Articulation Agreement
For Engineering and Computer Science

The University of Texas at Dallas
Erik Jonsson School of Engineering and Computer Science
and
Collin College
Division of Business, Information and Engineering Technologies

Whereas, The University of Texas at Dallas (UT Dallas) and Collin County Community College (Collin College) have a long history of cooperation and mutual interest in serving the citizens of Collin County;

Whereas, Collin County and the State of Texas are experiencing a shortage of qualified Engineering graduates as stated in the Texas Higher Education Coordinating Board's Closing the Gaps Initiative.

Whereas, The University of Texas at Dallas Bachelor of Science degree programs in Engineering are accredited by the Accreditation Board of Engineering and Technology (ABET); and

Whereas, Collin College is accredited by SACS and desires to ensure that its curriculum meets or exceeds the quality and standards established by UT Dallas for Engineering Programs; now, therefore, be it resolved:

The University of Texas at Dallas Erik Jonsson School of Engineering and Computer Science and Collin College Business, Information & Engineering Technologies Division have agreed to enhance the transfer process for Collin students pursuing an Associate of Science with an Emphasis in Engineering degree or an Emphasis in Computer Science degree based on the following terms and conditions:

1. The Jonsson School at UT Dallas will support Collin College in its desire to develop lower-division engineering courses comparable to those taken by UT Dallas students during their freshman and sophomore years. Further, Jonsson faculty and staff will work with their Collin colleagues to insure that these courses meet UT Dallas requirements. This includes sharing course syllabi, related UT Dallas program educational objectives, and outcomes assessment materials.

2. Collin College will provide laboratories/equipment to ensure that engineering lab courses are comparable to those taken by students at UT Dallas.

3. The University of Texas at Dallas will continue its commitment to the terms and conditions of the original March 13, 1997 Institutional Articulation Agreement with Collin County Community College District.

4. Both parties understand that this new articulation is specific to the Jonsson School at UT Dallas and to students pursuing Collin College's Associate of Science in Engineering Degree or Computer Science Degree. It contains the following specific provisions.

    a. Students seeking
        a. the B.S. in Electrical Engineering at The University of Texas at Dallas must earn at least 66 upper-division hours to graduate, including at least 32 upper-division hours in residence at UT Dallas.
        b. the B.S. in Computer Science at The University of Texas at Dallas must earn at least 59 upper-division hours to graduate, including at least 32 upper-division hours in residence at UT Dallas.
        c. the B.S. in Computer Engineering at The University of Texas at Dallas must earn at least 65 upper-division hours to graduate, including at least 32 upper-division hours in residence at UT Dallas.
        d. the B.S. in Telecommunications Engineering at The University of Texas at Dallas must earn at least 64 upper-division hours to graduate, including at least 32 upper-division hours in residence at UT Dallas.
        e. the B.S. in Software Engineering at The University of Texas at Dallas must earn at least 61 upper-division hours to graduate, including at least 31 upper-division hours in residence at UT Dallas.
        f. the B.S. in Mechanical Engineering at The University of Texas at Dallas must earn at least 63 upper-division hours to graduate, including at least 32 upper-division hours in residence at UT Dallas.

b. Students who successfully complete Collin College's Associate of Science Emphasizing an Engineering degree (and follow the specific degree course transfer guide) with a GPA of at least 2.5 and no grade below a 'C' in engineering courses will be able to transfer the following as a block to UT Dallas:
    a. 62 credit hours, in the case of the B.S. in Electrical Engineering,
    b. 61 credit hours. in the case of the B.S. in Computer Engineering,
    c. 61 credit hours. in the case of the B.S. in Telecommunications Engineering,
    d. 63 credit hours. in the case of the B.S. in Software Engineering,
    e. 64 credit hours. in the case of the B.S. in Mechanical Engineering,

    These classes will satisfy UT Dallas' core curriculum requirements as well as the identified undergraduate courses in the specific Engineering degree.

c. Students who successfully complete Collin College's Associate of Science Emphasizing a Computer Science degree (and follow the specific degree course transfer guide) with a GPA of at least 2.5 and no grade below a 'C' in engineering courses will be able to transfer the following as a block to UT Dallas:
    a. Up to 66 credit hours. in the case of the B.S. in Computer Science.

    These classes will satisfy UT Dallas' core curriculum requirements as well as the identified undergraduate courses in the specific Engineering degree.

d. The two institutions will work together to provide transfer guides for Collin students and advisors utilizing the Texas Common Course Numbering System to identify the courses to be completed at Collin College. Courses in the Engineering and Computer Science at The University of Texas at Dallas, along with their UT Dallas course numbers, will also be identified in the transfer guide.

e. Collin College faculty, staff, and advisors will ensure that students in the Associate of Science with an Emphasis in one of the Engineering programs or Computer Science program, and all students declaring an intent to earn the B.S. in Engineering or Computer Science from The University of Texas at Dallas, are advised regarding which courses taken at Collin College will transfer for degree program credit in UT Dallas' Engineering and Computer Science Degree Plans. In addition, students will be advised as to which courses will not count toward the relevant Engineering or Computer Science degree plan.

5. Collin College students who meet The University of Texas at Dallas student transfer admissions requirements and complete the Associate of Science with an Emphasis in Engineering or Computer Science degree will receive automatic admission to The University of Texas at Dallas.

6. Both Collin College and UT Dallas agree that Collin College will post on Collin College's website: the articulation agreement, the current Collin College specific UT Dallas Transfer Guides, and the current transfer table from this document. Further, UT Dallas will post the current Collin College specific UT Dallas Transfer Guides on UT Dallas' website.

7. Collin College and UT Dallas must agree on the design of any marketing materials publicizing this agreement distributed to current or potential students or the community at large.

8. The faculty and administrators from both institutions will meet annually to assess and develop program offerings, schedule student/faculty class and lab visits, and to discuss the potential opportunities for facilities/faculty sharing. The faculty and administrators will also explore potential joint grant funding.

This agreement may be amended, as necessary, for specific program articulation without affecting the master agreement. As the document is amended, the appropriate attachments will be changed appropriately.

This agreement shall become effective March 15, 2011 and shall remain in effect until terminated by either party. Termination can be by either The University of Texas at Dallas or Collin College by giving written notice to the other institution two years prior to the requested date of termination.

Collin County Community College District

By _____
Dr. Toni Jenkins, Vice President/Provost, Preston Ridge Campus

Date 2/25/11

University of Texas at Dallas

By _____
Dr. Bryan Wildenthal, Executive Vice President/Provost

Date 1-4-11

Collin County Community College District

By _____
Bill Blitt, Dean of Academic Affairs for Business, Information & Engineering Technologies

Date 2/24/11

University of Texas at Dallas

By _____
Dr. Mark Spong, Dean, Jonsson School of Engineering and Computer Science

Date 3/16/11

Collin County Community College District

By _____
Dave Galley, Director of Engineering

Date 2/24/2011

University of Texas at Dallas

By _____
Dr. Gopal Gupta, Head, Dept. of Computer Science

Date 3/15/11

Collin County Community College District

By _____
Susan Mahon, Chair, Computer Science and Information Systems

Date 2/24/11

University of Texas at Dallas

By _____
Dr. Mehrdad Nourani, Computer Engineering Program

Date 3-15-2011

University of Texas at Dallas

By _____

Dr. John Hansen, Head, Dept. of Electrical Engineering

Date MARCH 15, 2011

University of Texas at Dallas

By _____

Dr. Andrea Fumagalli, Head, Telecommunications Engineering Program

Date 3/28/2011

University of Texas at Dallas

By _____

Dr. Mario Rotea, Head, Dept. of Mechanical Engineering

Date 3/15/11

University of Texas at Dallas

By _____

Dr. Gopal Gupta, Head, Software Engineering

Date 3/15/11

Attachment 1- University of Texas at Dallas and Collin College
Course Specific Articulation Agreement Matrix

University of Texas at Dallas and Collin College Course Specific Articulation Agreement Matrix						
Collin Course	**UTD BS Electrical Engineering Course**	**UTD BS Telecommunications Engineering Course**	**UTD BS Computer Engineering Course**	**UTD BS Computer Science Course**	**UTD BS Software Engineering Course**	**UTD BS Mechanical Engineering Course**
ENGR 1201 and ENGR 1172 (If Required)	ENGR 1202 and 1 Credit Free Elective	TE 1102 and 2 Credits Free Elective or ENGR 1202 and 1 Credit Free Elective	ENGR 1202 and 1 Credit Free Elective	Not Required	Not Required	MECH 1108 and 1 Credit Free Elective (ENGR 1172 Is Not Required)
ENGR 2310 and ENGR 2110	ENGR 2310 and 1 Credit Free Elective	Not Required	CE 2310 and 1 Credit Free Elective	Not Required	Not Required	Not Required
ENGR 2300	ENGR 2300	Not Required	ENGR 2300	MATH 2418 (Additional 1 Credit From Calculus MATH Hours*)	MATH 2418 (Additional 1 Credit From Calculus MATH Hours)	ENGR 2300
MATH 2413, MATH 2414, MATH 2415 and MATH 2320 (If Required)	MATH 2417, MATH 2419, MATH 2420 and 3 Credits Free Elective	MATH 2417, MATH 2419, MATH 2420 and 3 Credits Free Elective	MATH 2417, MATH 2419, MATH 2420 and 3 Credits Free Elective	MATH 2417, MATH 2419, and 4 Credits Free Elective (MATH 2320 Is Not Required)	MATH 2417, MATH 2419, and 4 Credits Free Elective (MATH 2320 Is Not Required)	MATH 2417, MATH 2419, MATH 2420 and 3 Credits Free Elective
MATH 2305	Not Required	ECS 2305	ECS 2305	ECS 2305	ECS 2305	Not Required
ENGR 2332- Lecture Only (Future Offering)	Not Required	Not Required	Not Required	Not Required	Not Required	MECH 2320- Lecture Only

* Applies to students completing the 3 course Calculus Sequence at Collin College.

Attachment 2- 2010 – 2012 Electrical Engineering Transfer Guide

UTD THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: ELECTRICAL ENGINEERING **Degree: Bachelor of Science (B.S.E.E.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
	**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*		
ECS 3390	Professional & Technical Communication*	*N/A*	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			**070 Core Code**
GOVT 2301 * *and*	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 *and*	
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
	**Consult your academic advisor for course descriptions. The six hour government requirement must include study of the Constitution of the United States and the Constitution of Texas.*		
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	**060 Core Code**
HIST 1301	American History I	HIST 1301	
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours of Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	*N/A*	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2303, FREN 2304, HIST 2311, HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANC 2303, DRAM 1310,, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2417 *^	Calculus I (Accelerated)	MATH 2414 *or* 2417^ *and*	**020 Core Code**
MATH 2419 *^	Calculus II (Accelerated)	MATH 2415 *or* 2419^	
	**MATH 2417 & 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.*		
	^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.		

Note: UTD's accelerated two-semester calculus sequence, MATH 2417 and MATH 2419, is equivalent to the three-semester calculus sequence offered at community colleges. Students must take Calculus I, Calculus II, and Calculus III in order to be equivalent to UTD MATH 2417 and MATH 2419. Students are strongly urged to start and complete the entire sequence either at the community college, or at UTD. If students choose to take Calculus I, II, and III, there may be prerequisite courses required. These courses would not be applicable towards the degree plan.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	
CHEM 1311/1111*	General Chemistry w/lab	CHEM 1411	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

^One hour of Chemistry is counted under Science Core and three hours are counted under Major Preparatory Courses.

II. MAJOR REQUIREMENTS (74 Semester Hours)

Major Preparatory Courses: (20 Hours Beyond Core Curriculum)

ECS 1325	Introduction to Programming	***N/A, but may be satisfied by*** COSC 1337 or 1437 (Java)	
ENGR 2300	Applied Linear Algebra	ENGR 2300	
EE 2310	Intro to Digital Systems Techniques	ENGR 2310	
ENGR 1202	Introduction to Engineering	ENGR 1172 and ENGR 1201	
MATH 2420	Differential Equations w/ Applications	MATH 2320^	
MATH 2417	Calculus I (Accelerated)	MATH 2414 **or** 2417^	***and***
MATH 2419	Calculus II (Accelerated)	MATH 2415 **or** 2419^	

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426
CHEM 1311/1111	General Chemistry w/lab	CHEM 1411

Advanced Upper-Division Major Requirements (54 hours):
(See ECS Academic Advisor)

III. ELECTIVE REQUIREMENTS (12 Semester Hours)

Advanced Electives (6 Hours):

All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.

Free Electives (6 Hours):

Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 128 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor of the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.
http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html

Attachment 3- 2010 – 2012 Computer Science Transfer Guide

THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: COMPUTER SCIENCE **Degree: Bachelor of Science (B.S.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*			
ECS 3390	Professional & Technical Communication*	*N/A*	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			**070 Core Code**
GOVT 2301 * *and*	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 *and*	
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	**060 Core Code**
HIST 1301	American History I	HIST 1301	
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours of Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	*N/A*	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2303, FREN 2304, HIST 2311, HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANC 2303, DRAM 1310, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2413 or 2417	Calculus I (Accelerated)	MATH 2413 or 2417^ *and*	**020 Core Code**
MATH 2414 or 2419	Calculus II (Accelerated)	MATH 2414 or 2419^	

MATH 2413 or 2417 & 2414 or 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.* ***Note:* *Computer Science students only need to Math 2413 and Math 2414 to satisfy degree requirements. However, they may take Math 2415 if they choose or need additional math hours.*

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

Science Elective (4 hours)*:

**One hour of science elective is counted under the science core curriculum requirement and three hours are counted under major preparatory courses.*

Core options: Courses for Non-science majors CANNOT be used for this requirement.

BIOL 1406, BIOL 1407, BIOL 1411, BIOL 2401, BIOL 2402, BIOL 2406, BIOL 2416, BIOL 2421, BIOL 2428, CHEM 1411, CHEM 1412, CHEM 2401, CHEM 2423, CHEM 2425, GEOL 1305, GEOL 1402, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1445 GEOL 1447, GEOL 2470, PHYS 1411

II. MAJOR REQUIREMENTS (65 Semester Hours)

Major Preparatory Courses: (18 Hours Beyond Core Curriculum)

ECS 1337	Computer Science I	COSC 1437 or 1337 (Java)	
ECS 2336	Computer Science II	COSC 2436 (Java)	

Students who complete the C++ sequence should contact the ECS Academic Advisor for more information.

ECS 2305	Discrete Mathematics I	MATH 2305	
MATH 2418	Linear Algebra	MATH 2318 ^	
MATH 2413 or 2417	Calculus I (Accelerated)	MATH 2413 or 2417^	*and*
MATH 2414 or 2419	Calculus II (Accelerated)	MATH 2414 or 2419^	

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426

4 Hours Science Elective:

(See list of course options under the "E. Science Core Elective" above)

Advanced Upper-Division Major Requirements (47 hours):

(See ECS Academic Advisor)

III. ELECTIVE REQUIREMENTS (18 Semester Hours)

Advanced Electives (6 Hours):

All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.

Free Electives (12 Hours):

Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 125 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor or the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.

http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html

Attachment 4- 2010 – 2012 Computer Engineering Transfer Guide

THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: COMPUTER ENGINEERING **Degree: Bachelor of Science (B.S.C.E.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
	**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*		
ECS 3390	Professional & Technical Communication*	*N/A*	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			**070 Core Code**
GOVT 2301 * *and*	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 *and*	
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
	**Consult your academic advisor for course descriptions. The six hour government requirement must include study of the Constitution of the United States and the Constitution of Texas.*		
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	**060 Core Code**
HIST 1301	American History I	HIST 1301	
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours of Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	*N/A*	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL2342, ENGL 2343, FREN 2303, FREN 2304			
HIST 2311, HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANCE 2303, DRAM 1310, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2417 *	Calculus I (Accelerated)	MATH 2414 *or* 2417^ *and*	**020 Core Code**
MATH 2419 *	Calculus II (Accelerated)	MATH 2415 *or* 2419^	
	**MATH 2417 & 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.*		
	^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.		

Note: UTD's accelerated two-semester calculus sequence, MATH 2417 and MATH 2419, is equivalent to the three-semester calculus sequence offered at community colleges. Students must take Calculus I, Calculus II, and Calculus III in order to be equivalent to UTD MATH 2417 and MATH 2419. Students are strongly urged to start and complete the entire sequence either at the community college, or at UTD. If students choose to take Calculus I, II, and III, there may be prerequisite courses required. These courses would not be applicable towards the degree plan.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	
ENGR 1202	Introduction to Engineering	***N/A***	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

II. MAJOR REQUIREMENTS (75 Semester Hours)			
Major Preparatory Courses: (22 Hours Beyond Core Curriculum)			
CS 1337	Computer Science I	COSC 1437 *or* 1337 (Java)	
CS 2336	Computer Science II	COSC 2436 (Java)	
Students who complete the C++ sequence should contact the ECS Academic Advisor for more information.			
ENGR 1202	Introduction to Engineering	ENGR 1172 and ENGR 1201	
ENGR 2300	Applied Linear Algebra	ENGR 2300	
CE 2310	Intro to Digital Systems Techniques	ENGR 2310	
ECS 2305	Discrete Mathematics	MATH 2305	
MATH 2420	Differential Equations w/ Applications	MATH 2320 ^	
MATH 2417	Calculus I (Accelerated)	MATH 2414 *or* 2417^	*and*
MATH 2419	Calculus II (Accelerated)	MATH 2415 *or* 2419^	
^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.			
PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425	
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426	
Advanced Upper-Division Major Requirements (53 hours): (See ECS Academic Advisor)			

III. ELECTIVE REQUIREMENTS (9 Semester Hours)
Advanced Electives (6 Hours):
All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.
Free Electives (3 Hours):
Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 126 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor or the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.
http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html

Attachment 5- 2010 – 2012 Telecommunication Transfer Guide

THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: TELECOMMUNICATIONS ENGINEERING **Degree: Bachelor of Science (B.S.T.E.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
	**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*		
ECS 3390	Professional & Technical Communication*	*N/A*	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			**070 Core Code**
GOVT 2301 * *and*	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 *and*	
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
	**Consult your academic advisor for course descriptions. The six hour government requirement must include study of the Constitution of the United States and the Constitution of Texas.*		
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	**060 Core Code**
HIST 1301	American History I	HIST 1301	
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours of Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	*N/A*	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2303, FREN 2304 HIST 2311, HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANC 2303, DRAM 1310, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2417 *^	Calculus I (Accelerated)	MATH 2414 *or* 2417^ *and*	**020 Core Code**
MATH 2419 *^	Calculus II (Accelerated)	MATH 2415 *or* 2419^	
	**MATH 2417 & 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.* *^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.*		

Note: UTD's accelerated two-semester calculus sequence, MATH 2417 and MATH 2419, is equivalent to the three-semester calculus sequence offered at community colleges. Students must take Calculus I, Calculus II, and Calculus III in order to be equivalent to UTD MATH 2417 and MATH 2419. Students are strongly urged to start and complete the entire sequence either at the community college, or at UTD. If students choose to take Calculus I, II, and III, there may be prerequisite courses required. These courses would not be applicable towards the degree plan.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	
CHEM 1311/1111*^	General Chemistry w/lab	CHEM 1411	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

^One hour of Chemistry is counted under Science Core and three hours are counted under Major Preparatory Courses.

II. MAJOR REQUIREMENTS (71 Semester Hours)

Major Preparatory Courses: (19 Hours Beyond Core Curriculum)

ECS 1337	Computer Science I	COSC 1437 *or* 1337 (Java)
ECS 2336	Computer Science II	COSC 2436 (Java)

Students who complete the C++ sequence should contact the ECS Academic Advisor for more information.

ECS 2305	Discrete Mathematics	MATH 2305
TE 1102	Intro to Experimental Techniques	ENGR 1172
MATH 2420	Differential Equations	MATH 2320^
MATH 2417	Calculus I (Accelerated)	MATH 2414 *or* 2417^ ***and***
MATH 2419	Calculus II (Accelerated)	MATH 2415 *or* 2419^

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426
CHEM 1311/1111	General Chemistry w/lab	CHEM 1411

Advanced Upper-Division Major Requirements (52 hours):
(See ECS Academic Advisor)

III. ELECTIVE REQUIREMENTS (12 Semester Hours)

Advanced Electives (6 Hours):

All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.

Free Electives (6 Hours):

Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 125 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor or the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.

http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html

Attachment 6- 2010 – 2012 Software Engineering Transfer Guide

THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: SOFTWARE ENGINEERING **Degree: Bachelor of Science (B.S.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
	**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*		
ECS 3390	Professional & Technical Communication*	*N/A*	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			**070 Core Code**
GOVT 2301 * *and*	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 *and*	
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
	**Consult your academic advisor for course descriptions. The six hour government requirement must include study of the Constitution of the United States and the Constitution of Texas.*		
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	**060 Core Code**
HIST 1301	American History I	HIST 1301	
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours of Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	*N/A*	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL 2328, ENGL2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2303, FREN 2304, HIST 2311 HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANC 2303, DRAM 1310, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2413 or 2417	Calculus I (Accelerated)	MATH 2413 *or* 2417^ *and*	**020 Core Code**
MATH 2414 or 2419	Calculus II (Accelerated)	MATH 2414 *or* 2419^	

**MATH 2413 or 2417 & 2414 or 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.*

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

Note: Software Engineering students only need Math 2413 and Math 2414 to satisfy degree requirements however they may take Math 2415 if they choose or need additional math hours.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

Science Elective (4 hours)*:

**One hour of science elective is counted under the science core curriculum requirement and three hours are counted under major preparatory courses.*

Core options: Courses for Non-science majors CANNOT be used for this requirement.

BIOL 1406, BIOL 1407, BIOL 1411, BIOL 2401, BIOL 2402, BIOL 2404, BIOL 2406, BIOL 2416, BIOL 2421, BIOL 2428, CHEM 1411, CHEM 1412, CHEM 2401, CHEM 2423, CHEM 2425, GEOL 1402, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1445, PHYS 1411.

II. MAJOR REQUIREMENTS (67 Semester Hours)

Major Preparatory Courses: (18 Hours Beyond Core Curriculum)

ECS 1337	Computer Science I	COSC 1437 **or** 1337 (Java)	
ECS 2336	Computer Science II	COSC 2336 (Java)	

Students who complete the C++ sequence should contact the ECS Academic Advisor for more information.

ECS 2305	Discrete Mathematics I	MATH 2305	
MATH 2418	Linear Algebra	MATH 2318^	
MATH 2413 or 2417	Calculus I (Accelerated)	MATH 2413 **or** 2417^	***and***
MATH 2414 or 2419	Calculus II (Accelerated)	MATH 2414 **or** 2419^	

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426

4 Hours Science Elective:

(See list of course options under the "E. Science Core Elective" above)

Advanced Upper-Division Major Requirements (49 hours):

(See ECS Academic Advisor)

III. ELECTIVE REQUIREMENTS (15 Semester Hours)

Advanced Electives (6 Hours):

All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.

Free Electives (9 Hours):

Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 124 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor or the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.

http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html

Attachment 7- 2010 – 2012 Mechanical Engineering Transfer Guide

THE UNIVERSITY OF TEXAS AT DALLAS

Erik Jonsson School of Engineering and Computer Science
2010-2012 Transfer Guide for
Collin County Community College District

Major: Mechanical Engineering **Degree: Bachelor of Science (B.S.M.E.)**

UTD Courses		Collin College Courses	
I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)			
A.	**Communication (6 Hours)**		
RHET 1302	Composition & Rhetoric	ENGL 1302	**010 Core Code**
	**ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.*		
ECS 3390	Professional & Technical Communication*	***N/A***	
B.	**Social and Behavioral Sciences (15 Hours)**		
6 Hours of Government (Texas Legislative Mandate):			
GOVT 2301 * ***and***	Const Found & Pol Beh in the U.S. and Texas	GOVT 2301 ***and***	**070 Core Code**
GOVT 2302 *	Political Institutions in the U.S. and Texas	GOVT 2302	
	**Consult your academic advisor for course descriptions. The six hour government requirement must include study of the Constitution of the United States and the Constitution of Texas.*		
6 Hours of American History (Texas Legislative Mandate):		***Two of the following:***	
HIST 1301	American History I	HIST 1301	**060 Core Code**
HIST 1302	American History II	HIST 1302	
HIST 2301	Texas History	HIST 2301	
3 Hours Social and Behavioral Sciences Elective:			**080 Core Code**
ECS 3361	Social Issues and Ethics in CS & EE	***N/A***	
C.	**Humanities and Fine Arts (6 Hours)**		
HUMA 1301	Exploration of the Humanities	HUMA 1301	**040 Core Code**
or other core options:			
ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2303, FREN 2304, HIST 2311, HIST 2312, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2321, SPAN 2321, SPAN 2322			
ARTS 1301	Exploration of the Arts	ARTS 1301	**050 Core Code**
or other core options:			
ARTS 1303, ARTS 1304, DANC 2303, DRAM 1310,, DRAM 2361, DRAM 2362, MUSI 1306, MUSI 1307			
D.	**Mathematics and Quantitative Reasoning (6 Hours)**		
MATH 2417 *^	Calculus I (Accelerated)	MATH 2414 ***or*** 2417^	***and***
MATH 2419 *^	Calculus II (Accelerated)	MATH 2415 ***or*** 2419^	**020 Core Code**
	**MATH 2417 & 2419 are lower-division major requirements that also satisfy the 6 hour Mathematics and Quantitative Reasoning core curriculum requirement.*		
	^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.		

Note: UTD's accelerated two-semester calculus sequence, MATH 2417 and MATH 2419, is equivalent to the three-semester calculus sequence offered at community colleges. Students must take Calculus I, Calculus II, and Calculus III in order to be equivalent to UTD MATH 2417 and MATH 2419. Students are strongly urged to start and complete the entire sequence either at the community college, or at UTD. If students choose to take Calculus I, II, and III, there may be prerequisite courses required. These courses would not be applicable towards the degree plan.

UTD Courses		Collin College Courses	
E.	**Science (9 Hours)**		
PHYS 2325/2125*	Mechanics and Heat w/lab	PHYS 2425	**030 Core Code**
PHYS 2326/2126*	Electricity and Magnetism w/lab	PHYS 2426	
CHEM 1311/1111*	General Chemistry w/lab	CHEM 1411	

**PHYS 2325/2125 & 2326/2126 are major requirements that will also satisfy eight hours of the science core curriculum requirement.*

^One hour of Chemistry is counted under Science Core and three hours are counted under Major Preparatory Courses.

II. MAJOR REQUIREMENTS (76 Semester Hours)

Major Preparatory Courses: (25 Hours Beyond Core Curriculum)

CS 1325	Introduction to Programming	***N/A, but may be satisfied by*** COSC 1337 or 1437 (Java)
ENGR 2300	Applied Linear Algebra	ENGR 2300
MECH 2310	Static Equilibrium and Rigid Body Dynamics	ENGR 2301 ***and*** ENGR 2302
	**Must take both ENGR 2301 AND ENGR 2302 to receive credit for MECH 2310.*	
MECH 2320	Strength of Materials	ENGR 2332
MECH 2120	Mechanical Measurements Laboratory	***N/A***
MECH 1108	Introduction to Engineering	ENGR 1201
MECH 1208	Introduction to Mechanical Engineering	***N/A***
MATH 2420	Differential Equations w/ Applications	MATH 2320^
MATH 2417	Calculus I (Accelerated)	MATH 2414 ***or*** 2417^ ***and***
MATH 2419	Calculus II (Accelerated)	MATH 2415 ***or*** 2419^

^Students may need to take additional Mathematics courses so that the total number of hours in Mathematics credited to them is at least that specified in the degree requirements. Consult with an advisor.

PHYS 2325/2125	Mechanics and Heat w/lab	PHYS 2425
PHYS 2326/2126	Electricity and Magnetism w/lab	PHYS 2426
CHEM 1311/1111	General Chemistry w/lab	CHEM 1411

Advanced Upper-Division Major Requirements (51 hours):
(See ECS Academic Advisor)

III. ELECTIVE REQUIREMENTS (9 Semester Hours)

Advanced Electives (6 Hours):

All students are required to take at least six hours of advanced electives outside of their major field of study. These electives must be either upper-division classes or lower-division classes that require prerequisites.

Free Electives (3 Hours):

Both lower-division and upper-division course may count as free electives, but students must complete at least 51 hours of upper-division credit to qualify for graduation. Please consult with your advisor.

A MINIMUM OF 127 SEMESTER HOURS IS REQUIRED FOR GRADUATION WITH AT LEAST 51 UPPER-DIVISION HOURS

Note: Core options listed reflect the TCCNS courses. Other courses that may potentially qualify for core requirements must be petitioned through an academic advisor of the department housing the student's major.

UTD does not accept vocational or technical courses in certificate or applied science programs, nor courses offered through the Workforce Education Course Manual (WECM), nor developmental courses. Course credit awarded with no grade will not be accepted. Consult the current online UTD catalog for complete degree plan requirements.
http://www.utdallas.edu/student/catalog/ugcurrent/undergradprograms.html