



**Erik Jonsson School of Engineering and Computer Science**  
**2009-2010 Transfer Guide for**  
**Texas Common Course Numbering System**

Major: **MECHANICAL ENGINEERING**

Degree: **Bachelor of Science (B.S.)**

**UTD Courses**

**TCCNS Courses**

**I. UTD CORE CURRICULUM REQUIREMENTS (42 Semester Hours)**

<b>A. Communication (6 Hours)</b>			
<b>RHET 1302</b>	Rhetoric	<b>ENGL 1302*</b>	<b>010 Core Code</b>
<i>*(ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used for elective hours.)</i>			
<b>ECS 3390</b>	Professional and Technical Communication	N/A	
<b>B. Social and Behavioral Sciences (15 Hours)</b>			
<b>6 Hours of Government (Texas Legislative Mandate):</b>		<b>Choose one two-course series:</b>	<b>070 Core Code</b>
<b>GOVT 2301* and</b>	Const Found & Pol Beh in US and Texas	<b>GOVT 2301 and</b>	
<b>GOVT 2302*</b>	Political Institutions in US and Texas	<b>GOVT 2302</b>	
		<i>or</i>	
N/A	American Federal Government	<b>GOVT 2305 and</b>	
N/A	Texas Government	<b>GOVT 2306</b>	
<i>*(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.)</i>			
<b>6 Hours of American History (Texas Legislative Mandate):</b>		<b>Two of the following:</b>	<b>060 Core Code</b>
<b>HIST 1301</b>	US History Survey to Civil War	<b>HIST 1301</b>	
<b>HIST 1302</b>	US History Survey from Civil War	<b>HIST 1302</b>	
<b>HIST 2301</b>	History of Texas	<b>HIST 2301</b>	
N/A	Mexican-American History I	<b>HIST 2327</b>	
N/A	Mexican-American History II	<b>HIST 2328</b>	
<b>3 Hours of Social and Behavioral Sciences Elective:</b>			<b>080 Core Code</b>
<b>ECS 3361</b>	Social Issues and Ethics in CSE	N/A	
<b>C. Humanities and Fine Arts (6 Hours)</b>			
<b>HUMA 1301</b>	Exploration of the Humanities	<b>HUMA 1301</b>	<b>040 Core Code</b>
<i>or other core options:</i>			
<b>ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333, FREN 2303, FREN 2304, HIST 2311, HIST 2312, HIST 2321, HIST 2322, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2307, PHIL 2316, PHIL 2317.</b>			
<b>ARTS 1301</b>	Exploration of the Arts	<b>ARTS 1301</b>	<b>050 Core Code</b>
<i>or other core options:</i>			
<b>ARCH 1301, ARCH 1302, ARTS 1303, ARTS 1304, DANC 2303, DANC 2304, DRAM 1310, DRAM 2361, DRAM 2362, DRAM 2363, HUMA 1315, MUSI 1306, MUSI 1308, MUSI 1309.</b>			
<b>D. Mathematics and Quantitative Reasoning (6 Hours)</b>			
			<b>020 Core Code</b>
<b>MATH 2417*</b>	Calculus I (Accelerated)	<b>MATH 2314 or 2414 or 2417^</b>	
<b>MATH 2419*</b>	Calculus II (Accelerated)	<b>MATH 2315 or 2415 or 2419^</b>	
<i>*(MATH 2417 and MATH 2419 are lower-division major requirements that will also satisfy the six hour Mathematics and Quantitative Reasoning core curriculum requirement.)</i>			
<i>^(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.)</i>			

**\*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

## TCCNS Courses

**E. Science (9 Hours)**

030 Core Code

<b>PHYS 2325/2125*</b>	Mechanics w/lab	<b>PHYS 2325/2125 or 2425</b>
<b>PHYS 2326/2126*</b>	Electromagnetism and Waves w/lab	<b>PHYS 2326/2126 or 2426</b>
<b>CHEM 1311/1111*<sup>^</sup></b>	General Chemistry I w/lab	<b>CHEM 1311/1111 or 1411</b>

*\*(PHYS 2325/2125, PHYS 2326/2126, and CHEM 1311/1111 are major requirements that will also satisfy the nine hour science core curriculum requirement.)*

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

**II. UTD MAJOR REQUIREMENTS (76 Hours)****Major Preparatory Courses (20 hours beyond Core Curriculum):**

<b>CS 1337</b>	Computer Science I	<b>COSC 1337 or 1437 (JAVA)</b>
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Students who complete the C++ sequence should contact the ECS Academic Advisor for more information.

<b>MECH 1108</b>	Introduction to Engineering	<b>ENGR 1201</b>
<b>MECH 1208</b>	Introduction to Mechanical Engineering	<i>N/A</i>
<b>MECH 2120</b>	Mechanical Measurements Laboratory	<i>N/A</i>
<b>MECH 2300</b>	Linear Algebra for Engineers	<i>N/A</i>
<b>MECH 2310</b>	Static Equilibrium and Rigid Body Dynamics	<b>ENGR 2303 or BOTH ENGR 2301 and 2302</b>
<b>MECH 2320</b>	Strength of Materials	<b>ENGR 2332</b>
<b>MATH 2420</b>	Differential Equations with Applications	<b>MATH 2320 or 2420<sup>^</sup></b>
<b>MATH 2417</b>	Calculus I (Accelerated)	<b>MATH 2314 or 2414 or 2417<sup>^</sup></b>
<b>MATH 2419</b>	Calculus II (Accelerated)	<b>MATH 2315 or 2415 or 2419<sup>^</sup></b>

*^(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.)*

<b>CHEM 1311/1111</b>	General Chemistry I w/lab	<b>CHEM 1311/1111 or 1411</b>
<b>PHYS 2325/2125</b>	Mechanics w/lab	<b>PHYS 2325/2125 or 2425</b>
<b>PHYS 2326/2126</b>	Electromagnetism and Waves w/lab	<b>PHYS 2326/2126 or 2426</b>

**Advanced Upper-Division Major Requirements (57 Hours):**

(See Departmental Advisor)

**III. UTD ELECTIVE REQUIREMENTS (9 Hours)****Advanced Electives (6 hours):**

All students are required to complete at least 6 hours of advanced electives outside their major field of study. These electives must be either upper-division courses, or lower-division courses that have prerequisites.

**Free Electives (3 hours):**

Both lower-division and upper-division courses may be used as free electives, but students must complete at least 51 upper-division hours to qualify for graduation. Consult with an 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. Consult the current online UTD catalog for complete degree plan requirements.

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