

**BIOMEDICAL ENGINEERING (BS)**  
**Erik Jonsson School of Engineering and Computer Science**



**2021-2022 Two-Year Transfer PATHWAY using the Texas Common Course Numbering System**

This transfer pathway is intended as a *general* guide for UT DALLAS' lower-division major requirements and Core Curriculum requirements.

Please consult the current online UT DALLAS catalog for complete degree plan requirements.

<http://catalog.utdallas.edu/2021/undergraduate/programs>

*This is an **example** only. Please see advisor to develop individual plan.*

FRESHMAN YEAR							
FALL SEMESTER		Core Area	SCH	SPRING SEMESTER		Core Area	SCH
<b>ENGL 1301</b>	Composition I	010 Core	3	<b>ENGL 1302</b>	Composition II	010 Core	3
<b>HIST 1301</b>	U.S. History I	060 Core	3	<b>HIST 1302</b>	U.S. History II	060 Core	3
<b>CHEM 1311/1111</b> or <b>CHEM 1411</b>	General Chemistry I w/lab	030/090 Core	4	<b>CHEM 1312</b> or <b>CHEM 1412</b>	General Chemistry II	030/090 Core	3
<b>ENGR 1201</b>	Introduction to Engineering		2	<b>COSC 1337</b> or <b>COSC 1437</b>	Programming Fundamentals II		3
				<b>080 Core Course</b>	<b>See UTD Transfer Plan</b>	080 Core	3
<b>MATH 2413</b> or <b>MATH 2313</b>	Calculus I	020 Core	4	<b>MATH 2414</b> or <b>MATH 2314</b>	Calculus II	020/090 Core	4
Total Semester Credit Hours			16	Total Semester Credit Hours			19

SOPHOMORE YEAR							
FALL SEMESTER		Core Area	SCH	SPRING SEMESTER		Core Area	SCH
<b>040 Core Course</b>	<b>See UTD Transfer Plan</b>	040 Core	3	<b>050 Core Course</b>	<b>See UTD Transfer Plan</b>	050 Core	3
<b>GOVT 2305</b>	Federal Government	070 Core	3	<b>GOVT 2306</b>	Texas Government	070 Core	3
<b>BIOL 1306</b> or <b>BIOL 1406</b>	Biology for Science Majors I	030 Core	3	<b>ENGR 2301</b> or <b>ENGR 2401</b>	Engineering Mechanics-Statics		3
<b>MATH 2415</b> or <b>MATH 2315</b>	Calculus III	020/090 Core	4	<b>MATH 2420</b> or <b>MATH 2320</b>	Differential Equations		4
<b>PHYS 2325/2125</b> or <b>PHYS 2425</b>	University Physics I w/lab	030/090 Core	4	<b>PHYS 2326/2126</b> or <b>PHYS 2426</b>	University Physics II w/lab	030/090 Core	4
Total Semester Credit Hours			17	Total Semester Credit Hours			17

# BIOMEDICAL ENGINEERING (BS)

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UT DALLAS REQUIREMENT	TCCNS COURSE EQUIVALENT**
<b>I. UT DALLAS CORE CURRICULUM REQUIREMENTS: 42 semester credit hours</b>	
<b>Communication: 6 semester credit hours</b> <span style="float: right;"><b>010 Core Code</b></span>	
<b>RHET 1302</b> Rhetoric  <b>ECS 3390</b> Professional and Technical Communication (See UT DALLAS Departmental Advisor)	<b>ENGL 1302*</b> *(ENGL 1301 is prerequisite to ENGL 1302 and must be completed prior to taking ENGL 1302. ENGL 1301 can be used to satisfy three semester credit hours of the Communication Core Curriculum requirement.) N/A
<b>Mathematics: 3 semester credit hours</b> <span style="float: right;"><b>020 Core Code</b></span>	
<b>MATH 2417*</b> Calculus I (Accelerated) *(MATH 2417 is a required major preparatory course - noted in Section II below - that also fulfills the three-semester-credit-hour Mathematics Core Curriculum requirement.) (See UT DALLAS Departmental Advisor)	<b>MATH 2413 or 2313 and 2414 or 2314</b>
<b>Life and Physical Sciences: 6 semester credit hours</b> <span style="float: right;"><b>030 Core Code</b></span>	
<b>PHYS 2325*</b> Mechanics <b>PHYS 2326*</b> Electromagnetism and Waves *(PHYS 2325 and PHYS 2326 are required major preparatory courses - noted in Section II below - that also fulfill the six-semester-credit-hour Life and Physical Sciences Core Curriculum requirement.)	<b>PHYS 2325 or 2425</b> <b>PHYS 2326 or 2426</b>
<b>Language, Philosophy, and Culture: 3 semester credit hours</b> <span style="float: right;"><b>040 Core Code</b></span>	
Choose one course from the following: <b>HUMA 1301</b> Exploration of the Humanities <b>LIT 2331</b> Introduction to World Literature <b>PHIL 1301</b> Introduction to Philosophy <b>PHIL 1305</b> Introduction to Philosophy of Religion <b>PHIL 1306</b> Introduction to Ethics <b>PHIL 2316</b> History of Philosophy I	<b>HUMA 1301</b> <b>ENGL 2331</b> <b>PHIL 1301</b> <b>PHIL 2321</b> <b>PHIL 2306</b> <b>PHIL 2316</b> Or: select 3 semester credit hours from other TCCNS core options: <b>ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, HIST 2311, HIST 2312, HIST 2321, HIST 2322, PHIL 1304, PHIL 2307.</b>
<b>Creative Arts: 3 semester credit hours</b> <span style="float: right;"><b>050 Core Code</b></span>	
Choose one course from the following: <b>AHST 1303</b> Survey/Western Art History: Ancient-Medieval <b>AHST 1304</b> Survey/Western Art History: Renaissance-Modern <b>ARTS 1301</b> Exploration of the Arts <b>DANC 1305</b> Introduction to World Dance Forms <b>DANC 1310</b> Understanding Dance <b>FILM 2332</b> Understanding Film <b>MUSI 1306</b> Understanding Music <b>THEA 1310</b> Understanding Theatre	<b>ARTS 1303</b> <b>ARTS 1304</b> <b>ARTS 1301</b> <b>DANC 1305</b> <b>DANC 2303</b> <b>DRAM 2366</b> <b>MUSI 1306</b> <b>DRAM 1310</b> Or: select 3 semester credit hours from other TCCNS core options: <b>ARCH 1301, ARCH 1302, DRAM 2361, DRAM 2362, HUMA 1315, MUSI 1308, MUSI 1309.</b>
<b>American History: 6 semester credit hours</b> <span style="float: right;"><b>060 Core Code</b></span>	
Texas Legislative Mandate Choose two courses from the following: <b>HIST 1301</b> US History Survey to Civil War <b>HIST 1302</b> US History Survey from Civil War <b>HIST 2301</b> History of Texas <b>HIST 2381</b> African-American History	<b>HIST 1301</b> <b>HIST 1302</b> <b>HIST 2301</b> <b>HIST 2381</b>

<b>UT DALLAS REQUIREMENT</b>	<b>TCCNS COURSE EQUIVALENT**</b>
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<b>Government/Political Science: 6 semester credit hours</b>		<b>070 Core Code</b>
<b>Texas Legislative Mandate*</b>		
<b>GOVT 2305</b> American National Government <b>GOVT 2306</b> State and Local Government  <i>*The six-semester-credit-hour government course mandate requires study of the Constitution of the United States and the Constitution of Texas. (See UT DALLAS Departmental Advisor if you have questions)</i>	<b>GOVT 2305</b> <b>GOVT 2306</b>	
<b>Social and Behavioral Sciences: 3 semester credit hours</b>		<b>080 Core Code</b>
<b>Choose one course from the following:</b> <b>CRIM 1301</b> Introduction to Criminal Justice <b>CRIM 1307</b> Introduction to Crime and Criminology <b>ECON 2301</b> Principles of Macroeconomics <b>ECON 2302</b> Principles of Microeconomics <b>PSY 2301</b> Introduction to Psychology <b>PSY 2314</b> Lifespan Development <b>SOC 1301</b> Introduction to Sociology	<b>CRIJ 1301</b> <b>CRIJ 1307</b> <b>ECON 2301</b> <b>ECON 2302</b> <b>PSYC 2301</b> <b>PSYC 2314</b> <b>SOCI 1301</b>  <i>Or: select 3 semester credit hours from other TCCNS core options:</i> <b>ANTH 2302, ANTH 2346, ANTH 2351, ECON 1301,</b> <b>GEOG 1302, GEOG 1303, PSYC 2307, PSYC 2308, PSYC 2316,</b> <b>PSYC 2319, SOCI 1306, SOCI 2301, SOCI 2326, SOCI 2336.</b>	
<b>Component Area Option: 6 semester credit hours</b>		<b>090 Core Code</b>
<b>MATH 2417*</b> Calculus I (Accelerated) <b>MATH 2419*</b> Calculus II (Accelerated) <b>PHYS 2125*</b> Physics Laboratory I  <i>*(MATH 2417 and MATH 2419 and PHYS 2125 are required major preparatory courses - noted in Section II below - that also fulfill the six-semester-credit-hour Component Area Option Core Curriculum requirement.) (See UT DALLAS Departmental Advisor)</i>	<b>MATH 2413 or 2313 and 2414 or 2314</b> <b>MATH 2415 or 2315</b> <b>PHYS 2125 or lab of 2425</b>	

<b>II. UT DALLAS MAJOR REQUIREMENTS: 86 semester credit hours</b>		
<b>Major Preparatory Courses:</b>		
<b>BIOL 2311/2111</b> Introduction to Modern Biology I & Workshop <b>BIOL 2281</b> Introductory Biology Lab <b>CHEM 1311/1111</b> General Chemistry I and Lab <b>CHEM 1312</b> General Chemistry II <b>CHEM 2324</b> Introductory Organic Chemistry for Engineers <b>CS 1324</b> Introduction to Programming for Biomedical Engineers  <b>MATH 2417</b> Calculus I (Accelerated) <b>MATH 2419</b> Calculus II (Accelerated) <b>MATH 2420</b> Differential Equations with Applications  <b>PHYS 2325/2125</b> Mechanics and Physical Lab I <b>PHYS 2326/2126</b> Electromagnetism and Waves and Physics Lab II	<b>BIOL 1306/1106 or 1406</b>  <i>N/A</i> <b>CHEM 1311/1111 or 1411</b> <b>CHEM 1312 or 1412</b> <b>CHEM 2323 or 2423 and 2325 or 2425</b>  <i>N/A - but may be satisfied by</i> <b>COSC 1337 or 1437 (Java)</b> <b>MATH 2413 or 2313 and 2414 or 2314</b> <b>MATH 2415 or 2315</b> <b>MATH 2420 or 2320</b>  <i>(See UT DALLAS Departmental Advisor to clarify Math requirements)</i> <b>PHYS 2325/2125 or 2425</b> <b>PHYS 2326/2126 or 2426</b>	
<b>Major Core Courses (lower-c)</b>		
<b>BMEN 1100*</b> Introduction to Bioengineering I <b>ECS 1100*</b> Introduction to Engineering and Computer Science  <b>BMEN 1208</b> Introduction to Bioengineering II <b>BMEN 2320</b> Statics <b>ENGR 2300</b> Linear Algebra for Engineers	<b>*ENGR 1201</b> <b>*ENGR 1201</b> <i>*(both BMEN 1100 and ECS 1100 requirements may be satisfied by ENGR 1201)</i>  <i>(See UT DALLAS Departmental Advisor for equivalent course)</i> <b>ENGR 2301 or 2401</b>  <i>(See UT DALLAS Departmental Advisor for equivalent course)</i>	
<i>(See UT DALLAS Departmental Advisor for upper-division course requirements)</i>		

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

<b>**PLEASE NOTE:</b> Transfer Core options listed reflect the TCCNS courses only, as approved at UT DALLAS. Other Texas public colleges or universities may individually interpret some TCCNS courses in a different core category, which UT DALLAS will honor. Check with a UT DALLAS academic advisor to verify this. Other courses that may potentially qualify for core requirements must be approved by a UT DALLAS academic advisor or the department housing the student's major. Completion of the entire Core Curriculum at another Texas public college or university will substitute for completion of UT DALLAS Core Curriculum. TCCNS courses in Field of Study (FOS) programs will transfer to UT DALLAS. UT DALLAS does not accept vocational or technical courses in certificate or applied science programs, nor Workforce Education (WECM) courses, nor developmental courses.
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