

Science, Technology, Engineering, Mathematics (STEM) and Medical/Health-Related Degrees and Enrollment at UT System

Academic Institutions

Degrees

- Almost 23% of all degrees awarded at UT System academic institutions are in STEM fields, compared to 18.2% at other Texas public universities and 18.5% nationally.
- Excluding UT Austin, academic STEM degrees are 20.1% of total degrees.
- The percentage of STEM baccalaureates awarded was 22.2% at UT System and 19.4% excluding UT Austin, higher than 18.1% at other Texas public universities and 18.1% nationally.
- Percentage of STEM degrees at the master's level was 20.3% at UT System (with and without UT Austin), compared to 16.8% at other Texas public universities and 16.7% nationally.
- At the doctoral level, 47.4% of all degrees awarded at UT System are STEM degrees, higher than 38.4% for other Texas public universities and 43.2% nationally.
- Following a national trend, the proportion of STEM degrees at UT System declined at all levels, except doctoral. While degrees in science increased by 26%, computer science degrees decreased by almost 32% and engineering master's degrees decreased by almost 22%.

**STEM Degrees as Percent of Total Degrees Awarded
UT System Academic Institutions, 2008**

	UT System	Texas (Public, Other)	National
Baccalaureate	22.2%	18.1%	18.1%
Master's	20.3%	16.8%	16.7%
Doctoral	47.4%	38.4%	43.2%
Total	22.6%	18.2%	18.5%

Enrollments

- The highest increase in STEM enrollment at UT System was for first-time undergraduates. STEM enrollment increased by 11.0%, compared to 5.1% of total first-time undergraduate enrollment. The proportion of STEM majors also increased from 27.5% to 29.1%.
- Excluding UT Austin, STEM enrollment for first-time undergraduates increased by 16.5% compared to 8.2% of total first-time undergraduate enrollment. The proportion of STEM majors increased from 21.3% to 22.9%.
- Undergraduate enrollment in STEM majors increased by 5.4% compared to 5.0% of total undergraduate enrollment. The proportion of STEM majors remained about the same, slightly less than 25%.
- Transfer enrollment in STEM majors increased slightly by 2.1% compared to .8% of total transfer enrollment. The proportion of STEM majors remained about the same, around 23%.
- Graduate enrollment in STEM majors increased by 8.5% compared to 4.2% of total graduate enrollment. The proportion of STEM majors also increased from 26.8% to 27.9%.
- Engineering enrollment increased at almost every level, while science as a percent of total enrollment increased for first-time and total undergraduates.
- If UT Austin is excluded, the trends are similar except there was a decrease in science enrollment for transfers.

Health-Related Institutions

Degrees

- The total number of degrees awarded by UT System health-related institutions increased by nearly 10% compared to almost 5% nationally.
- From 2005 to 2008 there was a decrease of 7.2% in dental school degrees at UT System, compared to an increase of 12.1% nationally.
- Increases in baccalaureate (12.2%), master's (16.7%) and medical (1.9%) degrees exceeded national percentages 3.0%, 2.0% and -8.4%, respectively.

**Percent Change in Number of
Medical/Health-Related Degrees
UT System Health-Related Institutions, 2005 to 2008**

	UT System	National
Baccalaureate	12.2%	3.0%
Master's	16.7%	2.0%
Doctoral	14.5%	57.7%
Dental	-7.2%	12.1%
Medical	1.9%	-8.4%
Total	9.5%	4.6%

- Although UT System institutions awarded 14.5% more health-related doctoral degrees in 2008, this was less than the almost 58% increase at the national level. Most of the national increase was in physical therapy and audiology degrees.

Science, Technology, Engineering, Mathematics (STEM) and Medical/Health-Related Degrees and Enrollment at UT System

- As a proportion of total degrees awarded, biomedical sciences degrees increased by over four points and health professions by two points from 2005 to 2008.

Enrollments

- Undergraduate enrollment at UT System health-related institutions increased by 13.5% from 2005 to 2008. Post-Baccalaureate enrollment has almost tripled in size with the largest programs in public health (157 students) and biomedical sciences (125 students), while master's level enrollment decreased by 7.0%.
- Enrollment increased by 13.7% at the doctoral level and by 9.0% at the professional level.
- The largest programs at the undergraduate level, health professions and nursing increased by 3.4% and 9.9%, respectively.
- Enrollment in several of the largest master's level programs decreased from 2005 to 2008, health professions by 4.3%, nursing by 15.4% and public health by 13.8%, while biomedical sciences increased by 6.6%.
- At the doctoral level, the largest program, biomedical sciences increased by 2.6%.
- Medical school enrollment increased by 6.3% and dental school enrollment increased by 16.9%.

Table 1

Academic Institutions		U.T. System		Texas Public, Other		National	
		Percent of Total		Percent of Total		Percent of Total	
AY		2005	2008	2005	2008	2005	2008
Total	Total	24.5%	22.6%	19.1%	18.2%	19.1%	18.5%
	Science	7.3	8.3	6.6	7.7	6.9	7.7
	Technology	0.1	0.1	1.7	1.5	1.0	1.0
	Computer Science	5.1	3.1	4.3	2.7	3.8	2.6
	Engineering	10.5	9.7	5.5	5.4	6.2	6.1
	Mathematics	1.5	1.4	1.0	1.0	1.2	1.2
Baccalaureate	Total	23.8	22.2	19.1	18.1	18.8	18.1
	Science	8.6	9.7	7.3	8.6	7.3	8.2
	Technology	0.1	0.2	2.2	1.9	1.2	1.2
	Computer Science	5.3	2.7	4.2	2.2	3.9	2.3
	Engineering	8.3	8.3	4.5	4.4	5.4	5.3
	Mathematics	1.6	1.3	0.9	0.9	1.1	1.1
Masters	Total	24.2	20.3	17.8	16.8	17.6	16.7
	Science	3.0	3.2	3.8	3.9	4.0	4.2
	Technology	0.1	0.0	0.4	0.4	0.5	0.5
	Computer Science	4.8	3.9	4.8	4.2	3.7	3.2
	Engineering	15.2	11.7	7.7	7.3	8.1	7.4
	Mathematics	1.1	1.5	1.1	1.0	1.3	1.3
Doctoral	Total	43.0	47.4	38.6	38.4	41.3	43.2
	Science	16.1	16.2	17.2	17.0	21.4	21.6
	Technology	--	--	--	--	0.0	0.1
	Computer Science	3.1	5.8	2.5	4.1	2.3	3.1
	Engineering	21.2	22.9	15.9	15.3	14.7	15.7
	Mathematics	2.6	2.4	2.9	2.0	2.8	2.8

Notes:

STEM majors are based on the National Science Foundation STEM classification.

Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: NCES/IPEDS Completions Survey data

Table 2

**DEGREES: Science, Technology, Engineering and Mathematics
Academic Year 2005 and 2008**

Academic Institutions (excluding Austin)	AY	U.T. System (excluding Austin)		Texas Public, Other		National	
		Percent of Total		Percent of Total		Percent of Total	
		2005	2008	2005	2008	2005	2008
Total	Total	23.4%	20.1%	19.1%	18.2%	19.1%	18.5%
	Science	6.4	7.5	6.6	7.7	6.9	7.7
	Technology	0.2	0.2	1.7	1.5	1.0	1.0
	Computer Science	6.1	3.4	4.3	2.7	3.8	2.6
	Engineering	9.5	7.7	5.5	5.4	6.2	6.1
	Mathematics	1.2	1.2	1.0	1.0	1.2	1.2
Baccalaureate	Total	21.8	19.4	19.1	18.1	18.8	18.1
	Science	7.5	8.7	7.3	8.6	7.3	8.2
	Technology	0.2	0.3	2.2	1.9	1.2	1.2
	Computer Science	5.9	2.7	4.2	2.2	3.9	2.3
	Engineering	7.0	6.6	4.5	4.4	5.4	5.3
	Mathematics	1.2	1.1	0.9	0.9	1.1	1.1
Masters	Total	26.0	20.3	17.8	16.8	17.6	16.7
	Science	3.3	3.7	3.8	3.9	4.0	4.2
	Technology	0.1	0.1	0.4	0.4	0.5	0.5
	Computer Science	6.6	4.9	4.8	4.2	3.7	3.2
	Engineering	14.9	10.0	7.7	7.3	8.1	7.4
	Mathematics	1.1	1.7	1.1	1.0	1.3	1.3
Doctoral	Total	53.1	51.9	38.6	38.4	41.3	43.2
	Science	15.1	14.2	17.2	17.0	21.4	21.6
	Technology	--	--	--	--	0.0	0.1
	Computer Science	7.1	10.7	2.5	4.1	2.3	3.1
	Engineering	26.8	24.6	15.9	15.3	14.7	15.7
	Mathematics	4.2	2.5	2.9	2.0	2.8	2.8

Notes:

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Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: NCES/IPEDS Completions Survey data

Table 3

**DEGREES: Medical/Health-Related
Academic Year 2005 and 2008**

		U.T. System AY 2005 to 2008		National AY 2005 to 2008	
		Change	% Change	Change	% Change
Health Institutions	Total	260	9.5%	654	4.6%
	Baccalaureate	104	12.2	117	3.0
	Masters	118	16.7	85	2.0
	Doctoral	34	14.5	741	57.7
	Professional				
	Dental	-11	-7.2	62	12.1
Medical	15	1.9	-351	-8.4	

Notes:

U.T. System includes all medical/health-related programs. Certificates at U.T. System have not been included for the national comparison. National data includes degrees from institutions identified as medical schools in the Carnegie Classification and excludes U.T. System institutions. First-professional includes dentistry and medicine.

Source: NCES/IPEDS Completions Survey

Table 4

DEGREES: by Discipline
U. T. Academic Institutions, AY 2005 and 2008

AY					AY 2005 to 2008		
			2005	2008	Change	% Change	
Academic Total	Total	Total	7,969	8,130	161	2.0%	
		Science	2,377	2,988	611	25.7	
		Technology	36	47	11	30.6	
		Computer Science	1,656	1,127	-529	-31.9	
		Engineering	3,414	3,470	56	1.6	
		Mathematics	486	498	12	2.5	
		Baccalaureate	Total	5,459	5,760	301	5.5
			Science	1,963	2,506	543	27.7
			Technology	28	44	16	57.1
			Computer Science	1,210	712	-498	-41.2
			Engineering	1,895	2,158	263	13.9
			Mathematics	363	340	-23	-6.3
		Masters	Total	2,098	1,787	-311	-14.8
			Science	260	282	22	8.5
			Technology	8	3	-5	-62.5
			Computer Science	416	344	-72	-17.3
			Engineering	1,316	1,030	-286	-21.7
			Mathematics	98	128	30	30.6
		Doctoral	Total	412	583	171	41.5
			Science	154	200	46	29.9
		Computer Science	30	71	41	136.7	
		Engineering	203	282	79	38.9	
		Mathematics	25	30	5	20.0	

Notes:

STEM majors are based on the National Science Foundation STEM classification.

Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: NCES/IPEDS Completions Survey data

Table 5

DEGREES: by Discipline
U. T. Academic Institutions, Excluding U. T. Austin, AY 2005 and 2008

AY			2005		2008		AY 2005 to 2008	
							Change	% Change
Academic Total (excluding Austin)	Total	Total	4,709	4,712	3	0.1%		
		Science	1,287	1,768	481	37.4		
		Technology	36	47	11	30.6		
		Computer Science	1,236	793	-443	-35.8		
		Engineering	1,909	1,811	-98	-5.1		
		Mathematics	241	293	52	21.6		
	Baccalaureate	Total	3,076	3,339	263	8.6		
		Science	1,062	1,501	439	41.3		
		Technology	28	44	16	57.1		
		Computer Science	837	470	-367	-43.8		
		Engineering	981	1,138	157	16.0		
		Mathematics	168	186	18	10.7		
	Masters	Total	1,506	1,183	-323	-21.4		
		Science	189	215	26	13.8		
		Technology	8	3	-5	-62.5		
		Computer Science	382	284	-98	-25.7		
		Engineering	864	583	-281	-32.5		
		Mathematics	63	98	35	55.6		
	Doctoral	Total	127	190	63	49.6		
		Science	36	52	16	44.4		
		Computer Science	17	39	22	129.4		
		Engineering	64	90	26	40.6		
		Mathematics	10	9	-1	-10.0		

Notes:

STEM majors are based on the National Science Foundation STEM classification.

Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: NCES/IPEDS Completions Survey data

Table 6

DEGREES: by Discipline
U. T. Health Institutions, AY 2005 and 2008

AY				AY 2005 to 2008		Percent of Total	
		2005	2008	Change	% Change	2005	2008
Health Total	Total	3,012	3,412	400	13.3%		
	Health Professions	563	705	142	25.2	18.7%	20.7%
	Biomedical Sciences	278	469	191	68.7	9.2	13.7
	Dental	267	259	-8	-3.0	8.9	7.6
	Health Information Sciences	18	12	-6	-33.3	0.6	0.4
	Health Sciences	64	110	46	71.9	2.1	3.2
	Medical	791	804	13	1.6	26.3	23.6
	Medical Academics	3	2	-1	-33.3	0.1	0.1
	Nursing	828	863	35	4.2	27.5	25.3
	Public Health	200	188	-12	-6.0	6.6	5.5
Certificates	Total	211	231	20	9.5		
	Health Professions	174	203	29	16.7	82.5	87.9
	Biomedical Sciences	--	--	--	--	--	--
	Dental	16	14	-2	-12.5	7.6	6.1
	Health Sciences	21	14	-7	-33.3	10.0	6.1
Baccalaureate	Total	853	982	129	15.1		
	Health Professions	181	239	58	32.0	21.2	24.3
	Dental	22	35	13	59.1	2.6	3.6
	Health Sciences	43	96	53	123.3	5.0	9.8
	Nursing	607	612	5	0.8	71.2	62.3
Master's Certificate	Total	57	189	132	231.6		
	Health Professions	--	2	--	--	--	1.1
	Biomedical Sciences	--	137	--	--	--	72.5
	Dental	57	50	-7	-12.3	100.0	26.5
Master's	Total	715	792	77	10.8		
	Health Professions	208	261	53	25.5	29.1	33.0
	Biomedical Sciences	95	119	24	25.3	13.3	15.0
	Dental	22	19	-3	-13.6	3.1	2.4
	Health Information Sciences	18	10	-8	-44.4	2.5	1.3
	Medical Academics	3	2	-1	-33.3	0.4	0.3
	Nursing	211	240	29	13.7	29.5	30.3
	Public Health	158	141	-17	-10.8	22.1	17.8
Doctoral	Total	235	273	38	16.2		
	Biomedical Sciences	183	213	30	16.4	77.9	78.0
	Health Information Sciences	--	2	--	--	--	0.7
	Nursing	10	11	1	10.0	4.3	4.0
	Public Health	42	47	5	11.9	17.9	17.2
Professional	Total	941	945	4	0.4		
	Dental	150	141	-9	-6.0	15.9	14.9
	Medical	791	804	13	1.6	84.1	85.1

Note:

The school of Allied Health changed its name to the school of Health Professions in AY 2007-08.

Source: Texas Higher Education Coordinating Board data

Table 7

**ENROLLMENT: Science, Technology, Engineering and Mathematics
U. T. Academic Institutions, Fall 2005 and 2008**

	Fall	STEM Enrollment				Total Enrollment		Percent of Total	
		2005	2008	Fall 2005 to 2008		Fall 2005 to 2008		2005	2008
				Change	% Change	Change	% Change		
Undergraduate* Total	34,462	36,332	1,870	5.4%	7,053	5.0%	24.4%	24.5%	
Science	14,709	16,093	1,384	9.4			10.4	10.9	
Technology	280	262	-18	-6.4			0.2	0.2	
Computer Science	4,118	3,661	-457	-11.1			2.9	2.5	
Engineering	13,685	14,610	925	6.8			9.7	9.9	
Mathematics	1,670	1,706	36	2.2			1.2	1.2	
FTIC Total	6,060	6,727	667	11.0	1,115	5.1	27.5	29.1	
Science	2,740	3,111	371	13.5			12.4	13.4	
Technology	23	35	12	52.2			0.1	0.2	
Computer Science	518	591	73	14.1			2.4	2.6	
Engineering	2,577	2,805	228	8.8			11.7	12.1	
Mathematics	202	185	-17	-8.4			0.9	0.8	
Transfers Total	2,862	2,922	60	2.1	94	0.8	23.0	23.3	
Science	1,413	1,402	-11	-0.8			11.3	11.2	
Technology	40	29	-11	-27.5			0.3	0.2	
Computer Science	219	238	19	8.7			1.8	1.9	
Engineering	1,048	1,096	48	4.6			8.4	8.7	
Mathematics	142	157	15	10.6			1.1	1.3	
Graduate Total	8,545	9,270	725	8.5	1,421	4.2	26.8	27.9	
Science	2,108	2,155	47	2.2			6.6	6.5	
Technology	10	19	9	90.0			0.0	0.1	
Computer Science	1,318	1,579	261	19.8			4.1	4.7	
Engineering	4,504	4,892	388	8.6			14.1	14.7	
Mathematics	605	625	20	3.3			1.9	1.9	

Notes:

*Undergraduate includes post-baccalaureate students.

STEM majors are based on the National Science Foundation STEM classification.

Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: Texas Higher Education Coordinating Board data

Table 8

**ENROLLMENT: Science, Technology, Engineering and Mathematics
U. T. Academic Institutions Excluding U. T. Austin, Fall 2005 and 2008**

	Fall			STEM Enrollment		Total Enrollment		Percent of Total	
		2005	2008	Change	% Change	Change	% Change	2005	2008
Undergraduate*	Total	21,470	22,371	901	4.2%	5,955	5.7%	20.5%	20.2%
	Science	8,948	9,383	435	4.9			8.5	8.5
	Technology	280	262	-18	-6.4			0.3	0.2
	Computer Science	3,032	2,618	-414	-13.7			2.9	2.4
	Engineering	8,146	9,048	902	11.1			7.8	8.2
	Mathematics	1,064	1,060	-4	-0.4			1.0	1.0
FTIC	Total	3,230	3,764	534	16.5%	1,250	8.2	21.3	22.9
	Science	1,358	1,498	140	10.3			8.9	9.1
	Technology	23	35	12	52.2			0.2	0.2
	Computer Science	382	455	73	19.1			2.5	2.8
	Engineering	1,361	1,688	327	24.0			9.0	10.3
	Mathematics	106	88	-18	-17.0			0.7	0.5
Transfers	Total	2,237	2,172	-65	-2.9%	-257	-2.4	21.2	21.0
	Science	1,053	950	-103	-9.8			10.0	9.2
	Technology	40	29	-11	-27.5			0.4	0.3
	Computer Science	180	185	5	2.8			1.7	1.8
	Engineering	844	889	45	5.3			8.0	8.6
	Mathematics	120	119	-1	-0.8			1.1	1.2
Graduate	Total	4,948	5,600	652	13.2%	1,644	7.9	23.8	25.0
	Science	989	1,092	103	10.4			4.8	4.9
	Technology	10	19	9	90.0			0.0	0.1
	Computer Science	1,044	1,319	275	26.3			5.0	5.9
	Engineering	2,564	2,838	274	10.7			12.3	12.7
	Mathematics	341	332	-9	-2.6			1.6	1.5

Notes:

*Undergraduate includes post-baccalaureate students.

STEM majors are based on the National Science Foundation STEM classification.

Science includes Agricultural Sciences, Chemistry, Environmental Science, Geosciences, Life/Biological Science and Physics/Astronomy.

Technology includes technology/technician related fields such as electronic engineering technology, environmental control technology and computer engineering technology.

Source: Texas Higher Education Coordinating Board data

Table 9

ENROLLMENT: by Discipline
U. T. Health Institutions, Fall 2005 and 2008

	Fall			Fall 2005 to 2008		Percent of Total	
		2005	2008	Change	% Change	2005	2008
Undergraduate	Total	1,757	1,995	238	13.5%		
	Health Professions	506	523	17	3.4	28.8%	26.2%
	Dental Academics	86	83	-3	-3.5	4.9	4.2
	Health Sciences	86	203	117	136.0	4.9	10.2
	Nursing	1,079	1,186	107	9.9	61.4	59.4
Post-Baccalaureate	Total	154	425	271	176.0		
	Health Professions	29	27	-2	-6.9	18.8	6.4
	Biomedical Sciences	98	125	27	27.6	63.6	29.4
	Health Information Science	--	46	--	--	--	10.8
	Medical Academics	--	40	--	--	--	9.4
	Nursing	27	30	3	11.1	17.5	7.1
	Public Health	--	157	--	--	--	36.9
Master's	Total	3,109	2,891	-218	-7.0		
	Health Professions	763	730	-33	-4.3	24.5	25.3
	Biomedical Sciences	772	823	51	6.6	24.8	28.5
	Dental Academics	--	--	--	--	--	--
	Health Information Science	38	30	-8	-21.1	1.2	1.0
	Medical Academics	21	15	--	--	0.7	0.5
	Nursing	818	692	-126	-15.4	26.3	23.9
	Public Health	697	601	-96	-13.8	22.4	20.8
Doctoral	Total	1,840	2,092	252	13.7		
	Health Professions	--	165	--	--		
	Biomedical Sciences	1,488	1,527	39	2.6	80.9	73.0
	Health Information Science	17	23	6	35.3	0.9	1.1
	Nursing	107	132	25	23.4	5.8	6.3
	Public Health	228	245	17	7.5	12.4	11.7
Professional	Total	4,110	4,478	368	9.0		
	Dental Academics	96	147	51	53.1	2.3	3.3
	Dental School	610	713	103	16.9	14.8	15.9
	Medical	3,404	3,618	214	6.3	82.8	80.8

Note:

Includes all health-related programs by discipline.

Source: Texas Higher Education Coordinating Board data