



# 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 2014-15

**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

# Computer Science

- A Minimum of 120 semester hours required for graduation.
- 42 advanced (3000-4000 level) hours required for degree (minimum of 24 must be taken at UNT).
- A minimum of 31 semester hours must be completed at UNT.

**THIS IS A SIMPLIFIED GUIDE TO SELECTING COURSES – PLEASE MEET WITH YOUR ADVISOR AND CHECK THE UNDERGRADUATE CATALOG FOR ALL COURSE OPTIONS IN EACH CATEGORY**

## Math, Science & Engineering Found.

**Must earn at least a "C" in all courses and a 2.5 GPA**

### LABORATORY SCIENCES (16 Hours; 4 courses [with labs])

- \*PHYS 1710-1730 (4 hours) \_\_\_\_\_
- PHYS 2220-2240 (4 hours) \_\_\_\_\_
- \*CHEM 1410 or 1415 & lab \_\_\_\_\_
- BIOL 1710 -1730 (4 hours) \_\_\_\_\_

### MATHEMATICS (13 Hours)

- \*MATH 1710 – Calculus I (4 hours) \_\_\_\_\_
- MATH 1720 – Calculus II(3 hours) \_\_\_\_\_
- MATH 1780 – Probability (3 hours) \_\_\_\_\_
- MATH 2700 – Linear Algebra (3 hours) \_\_\_\_\_

### ORAL / ADVANCED WRITTEN COMMUNICATIONS (3 Hours)

- \*TECM 2700 \_\_\_\_\_ (satisfies second English requirement)

**\* = Engineering Foundation Courses**

## University Core

### COMMUNICATION (3 Hours)

Approved course \_\_\_\_\_  
Grade of "C" or better required

### AMERICAN HISTORY (6 Hours)

- HIST 2610 \_\_\_\_\_
- HIST 2620 / 4700 \_\_\_\_\_

**NOTE:** Honors equivalents or History 4700 (Texas History) or any advanced US-Topic History course(s) may substitute for either of the US History survey courses.

### GOVERNMENT / POLITICAL SCIENCE (6 Hours)

- PSCI 1040 \_\_\_\_\_
- PSCI 1050 \_\_\_\_\_

**NOTE:** If you are transferring credit for either PSCI course, please check with your advisor. Do not assume that your "first" course elsewhere is the same as PSCI 1040. An out-of-state American Government course cannot be equivalent to PSCI 1040 but may be equivalent to PSCI 1050. Any advanced US- Topic Political Science course may substitute for PSCI 1050 only.

### SOCIAL AND BEHAVIORAL SCIENCE (3 Hours) \_\_\_\_\_

(from list of approved options for this category)

### CREATIVE ARTS (3 Hours) \_\_\_\_\_

(upper division recommended to reach 42 advanced hours)

### LANGUAGE, PHILOSOPHY & CULTURE (3 Hours) \_\_\_\_\_

(from list of approved options for this category)

### DISCOVERY (3 Hours) \_\_\_\_\_

### CAPSTONE (3 Hours) \_\_\_\_\_ CSCOE 4010 Satisfies

TAKE UPPER DIVISION (3xxx & 4xxx) COURSES WHERE POSSIBLE

**NOTE: The student is required to maintain a 2.75 GPA and a C or better in all CSCE courses.**

#### Certificates:

CSCOE 3530,4550, 4560 & pre-reqs = National Security Sys. Cert.

CSCOE 4210, 4215, 4220, & 4250 = Game Programming Cert.

2<sup>nd</sup> & 3<sup>rd</sup> advanced Tech Writing = Tech Writing Certificate

Check with your advisor concerning elective courses

Max 6 hours of credit in CSCOE 4890, 4920, 4940, or 4950.

In case of conflicting information, the catalog (catalog.unt.edu) prevails. This guide is for catalog year 2014-15 and does not apply to other catalog years.

## CSE Department Required Courses

### COMPUTER SCIENCE

#### CSCE Required Courses (28 hours)

- CSCE 1030 – CS1 (4 Hrs) \_\_\_\_\_
- CSCE 1040 – CS2 (3 Hrs) \_\_\_\_\_
- CSCE 2100 – Foundations I (3 Hrs) \_\_\_\_\_
- CSCE 2110 – Foundations II (3 Hrs) \_\_\_\_\_
- CSCE 2610 – Comp. Org (3 Hrs) \_\_\_\_\_
- CSCE 3110 – Data Structures (3 Hrs) \_\_\_\_\_
- CSCE 3600 – Systems Prog (3 Hrs) \_\_\_\_\_
- CSCE 4010 - Ethics (3 Hrs) \_\_\_\_\_
- CSCE 4110 - Algorithms(3 Hrs) \_\_\_\_\_

#### CSCE Core Courses (9 hours)

Choose 9 hours from CSCE 4115,4410,4430,4600,4610,4650,4999

- (3 Hours) \_\_\_\_\_ (advanced)
- (3 Hours) \_\_\_\_\_ (advanced)
- (3 Hours) \_\_\_\_\_ (advanced)

#### CSCE Breadth Courses (9 hours)

Choose 9 hours from CSCE 3530,4210,4230,4310,4350,4444,4901

- (3 Hours) \_\_\_\_\_ (advanced)
- (3 Hours) \_\_\_\_\_ (advanced)
- (3 Hours) \_\_\_\_\_ (advanced)

#### CSCE Elective Courses (9 hours)

Choose 9 hours of upper div. CSCE courses (not from above)

- (3 hours) \_\_\_\_\_ (advanced)
- (3 hours) \_\_\_\_\_ (advanced)
- (3 hours) \_\_\_\_\_ (advanced)

### ELECTRICAL ENGINEERING (3 Hours)

EENG 2710 or ENGR 2720 – Digital Logic \_\_\_\_\_

### ADVANCED TECHNICAL COMMUNICATION (3 Hours)

TECM 4100, 4180, 4190, 4200, 4250, or 4700 \_\_\_\_\_

### ELECTIVE COURSES (To reach 120 Hrs with 42 Advanced Hrs.)

Students should seek advanced core courses to satisfy the 42 advanced hours requirement within the 120 hour minimum.



# Computer Engineering

# Computer Engineering

- A Minimum of 121 semester hours required for graduation.
- 42 advanced (3000-4000 level) hours required for degree (minimum of 24 must be taken at UNT).
- A minimum of 31 semester hours must be completed at UNT.

**THIS IS A SIMPLIFIED GUIDE TO SELECTING COURSES – PLEASE MEET WITH YOUR ADVISOR AND CHECK THE UNDERGRADUATE CATALOG FOR ALL COURSE OPTIONS IN EACH CATEGORY**

## Math, Science & Engineering Found.

**Must earn at least a "C" in all courses and a 2.5 GPA**

### LABORATORY SCIENCES (12 Hours; 3 courses)

- \*PHYS 1710-1730 (4 hours) \_\_\_\_\_
- PHYS 2220-2240 (4 hours) \_\_\_\_\_
- \*CHEM 1410 or 1415 and lab(4 hours) \_\_\_\_\_

### MATHEMATICS (19 Hours)

- \*MATH 1710 – Calculus I (4 hours) \_\_\_\_\_
- MATH 1720 – Calculus II (3 hours) \_\_\_\_\_
- MATH 1780 - Probability (3 hours) \_\_\_\_\_
- MATH 2700 – Linear Algebra(3 hours) \_\_\_\_\_
- MATH 2730 – MultiVar Calc.(3 hours) \_\_\_\_\_
- Adv. MATH or SCIENCE ELECTIVE \_\_\_\_\_

**Choose a 3000 or 4000 level course from Math, Physics, Chemistry, Biology, Geology, or Geography**

### ORAL / ADVANCED WRITTEN COMMUNICATIONS (3 Hours)

- \*TECM 2700 \_\_\_\_\_ (satisfies second English req.)
- \* = Engineering Foundation Courses**

## CSE Department Required Courses

### COMPUTER SCIENCE and ENGINEERING

- CSCE 1030 – CS1 (4 Hrs) \_\_\_\_\_
- CSCE 1040 – CS2 (3 Hrs) \_\_\_\_\_
- CSCE 2100 – Foundations I (3 Hrs) \_\_\_\_\_
- CSCE 2110 – Foundations II (3 Hrs) \_\_\_\_\_
- CSCE 2610 – Comp. Org (3 Hrs) \_\_\_\_\_
- CSCE 3010 – Signals & Sys (3 Hrs) \_\_\_\_\_ or EENG 2620
- CSCE 3020 – Comm Systems (3 Hrs) \_\_\_\_\_ or EENG 3810
- CSCE 3600 – Systems Progr (3 Hrs) \_\_\_\_\_
- CSCE 3612 – Embed Systems(3 Hrs) \_\_\_\_\_
- CSCE 3730 – Reconfig Logic (3 Hrs) \_\_\_\_\_
- CSCE 4011 – Engineering Ethics (3 Hrs) \_\_\_\_\_
- CSCE 4910 – Senior Design 1(3 Hrs) \_\_\_\_\_
- CSCE 4915 – Senior Design 2(3 Hrs) \_\_\_\_\_

- CSCE Specialty Elective \_\_\_\_\_
- CSCE Specialty Elective \_\_\_\_\_
- CSCE Specialty Elective \_\_\_\_\_
- See next page for details on specialty elective areas

### ELECTRICAL ENGINEERING (11 Hours)

- EENG 2710 or ENGR 2720 \_\_\_\_\_ Digital Logic
- ENGR 2730 \_\_\_\_\_ Logic Design Lab
- EENG 3510 \_\_\_\_\_ Electronics I
- EENG 2610 or ENGR 2405 \_\_\_\_\_ Circuit Analysis
- ENGR 2415 \_\_\_\_\_ Circuit Analysis Lab

### ELECTIVE COURSES (To reach 121 Hrs with 42 Advanced Hrs.)

It is strongly recommended that students take advanced courses in the core areas to satisfy the 42 advanced hours requirement within the 121 hour minimum.

## University Core

### COMMUNICATION (3 Hours)

Approved Course \_\_\_\_\_  
Grade of "C" or better is required

### AMERICAN HISTORY (6 Hours)

HIST 2610 \_\_\_\_\_  
HIST 2620 \_\_\_\_\_

**NOTE:** Honors equivalents or History 4700 (Texas History) or any advanced US-Topic History course(s) may substitute for either of the US History survey courses.

### GOVERNMENT / POLITICAL SCIENCE (6 Hours)

PSCI 1040 \_\_\_\_\_  
PSCI 1050 \_\_\_\_\_

**NOTE:** If you are transferring credit for either PSCI course, please check with your advisor. Do not assume that your "first" course elsewhere is the same as PSCI 1040. An out-of-state American Government course cannot be equivalent to PSCI 1040 but may be equivalent to PSCI 1050. Any advanced US- Topic Political Science course may substitute for PSCI 1050 only.

SOCIAL AND BEHAVIORAL SCIENCES (3 Hours) \_\_\_\_\_  
(from list of approved options for this category)

CREATIVE ARTS (3 Hours) \_\_\_\_\_  
(upper division recommended to reach 42 advanced hours)

LANGUAGE, PHILOSOPHY & CULTURE (3 Hours) \_\_\_\_\_  
(from list of approved options for this category)

DISCOVERY (3 Hours) \_\_\_\_\_

CAPSTONE (3 Hours) \_\_\_\_\_ CSCE 4011 Satisfies

TAKE UPPER DIVISION (3xxx & 4xxx) COURSES WHERE POSSIBLE

**NOTE: The student is required to maintain a 2.75 GPA and a C or better in all CSCE courses.**

**Taking CSCE 3530, CSCE 4550, and CSCE 4560 and pre-requisites earns a certificate in National Security Systems**

**Completing the four-course sequence CSCE 4210, 4215, 4220, and 4250 earns a Certificate in Game Programming**

**Check with your advisor concerning elective courses**

**In case of conflicting information, the catalog (catalog.unt.edu) prevails. This guide is for catalog year 2014-15 and does not apply to other catalog years.**

## Computer Engineering Specialty Area Electives

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

ELET 3750: Digital Systems  
CSCE 4620: Real-Time Operating systems  
CSCE 4730: VLSI Design  
CSCE 4440: Real-Time Software Development  
CSCE 4610: Computer Systems Architecture  
CSCE 4890: Directed Study in a Real-Time / Embedded Topic

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

CSCE 4730: VLSI Design  
CSCE 4750: VLSI Testing  
CSCE 4610: Computer Systems Architecture  
ELET 3750: Digital Systems  
PHYS 4500: Introduction to Solid State Physics  
CSCE 4890: Directed Study in a VLSI / Electronics Topic

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

CSCE 3510: Introduction to Wireless Communication  
CSCE 3530: Introduction to Computer Networks  
CSCE 4520: Wireless Networks and Protocols  
CSCE 4530: Computer Network Design  
CSCE 4560: Secure e-Commerce  
CSCE 4550: Introduction to Computer Security  
CSCE 4890: Directed Study in a Networking Topic

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

CSCE 4650: Introduction to Compilation Techniques  
CSCE 4610: Computer Systems Architecture  
CSCE 3030: Parallel Programming  
CSCE 4600: Intro to Operating Systems  
CSCE 4620: Real-Time Operating Systems  
CSCE 4890: Directed Study in a Systems Topic



# UNT Core Information

## **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 4 or 5 fulfills this category*

## **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

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

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

PSCI 1040, American Government **or**  
 PSCI 1041, Honors Am. Government  
 PSCI 1050, American Government **or**  
 PSCI 1051, Honors Am. Government

*AP U.S. Government & Politics score  
 of 3, 4 or 5  
 CLEP American Government  
 fulfills PSCI 1050 or PSCI 1051*

## **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 1600, Music in Human Imagination  
 MUMH 2040, Music Appreciation  
 MUMH 3000, Nineteenth-Century Music  
 MUMH 3010, Twentieth-Century Music  
 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 4 or 5  
 IB Dance score of 4 or higher\*  
 fulfills this category*

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

AGER 2250, Aging in Film & Lit.  
 ANTH 3101 American Culture & Society  
 ANTH 3110, North American Indians  
 ANTH 3120, Indians Southwest  
 ANTH 3140, Latinos in the U.S.  
 ANTH 3200, Latin American  
 ANTH 3210, Meso America  
 ANTH 3220, Mayan Culture  
 ANTH 3300, Peoples of the Pacific  
 ANTH 3400, Peoples of Africa  
 ANTH 3500, Middle Eastern Culture  
 ANTH 3700, South Asian Culture  
 DFST 2313, Courtship & Marriage

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

ENGL 2210, World Literature I  
 ENGL 2211, Honors World Literature I  
 ENGL 2220, World Literature II  
 ENGL 2221, Honors World Literature  
 FREN 3040, Adv. Reading French Culture  
 FREN 4060, Studies in French Literature  
 FREN 4310, French Civilization & Culture  
 GERM 3040, Topics in German Culture  
 GERM 3050, Topics in German Literature  
 GERM 4310, Topics Adv. German Culture  
 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, Italian Culture Thru Film  
 ITAL 3070, Intro. to Italian Literature  
 JAPN 3020, Advanced Japanese I  
 JAPN 3030, Advanced Japanese II  
 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 2400, Religion in American Society  
 PHIL 2600, Ethics in Science

*AP English Literature & Composition  
 score of 4 or 5 fulfills this category  
 AP World History score of 3, 4 or 5  
 IB History score of 4 or higher\*  
 fulfills this category*

## **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.  
 DFST 1013, Human Development  
 EADP 4050, Special Pop. in Disasters  
 ECON 1100, Microeconomics  
 ECON 1110, Macroeconomics  
 GEOG 1200, Global Societies  
 HLTH 2200, Family Life & Human Sexuality  
 JOUR 1210, Mass Comm. & Society  
 MDSE 2750, Consumers in Global Market  
 MDSE 3370, Fashion Theory & Trend Analysis  
 MKTG 2650, Princ. of Global Marketing  
 PADM 2100, Diversity in Urban Gover.  
 PSYC 1630, General Psychology I  
 PSYC 1650, General Psychology II  
 RHAB 3100, Disability & Society  
 SOCI 1510, Individuals in Society  
 SOCI 2100, Crime & Justice in the U.S.

*AP Macroeconomics score of 3, 4 or 5  
 AP Microeconomics score of 3, 4 or 5  
 AP Psychology score of 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  
 fulfills this category*

## **DISCOVERY** (3 Hours)

AGER 2250, Aging in Film & Literature  
 ANTH 1100, World Cultures  
 ANTH 1150, World Cultures Through Film  
 ANTH 2070, Intro. to Race & Ethnic Studies  
 ANTH 2200, Gender Across Cultures  
 BCIS 3615, Visual Display of Business Info.  
 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, Rhetoric & Argument  
 COUN 2620, Diversity & Cultural Awareness  
 DANC 1100, Stress Reduct. Thru Movement  
 DFST 2033, Parenting in Diverse Families  
 DFST 3423, Family, Schools, Communities  
 EENG 1910, Learning to Learn  
 ENGL 2500, Literary Analysis & Interpretation  
 ENGR 1030, Technological Systems  
 FREN 1610, French Influence in North Am.  
 FREN 1620, French Language in Canada  
 GEOG 1500, Geography of DFW Metroplex  
 HMGD 1450, Principles of Nutrition  
 HNRS 1100, The Good Society  
 HNRS 1500, Intro. to Research  
 INST 2100, Intro. to International Studies  
 ITAL 1610, Italian Influences in the U.S.  
 LANG 1610, World Ling. Landscapes  
 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 3010, Professional Selling  
 PHED 1000, Health Related Fitness  
 PHIL 1800, Philosophy of Self  
 PHIL 2400, Religion in American Society  
 PHIL 2500, Contemp. Environmental Issues  
 PSCI 1010, Politics and Pop Culture  
 PSYC 1500, Mythbusting  
 RHAB 3000, Microcounseling  
 SOCI 2070, Race & Ethnic Relations  
 SOWK 4540, Human Diversity  
 TECM 1500, New Media for College Career  
 WMST 2100, Women & Society

## **CAPSTONE** (3 Hours)

Fulfilled by a required course in your major

*\*Completion of IB program, earned  
 IB Diploma, & minimum score of 4 or  
 completion of IB program without the  
 earned diploma & minimum score of  
 5, 6 or 7.*



# 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	