Department of
Computer Science and Engineering

BA in Information Technology

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

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

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.A. in Information Technology

Graduates will:

- Pursue graduate studies in information technology, computer science or related disciplines, and/or a career in a technology field utilizing skills from the information technology areas studied during the undergraduate program.
- Act responsibly and ethically in their professional conduct and successfully engage in lifelong 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, manage, maintain and implement information systems while applying IT and computing principles and practices to the solution of real problems.

Information Technology

Information Technology

- 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 – <u>CHECK THE UNDERGRADUATE CATALOG FOR ALL COURSE OPTIONS</u>

Math, Science, & Engineering Found.

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

<u>LABORATORY SCIENCES</u> (8 Hours)

*CHEM 1410 **or** 1415 & lab (4 hrs) _____
*PHYS 1710-1730 (4 hrs) _____

<u>MATHEMATICS</u> (7 Hours)

*Math 1710 – Calculus I (4 hrs) _____
 Math 1680 or 1780 Probability (3 hrs) _____

<u>ORAL / ADVANCED WRITTEN COMMUNICATIONS</u> (3 Hours)

*TECM 2700 – Tech Writing _____ (satisfies 2nd English)

* = Engineering Foundation Courses

CSE Department Required Courses

<u>COMPUTER SCIENCE</u> (46 Hours)

Group I. CSCE Required Courses
CSCE 1030 – Computer Science I(4 hr) _____
CSCE 1040 – Computer Science II(3 hr) _____
CSCE 2100 – Computing Foundations I (3 hr) _____
CSCE 2110 – Computing Foundations II (3 hr) _____
CSCE 3055 – IT Project Mgmt (3 hr) _____
CSCE 3220 – Human Computer Interf. (3 hr) _____
CSCE 3420 – Internet Programming (3 hr) _____
CSCE 3530 – Intro to Comp. Networks (3 hr) _____
CSCE 3600 – Systems Programming(3 hr) _____
CSCE 4010 – Social Issues in Computing(3 hr) _____
CSCE 4350 – Intro to Database Sys.(3 hr) _____
CSCE 4444 – Software Engineering (3 hr) _____
CSCE 4550 – Intro. To Comp. Security (3hr) _____
CSCE 4905 – Capstone I (3 hr) _____
CSCE 4925 – Capstone II (3 hr) _____

Group II. CS Concentration Area (9 hours) – see next page
(3 Hrs.) _____ (advanced)
(3 Hrs.) _____ (advanced)
(3 Hrs.) _____ (advanced)
CSCE courses most closely aligned with the supporting area

<u>Supporting Area</u> (21 hrs to support the CS Concentration Area)
- these courses may NOT be used to fulfill a minor -

(3 Hrs.) _____
(3 Hrs.) _____
(3 Hrs.) _____
(3 Hrs.) _____
(3 Hrs.) _____
(3 Hrs.) _____
(3 Hrs.) _____

> **Advanced courses in the supporting track will assist in reaching the 42 advanced hours required for the degree**

These credits may come from the community college technology courses under certain conditions. Please check with an advisor. Pre-requisites required for Concentration & Supporting Areas can also be used in those areas.

University Core

<u>COMMUNICATION</u> (3 Hours)
Approved course _____
Grade of "C" or better required

<u>AMERICAN HISTORY</u> (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.

<u>GOVERNMENT / POLITICAL SCIENCE</u> (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.

<u>SOCIAL AND BEHAVIORAL SCIENCE</u> (3 Hours) _____
(from list of approved options for this category)

<u>CREATIVE ARTS</u> (3 Hours) _____
(upper division recommended to reach 42 advanced hours)

<u>LANGUAGE, PHILOSOPHY & CULTURE</u> (3 Hours) _____
(from list of approved options for this category)

<u>DISCOVERY</u> (3 Hours) _____

<u>CAPSTONE</u> (3 Hours) <u>CSCE 4010 Satisfies</u>

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

<u>NOTE: You must maintain a 2.75 GPA and a C or better in all CSCE courses.</u>

Completing CSCE 3530, CSCE 4550, and CSCE 4560 earns a certificate from the Committee on National Security Systems

Completing CSCE 4210, 4215, 4220, and 4250 earns the Certificate in Game Programming.

A maximum of 6 hours of credit can be received in CSCE 4890, 4920, 4940, or 4950.

Check with your advisor concerning elective courses and eligible Concentration and Supporting Area 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.

Bachelor of Arts Major in Information Technology
Sample Focus Areas
Students are encouraged to consult their advisor concerning transferability of courses.
The focus area does not appear on your diploma.

Focus areas involve a clearly defined set of courses in the Concentration and Supporting Areas
These courses may not be used as part of a minor.
Concentration area courses must be CSCE. Supporting area courses can be CSCE or from other disciplines. Approved courses and their pre-requisites will work for the Concentration / Supporting Areas

These are just a few samples of the many options available to you. Please consult your advisor.

Game Development

CS Concentration Area Courses (9 Hours)

CSCE 4210 Game Programming I
CSCE 4220 Game Programming II
CSCE 4215 Programming Math & Physics for Games

Suggested Supporting Area Courses
Math 2700 Linear Algebra
CSCE 4230 Intro. to Computer Graphics
CSCE 4310 Intro to Artificial Intelligence
CSCE 4890.716 Directed Study in Game Dev
CSCE 4250 Topics in Game Development
Advanced Digital Art / Modeling Courses

Business (Pre-MBA)

CS Concentration Area Courses (9 Hours)

CSCE 4310 Intro. To Artificial Intelligence
CSCE 4560 Secure Electronic Commerce
CSCE 4520 Wireless Networks and Protocols

Suggested Supporting Area Courses
ACCT 2010
ACCT 2020
FINA 3770
MKTG 3650
MGMT 3820
BLAW 3430
Any 3000-4000 level College of Business course

Security & Networking

CS Concentration Area Courses (9 Hours)

CSCE 3110 Data Structures
CSCE 4560 Secure Electronic Commerce
CSCE 4050 Cryptography

Suggested Supporting Area Courses
CSCE 4520 Wireless Networks and Protocols
CSCE 4050 Applications of Cryptography
CSCE 3510 Introduction to Wireless Comm.
Advanced BCIS Security or e-Commerce
CSCE 4890 Directed Study in Security
Advanced BCIS Security or e-Commerce
Advanced CJUS Course

Pre-Law

CS Concentration Area Courses (9 Hours)

CSCE 3110 Data Structures
CSCE 4560 Secure Electronic Commerce
CSCE 4890 Directed Study in Security

Suggested Supporting Area Courses

Choose 21 hours from the following courses depending on legal focus area
Political Sci. 3200, 3210, 4200, 4210, 4220, 4810
Criminal Justice 3201, 4250, 2100, 3210, 3700
Business Law 2000, 3430, 4200, 4430, 4450, 4480, 4600, 4770

Teaching Certification

CS Concentration Area Courses (9 Hours)
Course suggestions based on teaching area:
Theory: CSCE 3110, 4110, 4115
Security: CSCE 4050, 4240. 4560
Biocomputing: CSCE 3850, 4810, 4820
Systems: CSCE 4115, 4600, 4650
Etc...

Suggested Supporting Area Courses

TNTX 1100, TNTX 1200, PHIL 2600, EDSE 3500, EDSE 4000, EDSE 4500, EDSE 4608, EDSE 4618, EDSE 4628
Must have these 22 hours, a 2.5 GPA and be recommended for certification. Students should contact the Teach North Texas program office for more information.
All state certification requirements and information on required examinations is available on the web site of the State Board for Educator Certification (SBEC), www.tea.state.tx.us.

Prerequisite Structure
BA in Information Technology

Special Problems / Directed Study
See Undergraduate catalog for requirements

CSCE 4890	CSCE 4920
CSCE 4940	CSCE 4950

Maximum 6 hours credit in these courses

CSCE 4920
Co-op

See Undergraduate catalog for requirements

CSCE 2900
Special Problems

Elective credit only

Supporting Track 7

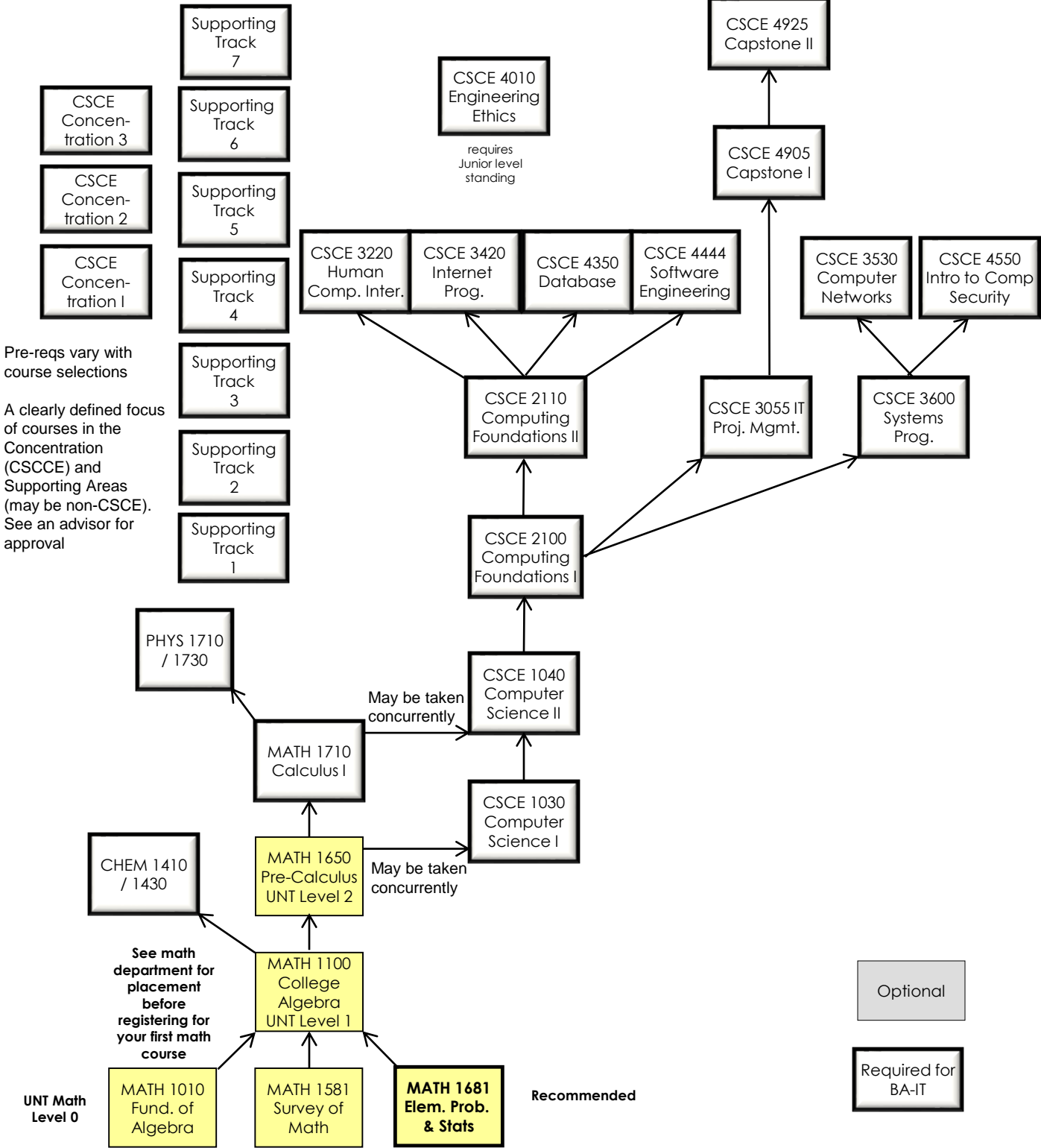Supporting Track 6

Supporting Track 5

Supporting Track 4

Supporting Track 3

Supporting Track 2

Supporting Track 1

CSCE Concentration 3

CSCE Concentration 2

CSCE Concentration 1

Pre-reqs vary with course selections

A clearly defined focus of courses in the Concentration (CSCCE) and Supporting Areas (may be non-CSCE). See an advisor for approval

CSCE 4010
Engineering Ethics

requires Junior level standing

CSCE 4925
Capstone II

CSCE 4905
Capstone I

CSCE 3220
Human Comp. Inter.

CSCE 3420
Internet Prog.

CSCE 4350
Database

CSCE 4444
Software Engineering

CSCE 3530
Computer Networks

CSCE 4550
Intro to Comp Security

CSCE 2110
Computing Foundations II

CSCE 3055 IT Proj. Mgmt.

CSCE 3600
Systems Prog.

CSCE 2100
Computing Foundations I

PHYS 1710 / 1730

CSCE 1040
Computer Science II

May be taken concurrently

MATH 1710
Calculus I

CSCE 1030
Computer Science I

CHEM 1410 / 1430

MATH 1650
Pre-Calculus
UNT Level 2

May be taken concurrently

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

MATH 1100
College Algebra
UNT Level 1

MATH 1010
Fund. of Algebra

MATH 1581
Survey of Math

**MATH 1681
Elem. Prob. & Stats**

Recommended

UNT Math Level 0

Optional

Required for BA-IT

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 Stated 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 16th Century
HIST 1060, World History from 16th 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
HMGT 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.*

BA in Information Technology
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	Collin	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	Collin	TCC	NCTC	Notes
PHYS 1710/1730	Physics I – Mechanics	PHYS 2425	PHYS 2425	PHYS 2425	PHYS 2425	
CHEM 1410/1430	Gen Chemistry I	CHEM 1411	CHEM 1411	CHEM 1411	CHEM 1411	
MATH 1710	Calculus I	MATH 2413	MATH 2413	MATH 2413	MATH 2413	
MATH 1680	Elem. Prob & Statistics	MATH 2342	MATH 1342	MATH 1342	MATH 1342	

Departmental Requirements

UNT Course	Title	DCCCD	Collin	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 CSCE 2100 complete	Foundations I	COSC 2436	COSC 2436	COSC 2436	COSC 2436	
CSCE 2100 or CSCE 2110 if CSCE 2100 complete	Foundations II	MATH 2305	MATH 2305	MATH 2305	MATH 2305	