.
- Complete professional work assignments that exhibit the ability to design, develop and implement software while applying computer science principles and practices to the solution of real problems.

## **Educational Objectives for the B.S. in Computer Engineering**

*Graduates will:*

- Have completed projects involving design, evaluation of materials, and management of computational and personnel resources to solve problems in multi-disciplinary teams and exhibit the ability to communicate effectively.
- Pursue graduate studies in computer engineering or related disciplines and careers involving VLSI design, real-time systems, communications, and networks or computer systems.
- Act responsibly and ethically in their professional conduct and successfully engage in life-long learning.
- Complete professional work assignments that exhibit a good balance between software and hardware systems, including software development, design of digital systems, microprocessors, embedded systems, real-time systems and digital communication systems.

# COMPUTER SCIENCE

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

Department of Computer Science & Engineering  
Discovery Park F-201; (940) 565-2767  
Faculty Advisors: Dr. Mark Thompson  
mark.thompson@unt.edu

Engineering Advising Office  
Discovery Park A-101; (940) 565-4201  
Academic Advisors: Heather Burrow, Beverly Wilks  
heather.burrow@unt.edu, beverly.wilks@unt.edu

## University Core

## Major Requirements

Grades of C or better.

### COMMUNICATION

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

### AMERICAN HISTORY

- HIST 2610, U.S. History To 1865 (3 Hours)
- HIST 2620, U.S. History From 1865 (3 Hours)

### GOVERNMENT/POLITICAL SCIENCE

- PSCI 2305, U.S. Political Behavior & Policy (3 Hours)
- PSCI 2306, U.S. & Texas Constitution & Institution (3 Hours)

### CREATIVE ARTS

- 3 Hours approved course

### LANGUAGE, PHILOSOPHY, & CULTURE

- 3 Hours approved course

### SOCIAL & BEHAVIORAL SCIENCE

- 3 Hours approved course

### COMPONENT AREA

- 3 Hours approved course

## Major Requirements

Grades of C or better.

### TECHNICAL COMMUNICATION

- 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 & Vector Geometry (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)

### SCIENCES (Continued)

- 1 Lab science and lab chosen from list options below
- 1 Lab science and lab chosen from list options below
  - 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)
  - CHEM 1420, General Chemistry II (3 Hours) & CHEM 1440, General Chemistry II Lab (1 Hour)
  - BIOL 1710, Biology I (3 Hours)
  - BIOL 1720, Biology II (3 Hours)
  - BIOL 1760, Biology Lab (2 Hours)

### 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)
- 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 list 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 Systems (3 Hours)  
CSCE 4650, Introduction to Compilation Techniques (3 Hours)

### 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)  
CSCE 4310, Introduction to Artificial Intelligence (3 Hours)  
CSCE 4350, Introduction to Database Systems Design (3 Hours)  
CSCE 4460, Software Testing & Empirical Methodologies (3 Hours)  
CSCE 4550, Introduction to Computer Security (3 Hours)

### COMPUTER SCIENCE and ENGINEERING FREE ELECTIVES

- 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 taken from CSCE 4890, 4920, 4930, 4940, 4950.

# COMPUTER SCIENCE

## Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses & notes

### FRESHMAN YEAR

#### FALL

MATH 1710, Calculus I (see note 1)	4
CHEM 1410 or 1415, Chemistry (see note 2)	3
CHEM 1430 or 1435, Chemistry Lab (see note 2)	1
CSCE 1030, Computer Science I (see note 3)	4
Communication Core course	<u>3</u>
Total Hours	15

#### SPRING

MATH 1720, Calculus II (MATH 1710)	3
CSCE 1040, Comp. Science II (CSCE 1030, MATH 1710)	3
TECM 2700, Tech. Writing (Communication Core)	3
BIOL 1710, Biology I (see note 2)	3
BIOL 1760, Biology Lab (see note 2)	<u>2</u>
Total Hours	14

### SOPHOMORE YEAR

#### FALL

MATH 2700, Linear Algebra (MATH 1720)	3
PHYS 1710, Mechanics (MATH 1710)	3
PHYS 1730, Mechanics Lab (MATH 1710)	1
CSCE 2100, Computing Foundations I (CSCE 1040)	3
EENG 2710, Digital Logic Design	3
University Core course	<u>3</u>
Total Hours	16

#### SPRING

MATH 1780, Probability Models (MATH 1710)	3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710, 1730)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710, 1730)	1
CSCE 2110, Computing Foundations II (CSCE 2100)	3
CSCE 2610, Assembly & Org. (CSCE 2100, EENG 2710)	3
University Core course	<u>3</u>
Total Hours	16

### JUNIOR YEAR

#### FALL

CSCE 3110, Data Structures (CSCE 2110)	3
CSCE 3600, Systems Programming (CSCE 2100)	3
CSCE Elective course (see note 5)	3
TECM course (TECM 2700)	3
University Core course	<u>3</u>
Total Hours	15

#### SPRING

CSCE 4010, Social Issues (CSCE 3600)	3
CSCE 4110, Analysis of Algorithms (CSCE 3110)	3
CSCE Elective course (see note 5)	3
CSCE Elective course (see note 5)	3
University Core course	<u>3</u>
Total Hours	15

### SENIOR YEAR

#### FALL

CSCE 4444, Software Engineering (CSCE 2110)	3
CSCE Elective course (see note 5)	3
CSCE Elective course (see note 5)	3
University Core course	3
University Core course	<u>3</u>
Total Hours	15

#### SPRING

CSCE 4901, Capstone, or CSCE 4999, Thesis (see note 6)	3
CSCE Elective course (see note 5)	3
CSCE Elective course (see note 5)	3
University Core course	3
University Core course	<u>3</u>
Total Hours	15

### 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) as prerequisite.

Note 4: 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 5: Must complete appropriate prerequisite(s) for each CSCE Core, Breadth and/or Free elective course.

Note 6: 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.**

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

**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.**

# Prerequisite Structure BS in Computer Science

Special Problems / Directed Study  
See Undergraduate catalog for requirements

**CSCE 4920**  
Co-op      See Undergraduate catalog for requirements

**CSCE 2900**  
Special Problems      Elective credit only

**CSCE 1010**  
Intro to CS      Not for CSCE major credit

**CSCE 4890**      **CSCE 4920**

**CSCE 4940**      **CSCE 4950**

Maximum 6 hours credit in these courses

CSCE Core  
**Choose 6 hours from these courses**  
Pre-req's vary

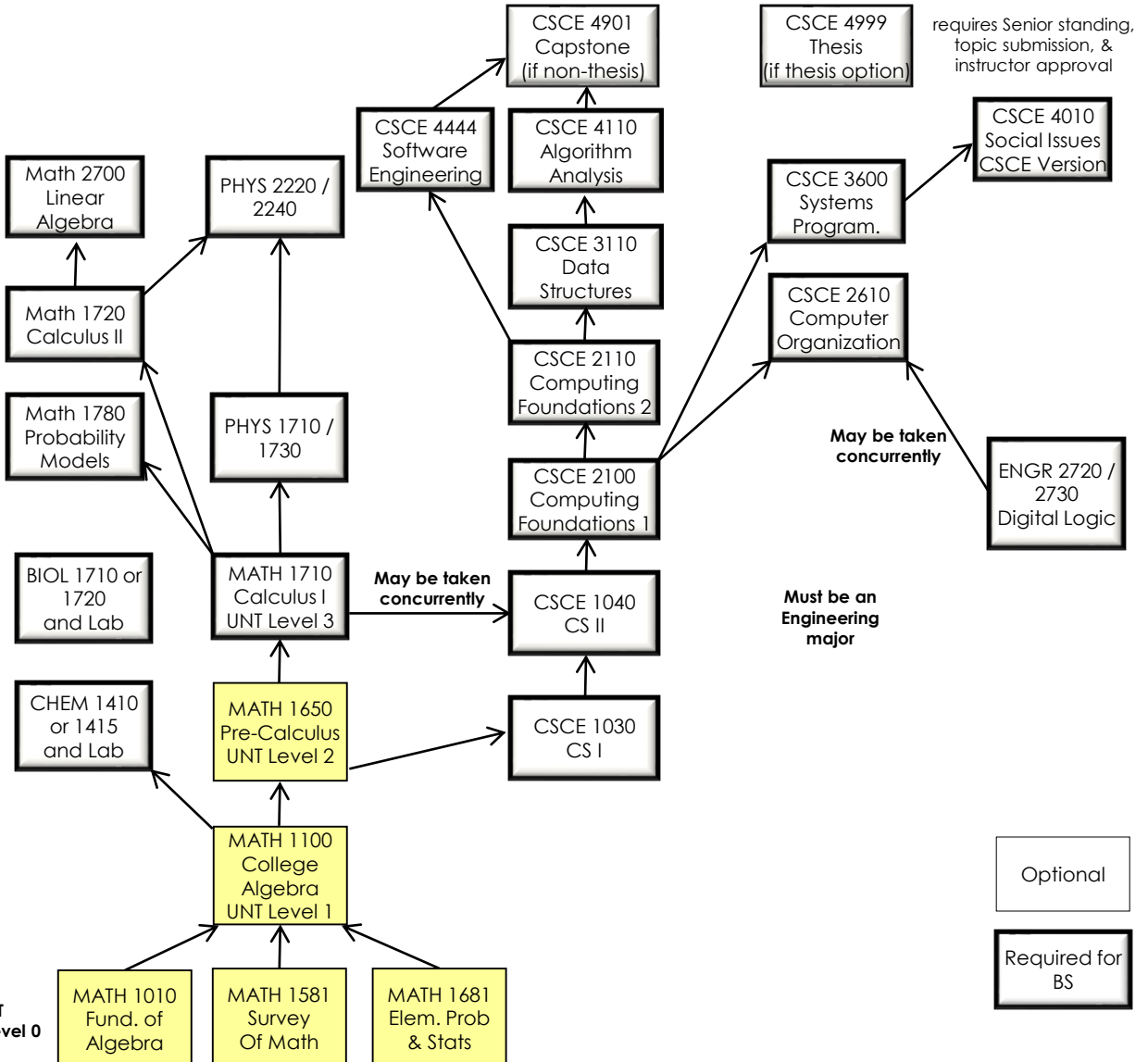
CSCE 3530 Computer Networks	CSCE 4430 Programming Languages	CSCE 4600 Intro. to Operating Sys
CSCE 4650 Intro Compil. Techniques	CSCE 4115 Formal Languages	

CSCE Electives  
**Choose 9 hours**  
Pre-req's vary

Any CSCE Upper Division (3\*\*\* or 4\*\*\*) Courses not required in another area.

CSCE Breadth  
**Choose 6 hours from these courses**  
Pre-req's vary

CSCE 4290 Nat. Lang. Processing	CSCE 4210 Game Programming	CSCE 4550 Computer Security
CSCE 4310 Intro to AI	CSCE 4350 Database Systems	CSCE 4230 Computer Graphics
		CSCE 4460 Software Testing



See math department for placement before registering for your first math course

## Computer Engineering Specialty Area Electives

### **Specialization Area: Real-time and Embedded Systems (choose 3 courses)**

ELET 3750 – Embedded C Programming  
CSCE 3610 – Introduction to Computer Architecture  
CSCE 4440 – Real-Time Software Development  
CSCE 4444 – Software Engineering  
CSCE 4600 – Introduction to Operating Systems  
CSCE 4610 – Computer Architecture  
CSCE 4620 – Real-Time Operating Systems  
CSCE 4730 – VLSI Design  
CSCE 4890 – Directed Study in a Real-Time / Embedded Topic

### **Specialization Area: VLSI and Electronics (choose 3 courses)**

ELET 3750 – Embedded C Programming  
ELET 4340 – Digital Logic Design Techniques  
ELET 4300 – Embedded System Organization  
PHYS 4500 – Introduction to Solid State Physics  
CSCE 3610 – Introduction to Computer Architecture  
CSCE 4610 – Computer Architecture  
CSCE 4730 – VLSI Design  
CSCE 4890 – Directed Study in a VLSI / Electronics Topic

### **Specialization Area: Communications and Networks (choose 3 courses)**

CSCE 3420 – Internet Programming  
CSCE 3530 – Introduction to Computer Networks  
CSCE 4510 – Introduction to Wireless Communication  
CSCE 4520 – Wireless Networks and Protocols  
CSCE 4530 – Computer Network Design  
CSCE 4550 – Introduction to Computer Security  
CSCE 4560 – Secure Electronic Commerce  
CSCE 4890 – Directed Study in a Communications / Networks Topic

### **Specialization Area: Computer Systems (choose 3 courses)**

CSCE 3030 – Parallel Programming  
CSCE 3610 – Introduction to Computer Architecture  
CSCE 4050 – Applications of Cryptography  
CSCE 4240 – Introduction to Digital Image Processing  
CSCE 4600 – Introduction to Operating Systems  
CSCE 4610 – Computer Architecture  
CSCE 4620 – Real-Time Operating Systems  
CSCE 4650 – Introduction to Compilation Techniques  
CSCE 4730 – VLSI Design  
CSCE 4890 – Directed Study in a Systems topic

# Pre-requisite Structure BS in Computer Engineering

CSCE 4920  
Co-op

See Undergraduate  
catalog for requirements

CSCE 2900  
Special  
Problems

Elective credit only

CSCE 1010  
Intro to CS

Not for CSCE major credit

Special Problems and Topics /  
Directed Study  
See Undergraduate catalog for  
requirements

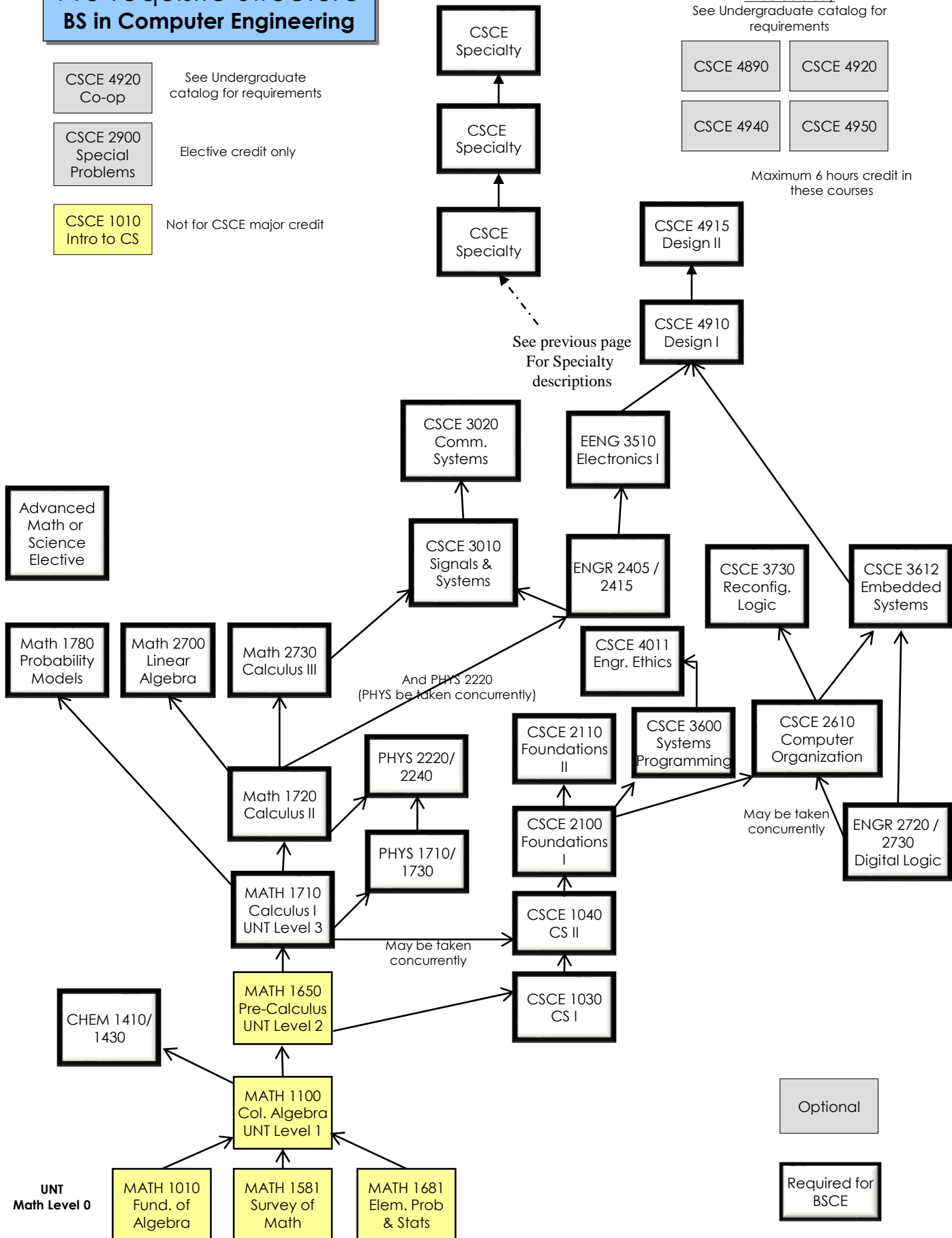
CSCE 4890

CSCE 4920

CSCE 4940

CSCE 4950

Maximum 6 hours credit in  
these courses



See math department for placement before  
registering for your first math course

# COMPUTER ENGINEERING

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

Department of Computer Science & Engineering  
Discovery Park F-201; (940) 565-2767  
Faculty Advisors: Dr. Robin Pottathuparambil  
Robin.Pottathuparambil@unt.edu

Engineering Advising Office  
Discovery Park A-101; (940) 565-4201  
Academic Advisors: Ashley Hubbard, Errica Smith,  
Ashley.Hubbard@unt.edu, Errica.smith@unt.edu

## University Core

## Major Requirements

Grades of C or better.

### COMMUNICATON

- 3 Hours approved course

**Grade of "C" or better is required.**

### AMERICAN HISTORY

- HIST 2610, U.S. History To 1865 (3 Hours)
- HIST 2620, U.S. History From 1865 (3 Hours)

### GOVERNMENT/POLITICAL SCIENCE

- PSCI 2305, U.S Political Behavior & Policy (3 Hours)
- PSCI 2306, U.S. & Texas Constitution & Institution (3 Hours)

### CREATIVE ARTS

- 3 Hours approved course

### LANGUAGE, PHILOSOPHY, & CULTURE

- 3 Hours approved course

### SOCIAL & BEHAVIORAL SCIENCE

- 3 Hours approved course

### COMPONENT AREA

- 3 Hours approved course

## Major Requirements

Grades of C or better.

### TECHNICAL COMMUNICATION

- TECM 2700, Technical Writing (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 & Vector Geometry (3 Hours)
- MATH 2730, Multivariable Calculus (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)
- 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)

### ADVANCED MATHEMATICS OR SCIENCE ELECTIVE

- 1 advanced Math or Science elective course (3 Hours) chosen from MATH 3\*\*\*, MATH 4\*\*\*, PHYS 3\*\*\*, CHEM 3\*\*\*, BIOL 3\*\*\*, BIOL 4\*\*\*, GEOG 3\*\*\*, or GEOG 4\*\*\*. Check with your advisor for approved options.

### ELECTRICAL ENGINEERING

- ENGR 2405, Circuit Analysis (3 Hours) &  
ENGR 2415, Circuit Analysis Lab (1 Hour)
- ENGR 2720, Digital Logic Design (3 Hours) &  
ENGR 2730, Digital Logic Lab (1 Hour)
- EENG 3510, Electronics I (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 3010, Signals & Systems (3 Hours)
- CSCE 3020, Communications Systems (3 Hours)
- CSCE 3600, Principles of Systems Programming (3 Hours)
- CSCE 3612, Embedded Systems Design (3 Hours)
- CSCE 3730, Reconfigurable Logic (3 Hours)
- CSCE 4011, Engineering Ethics (3 Hours)
- CSCE 4910, Senior Design I (3 Hours)
- CSCE 4915, Senior Design II (3 Hours)

### SPECIALTY AREA

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

- Specialty Elective (3 Hours)
- Specialty Elective (3 Hours)
- Specialty Elective (3 Hours)

### **Real-time & Embedded Systems Specialty Area (Choose 3 courses):**

ELET 3750, CSCE 3610, 4440, 4444, 4600, 4610, 4620, 4730, 4890

### **VLSI & Electronics Specialty Area: (Choose 3 courses)**

ELET 3750, 4300, 4340, CSCE 3610, 4610, 4730, 4890

### **Communications & Networks Specialty Area (Choose 3 courses):**

CSCE 3420, 3530, 4510, 4520, 4530, 4550, 4560, 4890

### **Computer Systems Specialty Area (Choose 3 courses):**

CSCE 3030, 3610, 4050, 4240, 4600, 4610, 4620, 4650, 4730, 4890

Maximum of 6 hours may taken from CSCE 4890, 4920, 4930, 4940, 4950.



# COMPUTER ENGINEERING

## Sample Four-Year Schedule

Required prerequisite(s) indicated in parentheses & notes

### FRESHMAN YEAR

#### FALL

MATH 1710, Calculus I (see note 1)	4
CHEM 1410 or 1415, Chemistry (see note 2)	3
CHEM 1430 or 1435, Chemistry Lab (see note 2)	1
CSCE 1030, Computer Science I (see note 3)	4
Communication Core course	3
Total Hours	15

#### SPRING

MATH 1720, Calculus II (MATH 1710)	3
PHYS 1710, Mechanics (MATH 1710)	3
PHYS 1730, Mechanics Lab (MATH 1710)	1
CSCE 1040, Comp. Science II (CSCE 1030, MATH 1710)	3
TECM 2700, Tech. Writing (Communication Core)	3
University Core course	3
Total Hours	16

### SOPHOMORE YEAR

#### FALL

MATH 2730, Multivariable Calculus (MATH 1720)	3
PHYS 2220, E. & M. (MATH 1720, PHYS 1710, 1730)	3
PHYS 2240, E. & M. Lab (MATH 1720, PHYS 1710, 1730)	1
CSCE 2100, Computing Foundations I (CSCE 1040)	3
ENGR 2720, Digital Logic	3
ENGR 2730, Digital Logic Lab	1
University Core course	3
Total Hours	17

#### SPRING

MATH 1780, Probability Models (MATH 1710)	3
MATH 2700, Linear Algebra (MATH 1720)	3
CSCE 2110, Computing Foundations II (CSCE 2100)	3
CSCE 2610, Assembly & Org. (CSCE 2100, ENGR 2720,2730)	3
ENGR 2405, Circuit Analysis (see note 4)	3
ENGR 2415, Circuit Analysis Lab (see note 4)	1
Total Hours	16

### JUNIOR YEAR

#### FALL

EENG 3510, Electronics I (ENGR 2405)	3
CSCE 3010, Signals & Systems (ENGR 2405, MATH 2730)	3
CSCE 3600, Systems Programming (CSCE 2100)	3
CSCE 3730, Reconfigurable Logic (CSCE 2610)	3
University Core course	3
Total Hours	15

#### SPRING

CSCE 3020, Comm. (CSCE 3010)	3
CSCE 3612, Embed. Sys. Design (ENGR 2720,2730 CSCE 2610)	3
CSCE Specialty Area Elective course (see note 5)	3
Advanced Math or Science Elective	3
University Core course	3
Total Hours	15

### SENIOR YEAR

#### FALL

CSCE 4910, Design I (CSCE 3612, EENG 3510)	3
CSCE Specialty Area Elective course (see note 5)	3
CSCE Specialty Area Elective course (see note 5)	3
University Core course	3
University Core course	3
Total Hours	15

#### SPRING

CSCE 4915, Design II (CSCE 4910)	3
CSCE 4011, Engineering Ethics (CSCE 3600)	3
University Core course	3
University Core course	3
Advanced Level General Elective (see note 6)	3
Total Hours	15

### 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: 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) as prerequisite.

Note 4: EENG 2610 or ENGR 2405 & ENGR 2415 lab requires completion of MATH 1720 and either completion of or co-enrollment in PHYS 2220 & 2240 as prerequisite.

Note 5: Must complete prerequisite(s) for each CSCE Specialty Area Elective course.

Note 6: Advanced level general elective may be needed to reach 42 total advanced hours. Please check with an advisor.

**Must earn at least a grade of "C" and a minimum 2.5 GPA in Communications Core, TECM 2700, MATH 1710, ENGR 2720/2730, CSCE 1030, CSCE 1040, CSCE 2100 as foundations to enroll in advanced courses.**

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

**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.**

# University Core Information

Majors  
 CIS 3615, Visual Display of  
 Business Info.

**COMMUNICATION** (3 Hours)

ENGL 1310, College Writing I  
 ENGL 1311, Honors College Writing I  
 ENGL 1315, Writing about Literature I  
 TECM 1312, Intro. to Writing For International Students  
 TECM 1700, Intro. to Professional, Science, & Tech. Writing

*AP English Language & Composition score of 3, 4 or 5*  
*IB English A: Language & Literature score of 5, 6, or 7*

**AMERICAN HISTORY** (6 Hours)

HIST 2610, US to 1865 **or**  
 HIST 2675, Honors US History to 1865  
 HIST 2620, US from 1865 **or**  
 HIST 2685, Honors US History from 1865  
 HIST 4700, Texas History

*AP U.S. History score of 3, 4 or 5*  
*CLEP History of United States I*  
*CLEP History of United States II*

**GOVT./POLITICAL SCIENCE** (6 Hours)

PSCI 2305, U.S Political Behav. & Policy **or**  
 PSCI 2315, Honors U.S. Political Behav.  
 PSCI 2306, U.S. & Texas **or**  
 PSCI 2316, Honors U.S. & Texas

*AP U.S. Gov. & Politics score of 3, 4 or 5*  
*CLEP American Government*  
*Fulfills PSCI 2305 or 2315*

**CREATIVE ARTS** (3 Hours)

ART 1300, Art Appreciation  
 ART 1301, Honors Art Appreciation  
 ART 2360, Art History Survey II  
 COMM 2060, Performance of Literature  
 DANC 1200, Appreciation of Dance  
 DANC 2800, Survey of Dance  
 MUMH 2040, Music Appreciation  
 MUMH 3000, Nineteenth-Century Music  
 MUMH 3010, Twentieth-Century Music  
 MUMH 3500, Music Hist. & Lit. to 1750  
 MUMH 3510, Music His. & Lit from 1750  
 THEA 1340, Aesthetics of the Theatre  
 THEA 2340, Theater Appreciation  
 THEA 3030, World Theatre to 1700  
 THEA 3040, World Theatre from 1700

*AP Art History score of 3, 4 or 5*  
*IB Dance score of 4 or higher\**

**LANGUAGE, PHIL. & CULTURE** (3 Hours)

AGER 2250, Aging in Film & Lit.  
 ANTH 3101 American Culture & Society  
 ANTH 3110, Indigenous People of N. Am.  
 ANTH 3120, Indigenous Cultures of S.W.  
 ANTH 3140, Latinos in the U.S.  
 ANTH 3200, Latin American Cultures  
 ANTH 3210, MesoAmerica  
 ANTH 3220, Mayan Culture  
 ANTH 3300, Peoples of the Pacific  
 ANTH 3400, Peoples of Africa  
 ANTH 3500, Peoples of the Middle East  
 ANTH 3700, Peoples of South Asian

**LANGUAGE, PHIL. & CULTURE Cont'd** (3 Hours)

ENGL 2210, World Literature to 1700  
 ENGL 2211, Honors World Literature to 1700  
 ENGL 2220, World Literature from 1700  
 ENGL 2221, Honors World Lit. from 1700  
 FREN 3040, France Today  
 FREN 4060, Studies in French Literature  
 FREN 4310, Contemp. French Civilization  
 GERM 3040, Topics in German Culture  
 GERM 3050, Topics in German Literature  
 HDF5 2313, Courtship & Marriage  
 HIST 1050, World History to 16<sup>th</sup> Century  
 HIST 1060, World History from 16<sup>th</sup> Century  
 ITAL 3040, Topics in Italian Culture  
 ITAL 3050, Comp. Italian Culture Thru Film  
 ITAL 3070, Intro. to Italian Literature  
 JAPAN 3020, Advanced Japanese I  
 MUET 3030, Music Cultures of the World  
 PHIL 1050, Introduction to Philosophy  
 PHIL 1400, Contemporary Moral Issues  
 PHIL 2050, Introduction to Logic  
 PHIL 2070, Great Religions  
 PHIL 2100, Intro. To Judaism  
 PHIL 2310, Intro. To Ancient Philosophy  
 PHIL 2600, Ethics in Science

*AP English Literature & Composition score of 3, 4 or 5*  
*AP World History score of 3, 4 or 5*  
*IB History score of 4 or higher\**  
*IB Philosophy score of 5, 6, or 7*  
*IB English Language A: Literature score of 5, 6, or 7*

**SOCIAL & BEHAVIORAL SCIENCE** (3 Hours)

AGER 4560, Minority Aging  
 AGER 4800, Social Context of Aging  
 ANTH 1010, Intro. to Anthropology  
 ANTH 2300, Culture and Society  
 BEHV 2300, Behavior Principles I  
 CJUS 2100, Crime and Justice in the U.S.  
 COMM 2020, Interpersonal Comm.  
 EADP 4050, Special Pop. in Disasters  
 ECON 1100, Microeconomics  
 ECON 1110, Macroeconomics  
 GEOG 1200, Global Societies  
 HDF5 1013, Human Development  
 HLTH 2200, Family Life & Human Sexuality  
 JOUR 1210, Mass Comm. & Society  
 MDSE 2750, Consumers in Global Market  
 MKTG 2650 Culture and Consumption  
 MAUG 1500 Occupational Health with Music  
 PADM 2100, Cultural Competency in Urban  
 PSYC 1630, General Psychology I  
 PSYC 1650, General Psychology II  
 PSYC 3620, Developmental Psychology  
 RHAB 3100, Disability & Society  
 SOCI 1510, Intro to Sociology  
 SOCI 2100, Crime & Justice in the U.S.  
 SOWK 1450, Intro. to Social Work

*AP Macroeconomics score of 3, 4 or 5*  
*AP Microeconomics score of 3, 4 or 5*  
*AP Psychology score of 3, 4 or 5*  
*IB Economics score of 4 or higher\**  
*IB Geography score of 4 or higher\**  
*IB Psychology score of 4 or higher\**  
*CLEP Macroeconomics*  
*CLEP Microeconomics*  
*CLEP Human Growth & Development*  
*CLEP Introductory Psychology*  
*CLEP Introductory Sociology*

BIOL 1000, Discover Life Science  
 BIOL 1750/1755, Intro. Research  
 Lab I & II  
 BMEN 1300, Discover Biomedical Engr.\*\*  
 BUSI 1340, Managing Business Enterprise  
 CHEM 1400, Discover Chemistry  
 COMM 1010, Intro. to Communication  
 COMM 1440, Honors Classical Argument  
 COMM 2040, Public Speaking  
 COMM 2140, Advocating in Public  
 COUN 2620, Diversity & Cultural Awareness  
 DANC 1100, Stress Reduct. Thru Movement  
 EENG 1910, Project 1: Learning to Learn  
 ENGL 3000, Literary Analysis & Interpretation  
 ENGR 1030, Technological System  
 FREN 1610, French Influence in North Am.  
 FREN 1620, French Language in Canada  
 GEOG 1500, Geospatial Tech. Urb Areas  
 HDF5 2033, Parenting in Diverse Families  
 HDF5 3423, Family, Schools, Communities  
 HLTH 2000, Intro. to Public Health  
 HMGT 1450, Principles of Nutrition  
 HNRS 1100, The Good Society  
 HNRS 1500, Intro. to Research  
 INST 2100, Intro. to International Studies  
 INST 2500, Global Perspectives  
 ITAL 1610, Italian Influences in the U.S.  
 JOUR 1210, Mass Communication Society  
 LANG 1610, World Ling. Landscap  
 LING 2050, Language of Now  
 MATH 2000, Discrete Mathematics  
 MDSE 2750, Consumers in a Global Market  
 MEEN 1000, Discover Mech. & Energy Engr.  
 MGMT 3330, Communicating in Business  
 MKTG 2650, Culture & Consumption  
 MKTG 3010, Professional Selling  
 MTSE 1100, Discover Materials  
 PHED 1000, Health Related Fitness  
 PHIL 1800, Philosophy of Self  
 PHIL 2400, Religion in American Society  
 PHIL 2500, Contemp.  
 Environmental Issues  
 PHIL 4150, Feminism  
 PHIL 4200, Science, Technology, Society  
 PHIL 4200, Philosophy of Food  
 PSCI 1000, Politics and the Culture  
 PSCI 2000, Philosophy of Science  
 RHAB 3000, Microcounseling  
 SOCI 2070, Race & Ethnic Relations  
 SOWK 4540, Human Diversity  
 TECM 1300 is pre-approved to College  
 Core included as an option for the  
 WSCS Component Area 2100, Values & Society  
 Please contact an engineering advisor prior to enrollment in this course.

# Computer Science / Computer Engineering University of North Texas

## Transfer Student Guide

The tables below indicate the University Core, College of Engineering and Departmental course requirements that are available to take at area community colleges before transferring to UNT Denton or UNT Dallas. Courses that are taken at area community colleges after transferring to UNT Denton or UNT Dallas must be approved from a UNT advisor and may be different than what is listed on these tables.

### Core Classes

UNT Course	Title	DCCCD	CCCC	TCC	NCTC	Notes
ENGL 1310	Composition I	ENGL 1301	ENGL 1301	ENGL 1301	ENGL 1301	
TECM 2700	Technical Writing	ENGL 2311	ENGL 2311	ENGL 2311	ENGL 2311	
HIST 2610	US History I	HIST 1301	HIST 1301	HIST 1301	HIST 1301	
HIST 2620	US History II	HIST 1302	HIST 1302	HIST 1302	HIST 1302	
PSCI 1040	State and Local Govt.	GOVT 2301	GOVT 2301	GOVT 2306	GOVT 2306	
PSCI 1050	US Govt.	GOVT 2302	GOVT 2302	GOVT 2305	GOVT 2305	
Social & Behavioral Science	From approved list	From approved list	From approved list	From approved list	From approved list	
Creative Arts	From approved list	From approved list	From approved list	From approved list	From approved list	
Language, Philosophy & Culture	From approved list	From approved list	From approved list	From approved list	From approved list	
Discovery	From approved list	From approved list	From approved list	From approved list	From approved list	

Please see the College of Engineering Advisers in Discovery Park  
BEFORE enrolling in courses at another institution

College of Engineering Core  
**Grades of 'D' are not accepted**

UNT Course	Title	DCCCD	CCCC	TCC	NCTC	Notes
BIOL 1710/1730	General Biology I	BIOL 1406	BIOL 1406	BIOL 1406	BIOL 1406	
PHYS 1710/1730	Physics I – Mechanics	PHYS 2425	PHYS 2425	PHYS 2425	PHYS 2425	
PHYS 2220/2240	Physics II – Electricity and Magnetism	PHYS 2426	PHYS 2426	PHYS 2426	PHYS 2426	
CHEM 1410/1430	Gen Chemistry I	CHEM 1411	CHEM 1411	CHEM 1411	CHEM 1411	
BIOL 1720/1740	Gen Biology II	BIOL 1407	BIOL 1407	BIOL 1407	BIOL 1407	
MATH 1710	Calculus I	MATH 2413	MATH 2413	MATH 2413	MATH 2413	
CSCE 2100 or CSCE 2110 if CS2100 complete	Discrete Mathematics / Computing Foundations	MATH 2305	MATH 2305	MATH 2305	MATH 2305	

UNT Course	Title	DCCCD	CCCC	TCC	NCTC	Notes
CSCE 1030	Programming Fundamentals I	COSC 1436	COSC 1436	COSC 1436	COSC 1436	
CSCE 1040	Programming Fundamentals II	COSC 1437	COSC 1437	COSC 1437	COSC 1437	
CSCE 2100 or CSCE 2110 if CS2100 complete	Programming Fundamentals III / Computing Foundations	COSC 2436	COSC 2436	COSC 2436	COSC 2436	
CSCE 2610	Computer Organization	COSC 2425	COSC 2425	COSC 2425	COSC 2425	