
Tennessee Technological University

NSSE 2016 Major Field Report, Part II

Comparisons to Other Institutions

Engineering

Comparing your students majoring in the fields shown below to those in the same fields at your comparison group institutions

The Major Field Report group 'Engineering' includes the following majors: Aero-, astronautical engineering; Chemical engineering; Civil engineering; Computer engineering and technology; Computer science; Electrical or electronic engineering; Industrial engineering; Information technology; Materials engineering; Mechanical engineering; Other computer science and technology; Other engineering; Software engineering.

Note:

The Major Field Report was formatted for printing. When viewing on screen in Excel, some content may appear truncated or oddly formatted. This is normal. Increasing the zoom level or viewing the report in Print Preview will improve on-screen display.

About Your Major Field Report, Part II

NSSE data serve to identify institutional strengths and weaknesses in reference to selected comparison institutions, yet institution-level comparisons may not capture important variation in student engagement that can be found within key subpopulations such as major. This report displays selected results for students at your institution and at your selected comparison institutions in the major category: Engineering.

NSSE results included in MFR, Part II

- Engagement Indicators
- High-Impact Practices
- Frequencies and Statistical Comparisons
- Respondent Profile

Related-Major Groups

Self-reported majors (first major given if two were reported) were identified from the survey. Your institution had the option to customize how these were grouped, using up to ten related-major groups. Institutions choosing not to customize their related-major groups receive NSSE's ten default groups. The majors used in this report are listed on the cover page of this report.

Sample

This report is based on information from all randomly selected or census-administered students in the indicated group of majors for both your institution and your comparison institutions. Targeted and locally administered oversamples and other non-randomly selected students are not included.

Class

Results are presented separately by institution-reported class level. Keep in mind that majors are student-reported. First-year students may report *intended* majors that have not yet been *declared*. Also, much of the first-year experience may take place outside of the major field. For these reasons, first-year results should be interpreted with caution.

Technical Requirements

Related-major groups with fewer than 20 respondents in a given class are not reported (columns are blank). Comparison groups must also contain at least 20 respondents in the major category, or they remain blank. Although 20 is a minimum requirement, keep in mind that any statistical result requires a sufficient number of respondents per group to produce a reliable estimate. Due to the disaggregation of results by student-reported major, the Major Field Report results are unweighted.

Report Sections

Engagement Indicators (pp. 3-7)	Results on NSSE's ten Engagement Indicators (EIs) organized into four themes. See your <i>Engagement Indicators</i> report for more details.
High-Impact Practices (p. 8)	Results on student participation in six High-Impact Practices (HIPs). See your <i>High-Impact Practices</i> report for more details.
Frequencies and Statistical Comparisons (pp. 9-44)	Response frequencies and statistical comparisons (including tests of significance and effect sizes) for all survey items except the demographics for your institution and your three core comparison groups.
Respondent Profile (pp. 45-51)	Response frequencies for all demographic questions for your institution and your three core comparison groups.

Engagement Indicators: Overview

Engagement Indicators are summary measures based on sets of NSSE questions examining key dimensions of student engagement. The ten indicators are organized within four themes: Academic Challenge, Learning with Peers, Experiences with Faculty, and Campus Environment. The tables below compare average scores^a for your students in this related-major category with students in your comparison groups within the same category.

Use the following key:

- ▲ **Your students' average** was significantly higher ($p < .05$) with an effect size at least .3 in magnitude.
- △ **Your students' average** was significantly higher ($p < .05$) with an effect size less than .3 in magnitude.
- No significant difference.
- ▼ **Your students' average** was significantly lower ($p < .05$) with an effect size less than .3 in magnitude.
- ▽ **Your students' average** was significantly lower ($p < .05$) with an effect size at least .3 in magnitude.

Theme	Engagement Indicator	First-Year Students in Engineering			Seniors in Engineering		
		Your first-year students compared with Carnegie Class	Your first-year students compared with THEC Peer Group	Your first-year students compared with NSSE 2015 & 2016	Your seniors compared with Carnegie Class	Your seniors compared with THEC Peer Group	Your seniors compared with NSSE 2015 & 2016
Academic Challenge	Higher-Order Learning	--	--	--	--	▽	--
	Reflective & Integrative Learning	--	▽	--	--	--	--
	Learning Strategies	--	--	--	--	▽	--
	Quantitative Reasoning	--	--	--	--	--	--
Learning with Peers	Collaborative Learning	△	--	--	▲	--	△
	Discussions with Diverse Others	--	--	--	--	--	--
Experiences with Faculty	Student-Faculty Interaction	--	--	--	--	--	--
	Effective Teaching Practices	▽	▽	▽	--	--	--
Campus Environment	Quality of Interactions	--	--	--	--	--	--
	Supportive Environment	▽	▽	▽	--	--	--

First-year students^a in Engineering

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Academic Challenge												
Higher-Order Learning												
Tennessee Tech (N = 74)	38.0	13.5	1.57	20	25	40	45	60				
Carnegie Class	38.8	13.5	.30	15	30	40	50	60	2,109	-.8		-.062
THEC Peer Group	41.0	14.5	1.10	15	33	40	55	60	244	-3.1		-.217
NSSE 2015 & 2016	38.4	13.1	.10	20	30	40	45	60	15,844	-.4		-.034
Reflective & Integrative Learning												
Tennessee Tech (N = 76)	31.7	10.6	1.22	17	26	31	37	54				
Carnegie Class	33.8	12.2	.27	14	26	34	40	57	83	-2.1		-.174
THEC Peer Group	35.8	12.7	.97	14	26	34	46	60	171	-4.1	**	-.338
NSSE 2015 & 2016	33.2	11.9	.09	14	26	31	40	54	76	-1.5		-.130
Learning Strategies												
Tennessee Tech (N = 73)	39.2	13.8	1.62	20	27	40	53	60				
Carnegie Class	36.8	14.0	.31	13	27	40	47	60	2,115	2.4		.171
THEC Peer Group	40.2	13.4	1.03	20	33	40	53	60	240	-1.1		-.078
NSSE 2015 & 2016	36.5	13.7	.11	13	27	33	47	60	15,914	2.6		.192
Quantitative Reasoning												
Tennessee Tech (N = 76)	29.0	15.8	1.81	0	17	27	40	60				
Carnegie Class	30.8	15.6	.34	7	20	27	40	60	2,137	-1.8		-.116
THEC Peer Group	32.6	15.1	1.15	7	20	33	40	60	247	-3.6		-.236
NSSE 2015 & 2016	30.7	15.2	.12	7	20	27	40	60	16,064	-1.7		-.110
Learning with Peers												
Collaborative Learning												
Tennessee Tech (N = 77)	37.5	12.0	1.37	15	30	40	45	60				
Carnegie Class	34.6	14.7	.33	10	25	35	45	60	85	2.9	*	.202
THEC Peer Group	36.8	15.9	1.22	10	25	35	50	60	191	.7		.048
NSSE 2015 & 2016	35.3	14.2	.11	15	25	35	45	60	77	2.3		.161
Discussions with Diverse Others												
Tennessee Tech (N = 75)	39.5	13.6	1.57	20	30	40	50	60				
Carnegie Class	39.4	16.4	.36	10	30	40	55	60	82	.1		.007
THEC Peer Group	40.1	16.9	1.29	10	30	40	60	60	174	-.6		-.036
NSSE 2015 & 2016	40.1	15.8	.12	15	30	40	55	60	75	-.5		-.035

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Engineering

Tennessee Technological University

First-year students^a in Engineering

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Experiences with Faculty												
Student-Faculty Interaction												
Tennessee Tech (N = 76)	17.2	13.8	1.59	0	5	15	25	45				
Carnegie Class	18.9	14.3	.32	0	10	15	25	45	2,126	-1.7		-.118
THEC Peer Group	20.0	16.4	1.25	0	10	15	30	60	247	-2.7		-.175
NSSE 2015 & 2016	18.7	13.9	.11	0	10	15	25	45	15,925	-1.5		-.107
Effective Teaching Practices												
Tennessee Tech (N = 76)	35.6	13.1	1.51	12	28	36	42	56				
Carnegie Class	39.0	13.2	.29	16	32	40	48	60	2,153	-3.4	*	-.257
THEC Peer Group	41.2	13.4	1.02	20	32	40	52	60	247	-5.6	**	-.424
NSSE 2015 & 2016	38.6	12.8	.10	16	32	40	48	60	16,169	-3.0	*	-.236
Campus Environment												
Quality of Interactions												
Tennessee Tech (N = 73)	41.8	11.5	1.35	22	38	44	50	60				
Carnegie Class	41.7	12.3	.28	18	34	43	50	60	2,029	.1		.008
THEC Peer Group	41.9	13.4	1.02	16	34	44	52	60	243	-.1		-.011
NSSE 2015 & 2016	42.5	11.7	.09	20	36	44	50	60	15,400	-.7		-.057
Supportive Environment												
Tennessee Tech (N = 76)	32.1	13.0	1.49	13	21	31	40	55				
Carnegie Class	35.9	13.7	.30	13	25	37	45	60	2,135	-3.9	*	-.282
THEC Peer Group	36.9	13.9	1.06	13	30	38	48	60	247	-4.8	*	-.351
NSSE 2015 & 2016	36.3	13.2	.10	15	28	38	45	60	16,038	-4.2	**	-.321

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Engineering

Tennessee Technological University

Seniors^a in Engineering

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Academic Challenge												
Higher-Order Learning												
Tennessee Tech (N = 91)	36.3	14.6	1.53	10	25	40	45	60				
Carnegie Class	39.0	13.8	.29	15	30	40	50	60	2,382	-2.7		-.197
THEC Peer Group	40.7	14.3	.95	15	30	40	55	60	312	-4.4	*	-.303
NSSE 2015 & 2016	38.3	13.7	.10	15	30	40	50	60	18,948	-2.0		-.143
Reflective & Integrative Learning												
Tennessee Tech (N = 94)	30.8	11.9	1.22	11	23	29	40	51				
Carnegie Class	33.1	12.3	.26	14	26	31	40	57	2,424	-2.3		-.187
THEC Peer Group	33.5	12.2	.80	14	26	31	40	57	320	-2.7		-.227
NSSE 2015 & 2016	32.7	12.2	.09	14	23	31	40	54	19,306	-1.9		-.156
Learning Strategies												
Tennessee Tech (N = 94)	33.0	15.2	1.57	7	20	33	40	60				
Carnegie Class	35.9	15.2	.32	13	27	33	47	60	2,399	-2.9		-.188
THEC Peer Group	38.9	15.8	1.04	7	27	40	53	60	321	-5.8	**	-.372
NSSE 2015 & 2016	35.2	14.9	.11	13	27	33	47	60	19,055	-2.2		-.146
Quantitative Reasoning												
Tennessee Tech (N = 94)	36.5	16.8	1.74	0	27	40	53	60				
Carnegie Class	33.2	16.3	.34	7	20	33	40	60	2,425	3.3		.202
THEC Peer Group	34.7	15.4	1.02	7	27	33	47	60	322	1.8		.114
NSSE 2015 & 2016	34.2	16.2	.12	7	20	33	47	60	19,262	2.3		.144
Learning with Peers												
Collaborative Learning												
Tennessee Tech (N = 95)	41.3	12.8	1.31	20	35	40	50	60				
Carnegie Class	36.4	15.0	.31	10	25	35	50	60	105	4.9	***	.329
THEC Peer Group	38.9	13.9	.93	15	30	40	50	60	319	2.4		.174
NSSE 2015 & 2016	37.4	14.6	.11	15	25	40	50	60	95	3.9	**	.265
Discussions with Diverse Others												
Tennessee Tech (N = 95)	39.8	15.6	1.60	15	25	40	55	60				
Carnegie Class	40.5	17.0	.35	10	30	40	60	60	2,411	-.7		-.044
THEC Peer Group	42.6	15.8	1.04	15	35	45	60	60	323	-2.8		-.177
NSSE 2015 & 2016	40.0	16.5	.12	10	30	40	55	60	19,179	-.2		-.010

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Engagement Indicators: Engineering

Tennessee Technological University

Seniors^a in Engineering

	Mean statistics			Percentile ^d scores					Comparison results			
	Mean	SD ^b	SEM ^c	5th	25th	50th	75th	95th	Deg. of freedom ^e	Mean diff.	Sig. ^f	Effect size ^g
Experiences with Faculty												
Student-Faculty Interaction												
Tennessee Tech (N = 91)	24.5	13.9	1.46	0	15	25	35	50				
Carnegie Class	21.9	15.5	.32	0	10	20	30	50	2,395	2.5		.163
THEC Peer Group	24.4	15.3	1.01	5	15	20	35	55	319	.1		.004
NSSE 2015 & 2016	21.9	15.4	.11	0	10	20	30	50	19,104	2.5		.164
Effective Teaching Practices												
Tennessee Tech (N = 94)	36.7	14.0	1.44	4	28	40	48	56				
Carnegie Class	37.7	13.9	.29	16	28	40	48	60	2,435	-1.1		-.075
THEC Peer Group	38.6	14.1	.93	12	32	40	48	60	323	-1.9		-.133
NSSE 2015 & 2016	37.1	13.5	.10	16	28	36	48	60	19,378	-.4		-.032
Campus Environment												
Quality of Interactions												
Tennessee Tech (N = 93)	41.4	12.9	1.34	12	35	44	52	60				
Carnegie Class	42.0	11.5	.24	20	35	43	50	60	2,312	-.6		-.052
THEC Peer Group	41.9	11.3	.75	20	36	44	50	60	315	-.5		-.041
NSSE 2015 & 2016	41.7	11.5	.08	20	34	42	50	60	18,546	-.3		-.026
Supportive Environment												
Tennessee Tech (N = 93)	28.9	13.6	1.41	5	20	30	38	53				
Carnegie Class	30.1	14.6	.30	8	20	30	40	58	2,411	-1.2		-.081
THEC Peer Group	29.5	14.6	.97	5	20	30	40	58	318	-.6		-.041
NSSE 2015 & 2016	30.9	14.0	.10	8	20	30	40	58	19,238	-2.0		-.144

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

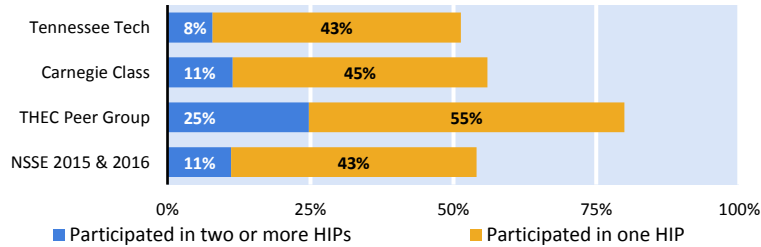
High-Impact Practices: Engineering

Tennessee Technological University

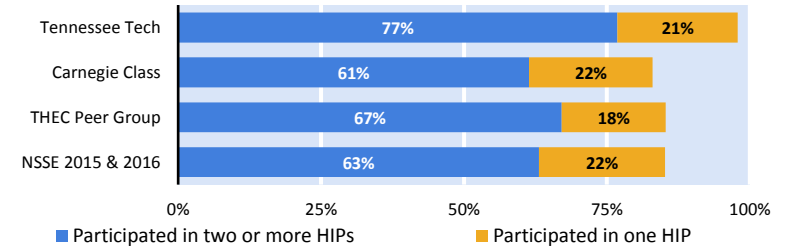
Overall HIP Participation^a

The figures below display the percentage^h of students who participated in High-Impact Practices. Both figures include participation in a learning community, service-learning, and research with faculty. The Senior figure also includes participation in an internship or field experience, study abroad, and culminating senior experience. The first segment in each bar shows the percentage of students who participated in at least two HIPs, and the full bar (both colors) represents the percentage who participated in at least one.

First-Year Students in Engineering



Seniors in Engineering



Statistical Comparisons^a

The table below compares the percentage^h of your students who participated in a High-Impact Practice, including the percentage who participated overall (at least one, two or more), with those at institutions in your comparison groups.

	Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
	%		% ⁱ	Effect size ^j	% ⁱ	Effect size ^j	% ⁱ	Effect size ^j
<i>First-Year Students in Engineering</i>								
11c. Learning community	8		15	-.23	25 **	-.48	16	-.24
12. Service-learning	47		50	-.05	76 ***	-.59	46	.04
11e. Research with faculty	5		5	.03	8	-.11	6	-.01
Participated in at least one	51		56	-.09	80 ***	-.61	54	-.05
Participated in two or more	8		11	-.12	25 **	-.47	11	-.11
<i>Seniors in Engineering</i>								
11c. Learning community	23		24	-.01	25	-.05	24	-.02
12. Service-learning	53		48	.09	63	-.20	44	.17
11e. Research with faculty	26		23	.07	23	.09	27	-.02
11a. Internship or field exp.	62		56	.13	55	.14	57	.11
11d. Study abroad	12		7	.16	7	.18	10	.05
11f. Culminating senior exp.	65		49 **	.33	49 **	.33	53 *	.25
Participated in at least one	98		83 ***	.56	85 ***	.50	85 ***	.50
Participated in two or more	77		61 **	.34	67	.22	63 **	.30

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k													
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016							
Item wording or description	Variable name ^l	Values ^m	Response options	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ							
				%	%	%	%	%	%																
1. During the current school year, about how often have you done the following?																									
a. Asked questions or contributed to course discussions in other ways	askquest	1 2 3 4	Never Sometimes Often Very often	3 29 30 15	4 38 39 19	79 764 737 502	4 37 35 24	4 54 64 51	2 31 37 29	615 6,233 5,785 3,494	4 39 36 22	2.7	2.8	-.07	2.9	-.24	2.8	-.02							
Total				77	100	2,082	100	173	100	16,127	100														
b. Prepared two or more drafts of a paper or assignment before turning it in	drafts	1 2 3 4	Never Sometimes Often Very often	19 22 22 13	25 29 29 17	416 778 579 302	20 37 28 15	42 55 45 32	24 32 26 18	3,156 6,060 4,441 2,408	20 38 28 15								2.4	2.4	.01	2.4	.00	2.4	.00
Total				76	100	2,075	100	174	100	16,065	100														
c. Come to class without completing readings or assignments	unpreparedr (Reverse-coded version of unprepared created by NSSE.)	1 2 3 4	Very often Often Sometimes Never	4 10 40 22	5 13 53 29	124 250 1,128 573	6 12 54 28	14 25 88 47	8 14 51 27	810 2,171 9,107 3,973	5 14 57 25														
Total				76	100	2,075	100	174	100	16,061	100														
d. Attended an art exhibit, play or other arts performance (dance, music, etc.)	attendart	1 2 3 4	Never Sometimes Often Very often	22 30 21 4	29 39 27 5	900 777 282 119	43 37 14 6	73 59 30 12	42 34 17 7	6,727 6,231 2,199 906	42 39 14 6	2.1	1.8 **	.31	1.9	.22	1.8 **	.30							
Total				77	100	2,078	100	174	100	16,063	100														
e. Asked another student to help you understand course material	CLaskhelp	1 2 3 4	Never Sometimes Often Very often	2 16 37 22	3 21 48 29	189 721 713 455	9 35 34 22	12 60 49 52	7 35 28 30	1,217 5,385 5,856 3,633	8 33 36 23								3.0	2.7 ***	.37	2.8	.23	2.7 **	.32
Total				77	100	2,078	100	173	100	16,091	100														
f. Explained course material to one or more students	CLexplain	1 2 3 4	Never Sometimes Often Very often	5 14 38 20	6 18 49 26	90 657 841 490	4 32 40 24	6 55 65 47	3 32 38 27	546 4,928 6,704 3,901	3 31 42 24														
Total				77	100	2,078	100	173	100	16,079	100														

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

Item wording or description				Frequency Distributions								Statistical Comparisons ^k									
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016			
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ				
g. Prepared for exams by discussing or working through course material with other students				CLstudy	1	Never	10	13	338	16	23	13	2,128	13	2.8	2.6	.18	2.8	.00	2.6	.13
				2	Sometimes	17	22	660	32	45	26	5,250	33								
				3	Often	31	40	598	29	54	31	5,015	31								
				4	Very often	19	25	474	23	51	29	3,702	23								
				Total		77	100	2,070	100	173	100	16,095	100								
h. Worked with other students on course projects or assignments				CLproject	1	Never	6	8	140	7	13	8	876	5	2.8	2.8	-.05	2.9	-.19	2.8	-.04
				2	Sometimes	19	25	649	31	44	25	5,214	32								
				3	Often	39	51	759	37	57	33	6,186	38								
				4	Very often	13	17	529	25	59	34	3,809	24								
				Total		77	100	2,077	100	173	100	16,085	100								
i. Given a course presentation				present	1	Never	16	21	397	19	38	22	3,537	22	2.2	2.2	-.01	2.2	.02	2.2	.08
				2	Sometimes	33	43	1,003	48	82	47	7,787	48								
				3	Often	23	30	484	23	33	19	3,462	22								
				4	Very often	5	6	194	9	20	12	1,296	8								
				Total		77	100	2,078	100	173	100	16,082	100								
2. During the current school year, about how often have you done the following?																					
a. Combined ideas from different courses when completing assignments				RIntegrate	1	Never	9	12	150	7	9	5	1,027	6	2.5	2.6	-.17	2.7 *	-.29	2.6	-.16
				2	Sometimes	30	39	805	39	66	39	6,515	41								
				3	Often	29	38	766	37	56	33	6,009	37								
				4	Very often	9	12	352	17	40	23	2,521	16								
				Total		77	100	2,073	100	171	100	16,072	100								
b. Connected your learning to societal problems or issues				RSocietal	1	Never	11	14	263	13	23	13	2,069	13	2.3	2.4	-.16	2.5	-.17	2.4	-.12
				2	Sometimes	39	51	909	44	73	43	7,264	45								
				3	Often	20	26	618	30	50	29	4,844	30								
				4	Very often	7	9	273	13	25	15	1,823	11								
				Total		77	100	2,063	100	171	100	16,000	100								
c. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments				RIdiverse	1	Never	11	14	311	15	24	14	2,652	17	2.3	2.4	-.15	2.4	-.15	2.3	-.08
				2	Sometimes	38	50	864	42	80	47	7,090	44								
				3	Often	23	30	661	32	45	26	4,535	28								
				4	Very often	4	5	232	11	23	13	1,757	11								
				Total		76	100	2,068	100	172	100	16,034	100								

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Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
c. Discussed course topics, ideas, or concepts with a faculty member outside of class	SFdiscuss	1	Never	28	37	684	33	62	36	5,239	33	1.8	2.0	-.16	2.0	-.16	2.0	-.15	
		2	Sometimes	34	45	882	43	67	39	7,024	44								
		3	Often	12	16	372	18	28	16	2,696	17								
		4	Very often	2	3	134	6	16	9	1,035	6								
		Total		76	100	2,072	100	173	100	15,994	100								
d. Discussed your academic performance with a faculty member	SFperform	1	Never	26	34	591	29	57	33	4,521	28	1.9	2.0	-.18	2.1	-.22	2.0	-.15	
		2	Sometimes	35	46	940	45	62	36	7,637	48								
		3	Often	12	16	390	19	33	19	2,797	18								
		4	Very often	3	4	151	7	21	12	1,025	6								
		Total		76	100	2,072	100	173	100	15,980	100								
4. During the current school year, how much has your coursework emphasized the following?																			
a. Memorizing course material	memorize	1	Very little	0	0	90	4	6	3	760	5	3.0	2.8 *	.23	2.9	.22	2.8 **	.26	
		2	Some	17	23	611	29	53	31	4,807	30								
		3	Quite a bit	39	52	911	44	73	42	7,182	45								
		4	Very much	19	25	465	22	40	23	3,318	21								
		Total		75	100	2,077	100	172	100	16,067	100								
b. Applying facts, theories, or methods to practical problems or new situations	HOapply	1	Very little	0	0	64	3	7	4	420	3	3.2	3.1	.17	3.2	.01	3.1	.13	
		2	Some	14	19	391	19	28	16	2,837	18								
		3	Quite a bit	31	41	938	45	61	35	7,340	46								
		4	Very much	30	40	683	33	77	45	5,444	34								
		Total		75	100	2,076	100	173	100	16,041	100								
c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts	HOanalyze	1	Very little	1	1	88	4	9	5	564	4	3.0	3.0	.02	3.2	-.16	3.0	.03	
		2	Some	21	28	467	23	27	16	3,793	24								
		3	Quite a bit	29	39	867	42	66	38	6,918	43								
		4	Very much	24	32	643	31	71	41	4,716	29								
		Total		75	100	2,065	100	173	100	15,991	100								
d. Evaluating a point of view, decision, or information source	HOevaluate	1	Very little	8	11	113	5	9	5	1,094	7	2.7	2.8	-.17	2.9	-.25	2.8	-.07	
		2	Some	23	31	595	29	50	29	5,120	32								
		3	Quite a bit	27	36	879	43	60	35	6,477	40								
		4	Very much	16	22	478	23	53	31	3,321	21								
		Total		74	100	2,065	100	172	100	16,012	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
e. Forming a new idea or understanding from various pieces of information	HOform	1	Very little	7	9	106	5	7	4	874	5	2.7	2.9	-.16	2.9	-.26	2.8	-.13	
		2	Some	22	29	596	29	48	28	4,614	29								
		3	Quite a bit	31	41	852	41	65	38	6,834	43								
		4	Very much	15	20	513	25	53	31	3,678	23								
		Total		75	100	2,067	100	173	100	16,000	100								
5. During the current school year, to what extent have your instructors done the following?																			
a. Clearly explained course goals and requirements	ETgoals	1	Very little	5	7	46	2	4	2	357	2	2.9	3.1	-.19	3.2 **	-.36	3.1	-.16	
		2	Some	14	18	408	20	26	15	3,157	20								
		3	Quite a bit	37	49	929	45	68	39	7,629	47								
		4	Very much	20	26	696	33	75	43	4,947	31								
		Total		76	100	2,079	100	173	100	16,090	100								
b. Taught course sessions in an organized way	ETorganize	1	Very little	2	3	68	3	6	3	437	3	3.0	3.1	-.03	3.2	-.18	3.1	-.02	
		2	Some	14	18	396	19	26	15	3,085	19								
		3	Quite a bit	39	51	943	45	71	41	7,696	48								
		4	Very much	21	28	668	32	70	40	4,845	30								
		Total		76	100	2,075	100	173	100	16,063	100								
c. Used examples or illustrations to explain difficult points	ETexample	1	Very little	4	5	69	3	2	1	484	3	3.0	3.1	-.13	3.3 **	-.37	3.1	-.13	
		2	Some	20	27	418	20	33	19	3,191	20								
		3	Quite a bit	25	33	857	41	51	29	6,969	43								
		4	Very much	26	35	732	35	87	50	5,399	34								
		Total		75	100	2,076	100	173	100	16,043	100								
d. Provided feedback on a draft or work in progress	ETdraftfb	1	Very little	15	20	206	10	20	12	1,522	9	2.4	2.8 ***	-.41	2.8 **	-.43	2.7 ***	-.39	
		2	Some	26	34	625	30	43	25	5,101	32								
		3	Quite a bit	27	36	719	35	66	38	5,663	35								
		4	Very much	8	11	523	25	44	25	3,757	23								
		Total		76	100	2,073	100	173	100	16,043	100								
e. Provided prompt and detailed feedback on tests or completed assignments	ETfeedback	1	Very little	9	12	181	9	10	6	1,383	9	2.6	2.7	-.19	2.8	-.27	2.7	-.16	
		2	Some	27	36	625	30	57	33	5,064	32								
		3	Quite a bit	27	36	797	38	59	34	6,208	39								
		4	Very much	13	17	468	23	46	27	3,362	21								
		Total		76	100	2,071	100	172	100	16,017	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
c. 11 pages or more	wrlongnum	0	None	65	88	1,481	76	144	87	11,602	76	1.0	.9	.02	.8	.05	.8	.09	
	(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	3	4	321	16	11	7	2,592	17								
	4	3-5	2	3	65	3	3	2	480	3									
	8	6-10	0	0	37	2	3	2	264	2									
	13	11-15	3	4	31	2	3	2	143	1									
	18	16-20	0	0	10	1	0	0	46	0									
	23	More than 20	1	1	10	1	2	1	62	0									
	Total			74	100	1,955	100	166	100	15,189	100								
Estimated number of assigned pages of student writing.	wpages		(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)									39.1	48.9	-.15	31.8	.12	45.1	-.10	
8. During the current school year, about how often have you had discussions with people from the following groups?																			
a. People of a race or ethnicity other than your own	DDrace	1	Never	2	3	115	6	11	6	848	5	3.0	3.0	-.05	3.1	-.09	3.0	-.05	
		2	Sometimes	23	31	530	26	40	23	4,063	25								
		3	Often	24	32	612	29	49	28	4,953	31								
		4	Very often	26	35	821	40	74	43	6,239	39								
			Total	75	100	2,078	100	174	100	16,103	100								
b. People from an economic background other than your own	DDeconomic	1	Never	3	4	138	7	15	9	810	5	3.0	3.0	-.02	3.0	-.03	3.0	-.06	
		2	Sometimes	17	23	481	23	40	23	3,742	23								
		3	Often	34	45	720	35	48	28	5,678	35								
		4	Very often	21	28	738	36	71	41	5,838	36								
			Total	75	100	2,077	100	174	100	16,068	100								
c. People with religious beliefs other than your own	DDreligion	1	Never	3	4	170	8	11	6	1,136	7	2.9	2.9	.00	3.0	-.04	3.0	-.04	
		2	Sometimes	21	28	547	26	48	28	3,971	25								
		3	Often	28	37	587	28	47	27	4,959	31								
		4	Very often	23	31	772	37	68	39	6,014	37								
			Total	75	100	2,076	100	174	100	16,080	100								
d. People with political views other than your own	DDpolitical	1	Never	3	4	184	9	13	8	1,045	7	3.0	2.9	.09	3.0	.04	3.0	.04	
		2	Sometimes	17	23	519	25	42	24	4,107	26								
		3	Often	32	43	658	32	55	32	5,270	33								
		4	Very often	23	31	710	34	62	36	5,633	35								
			Total	75	100	2,071	100	172	100	16,055	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count		Count		Count		Count		Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
				%	%	%	%	%	%										
9. During the current school year, about how often have you done the following?																			
a. Identified key information from reading assignments	LSreading	1	Never	6	8	65	3	6	3	453	3	2.8	3.0	-.19	3.0	-.22	3.0	-.19	
		2	Sometimes	19	26	520	25	41	24	3,980	25								
		3	Often	32	43	908	44	74	43	7,401	46								
		4	Very often	17	23	581	28	53	30	4,226	26								
		Total		74	100	2,074	100	174	100	16,060	100								
b. Reviewed your notes after class	LSnotes	1	Never	2	3	117	6	7	4	902	6	3.1	2.8 **	.32	3.1	-.01	2.8 **	.34	
		2	Sometimes	17	23	668	32	31	18	5,328	33								
		3	Often	25	34	726	35	66	38	5,600	35								
		4	Very often	30	41	559	27	68	40	4,192	26								
		Total		74	100	2,070	100	172	100	16,022	100								
c. Summarized what you learned in class or from course materials	LSsummary	1	Never	3	4	153	7	8	5	1,220	8	2.9	2.7 *	.25	2.9	.04	2.7 *	.26	
		2	Sometimes	24	32	721	35	52	31	5,576	35								
		3	Often	22	30	741	36	60	35	5,808	36								
		4	Very often	25	34	439	21	50	29	3,330	21								
		Total		74	100	2,054	100	170	100	15,934	100								
10. During the current school year, to what extent have your courses challenged you to do your best work?																			
challenge		1	Not at all	0	0	17	1	2	1	89	1	5.8	5.4 ***	.33	5.6	.23	5.5 **	.29	
		2		1	1	27	1	4	2	213	1								
		3		0	0	91	4	6	3	594	4								
		4		4	5	224	11	17	10	1,597	10								
		5		20	26	670	32	48	28	5,126	32								
		6		31	41	604	29	48	28	5,046	31								
		7	Very much	20	26	436	21	49	28	3,416	21								
		Total		76	100	2,069	100	174	100	16,081	100								
11. Which of the following have you done or do you plan to do before you graduate?^o																			
a. Participate in an internship, co-op, field experience, student teaching, or clinical placement	intern	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	6	8	200	10	22	13	1,431	9	5%	8%	-.10	7%	-.07	9%	-.13	
			Do not plan to do	3	4	86	4	7	4	529	3								
			Plan to do	63	83	1,639	79	132	76	12,762	79								
			Done or in progress	4	5	158	8	12	7	1,385	9								
			Total	76	100	2,083	100	173	100	16,107	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering Tennessee Technological University

First-Year Students^a in Engineering

			Frequency Distributions								Statistical Comparisons ^k							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
b. Hold a formal leadership role in a student organization or group	leader <i>(Means indicate the percentage who responded "Done or in progress.")</i>	Have not decided	20	27	620	30	43	25	4,574	28	9%	10%	-.01	11%	-.07	11%	-.06	
		Do not plan to do	21	28	510	25	44	25	3,801	24								
		Plan to do	27	36	751	36	67	39	5,913	37								
		Done or in progress	7	9	200	10	20	11	1,786	11								
		Total	75	100	2,081	100	174	100	16,074	100								
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	learncom <i>(Means indicate the percentage who responded "Done or in progress.")</i>	Have not decided	31	42	702	34	52	30	5,050	31	8%	15%	-.23	25% **	-0.48	16%	-.24	
		Do not plan to do	26	35	549	27	40	23	4,655	29								
		Plan to do	11	15	501	24	38	22	3,785	24								
		Done or in progress	6	8	319	15	44	25	2,565	16								
		Total	74	100	2,071	100	174	100	16,055	100								
d. Participate in a study abroad program	abroad <i>(Means indicate the percentage who responded "Done or in progress.")</i>	Have not decided	28	38	641	31	51	29	4,807	30	1%	4%	-.16	3%	-.14	3%	-.14	
		Do not plan to do	32	43	728	35	60	34	5,542	35								
		Plan to do	13	18	624	30	57	33	5,157	32								
		Done or in progress	1	1	77	4	6	3	545	3								
		Total	74	100	2,070	100	174	100	16,051	100								
e. Work with a faculty member on a research project	research <i>(Means indicate the percentage who responded "Done or in progress.")</i>	Have not decided	34	46	843	41	65	38	6,277	39	5%	5%	.03	8%	-.11	6%	-.01	
		Do not plan to do	10	14	341	16	26	15	2,460	15								
		Plan to do	26	35	791	38	68	39	6,365	40								
		Done or in progress	4	5	99	5	14	8	916	6								
		Total	74	100	2,074	100	173	100	16,018	100								
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone <i>(Means indicate the percentage who responded "Done or in progress.")</i>	Have not decided	16	22	595	29	46	27	4,184	26	0%	3%	-.33	5%	-.43	2%	-.30	
		Do not plan to do	7	9	157	8	11	6	1,165	7								
		Plan to do	51	69	1,264	61	108	62	10,316	64								
		Done or in progress	0	0	55	3	8	5	361	2								
		Total	74	100	2,071	100	173	100	16,026	100								

12. About how many of your courses at this institution have included a community-based project (service-learning)?

servcourse	Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ
1 None	40	53	1,033	50	42	24	8,698	54	1.6	-0.03
2 Some	29	38	842	41	110	64	6,178	39		
3 Most	6	8	150	7	14	8	899	6		
4 All	1	1	32	2	6	3	187	1		
Total	76	100	2,057	100	172	100	15,962	100		

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

Item wording or description				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your first-year students compared with					
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
13. Indicate the quality of your interactions with the following people at your institution.																			
a. Students																			
		QIstudent	1	Poor	2	3	31	1	1	1	204	1	5.2	5.5	-.19	5.7 *	-.33	5.6 *	-.26
			2		2	3	38	2	2	1	285	2							
			3		4	5	107	5	8	5	659	4							
			4		8	11	252	12	21	12	1,600	10							
			5		27	36	501	24	32	18	3,970	25							
			6		17	23	582	28	54	31	4,959	31							
			7	Excellent	15	20	559	27	54	31	4,356	27							
			—	Not applicable	0	0	14	1	2	1	95	1							
			Total		75	100	2,084	100	174	100	16,128	100							
b. Academic advisors																			
		QIadvisor	1	Poor	4	5	68	3	4	2	537	3	5.2	5.2	.01	5.1	.04	5.2	.01
			2		1	1	104	5	9	5	756	5							
			3		3	4	163	8	18	10	1,200	7							
			4		14	19	286	14	29	17	2,179	14							
			5		15	20	390	19	22	13	3,267	20							
			6		22	29	480	23	45	26	3,597	22							
			7	Excellent	16	21	545	26	43	25	4,173	26							
			—	Not applicable	0	0	42	2	4	2	385	2							
			Total		75	100	2,078	100	174	100	16,094	100							
c. Faculty																			
		QIfaculty	1	Poor	2	3	37	2	5	3	281	2	5.3	5.3	.06	5.3	.01	5.3	.03
			2		0	0	73	4	8	5	449	3							
			3		4	5	119	6	9	5	896	6							
			4		8	11	302	15	21	12	2,184	14							
			5		23	31	514	25	36	21	4,192	26							
			6		27	36	572	28	49	28	4,594	29							
			7	Excellent	11	15	426	21	45	26	3,270	20							
			—	Not applicable	0	0	28	1	1	1	177	1							
			Total		75	100	2,071	100	174	100	16,043	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
d. Student services staff (career services, student activities, housing, etc.)	QIstaff	1	Poor	4	5	98	5	12	7	568	4	5.1	5.0	.04	4.9	.07	5.1	-.03	
		2		3	4	81	4	5	3	594	4								
		3		1	1	133	6	15	9	1,034	6								
		4		16	21	273	13	22	13	2,049	13								
		5		17	23	419	20	35	20	3,382	21								
		6		12	16	432	21	38	22	3,688	23								
		7	Excellent	18	24	368	18	34	20	3,078	19								
		—	Not applicable	4	5	271	13	11	6	1,683	10								
Total				75	100	2,075	100	172	100	16,076	100								
e. Other administrative staff and offices (registrar, financial aid, etc.)	QIadmin	1	Poor	5	7	106	5	15	9	623	4	5.1	4.9	.09	4.9	.10	5.0	.01	
		2		0	0	104	5	6	3	678	4								
		3		4	5	165	8	21	12	1,093	7								
		4		12	16	285	14	21	12	2,269	14								
		5		21	28	448	22	24	14	3,515	22								
		6		18	24	406	20	48	28	3,553	22								
		7	Excellent	13	17	377	18	36	21	2,994	19								
		—	Not applicable	2	3	191	9	3	2	1,370	9								
Total				75	100	2,082	100	174	100	16,095	100								
14. How much does your institution emphasize the following?																			
a. Spending significant amounts of time studying and on academic work	empstudy	1	Very little	3	4	35	2	1	1	244	2	3.1	3.2	-.13	3.3	-.25	3.2	-.19	
		2	Some	16	21	335	16	24	14	2,307	14								
		3	Quite a bit	29	38	922	45	76	44	7,106	44								
		4	Very much	28	37	779	38	72	42	6,367	40								
		Total				76	100	2,071	100	173	100								16,024
b. Providing support to help students succeed academically	SEacademic	1	Very little	2	3	74	4	4	2	512	3	3.0	3.1	-.17	3.2 *	-.27	3.1	-.21	
		2	Some	18	24	391	19	32	18	2,791	17								
		3	Quite a bit	37	49	853	41	66	38	6,818	43								
		4	Very much	19	25	741	36	71	41	5,843	37								
		Total				76	100	2,059	100	173	100								15,964
c. Using learning support services (tutoring services, writing center, etc.)	SElearnsup	1	Very little	5	7	93	5	9	5	665	4	3.0	3.2	-.20	3.2	-.21	3.2	-.22	
		2	Some	17	23	329	16	24	14	2,590	16								
		3	Quite a bit	27	36	793	38	69	40	6,076	38								
		4	Very much	26	35	845	41	71	41	6,610	41								
		Total				75	100	2,060	100	173	100								15,941

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering Tennessee Technological University

First-Year Students^a in Engineering

Item wording or description				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your first-year students compared with				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	14	18	248	12	20	12	1,944	12	2.4	2.7 *	-0.25	2.7 *	-0.31	2.7 *	-0.26
		2	Some	24	32	659	32	47	27	4,922	31							
		3	Quite a bit	29	38	662	32	66	38	5,393	34							
		4	Very much	9	12	491	24	40	23	3,719	23							
		Total		76	100	2,060	100	173	100	15,978	100							
e. Providing opportunities to be involved socially	SEsocial	1	Very little	7	9	140	7	9	5	863	5	2.7	2.9 *	-0.25	3.0 *	-0.31	3.0 *	-0.29
		2	Some	23	30	480	23	43	25	3,770	24							
		3	Quite a bit	31	41	816	40	61	35	6,494	41							
		4	Very much	15	20	622	30	59	34	4,846	30							
		Total		76	100	2,058	100	172	100	15,973	100							
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	5	7	140	7	11	6	1,010	6	2.8	2.9	-0.11	2.9	-0.12	2.9	-0.16
		2	Some	22	29	516	25	44	25	3,683	23							
		3	Quite a bit	32	42	808	39	67	39	6,402	40							
		4	Very much	17	22	591	29	51	29	4,849	30							
		Total		76	100	2,055	100	173	100	15,944	100							
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	23	30	449	22	36	21	3,425	21	2.1	2.3 *	-0.26	2.4 *	-0.34	2.3 *	-0.26
		2	Some	27	36	756	37	58	34	5,996	38							
		3	Quite a bit	23	30	569	28	50	29	4,435	28							
		4	Very much	3	4	280	14	28	16	2,110	13							
		Total		76	100	2,054	100	172	100	15,966	100							
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	5	7	216	11	19	11	1,332	8	2.6	2.8	-0.20	2.9 *	-0.28	2.8 *	-0.25
		2	Some	30	39	528	26	35	20	4,209	26							
		3	Quite a bit	31	41	768	37	70	40	6,233	39							
		4	Very much	10	13	544	26	49	28	4,162	26							
		Total		76	100	2,056	100	173	100	15,936	100							
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	19	25	353	17	31	18	2,484	16	2.3	2.5	-0.22	2.5	-0.22	2.5 *	-0.24
		2	Some	27	36	732	36	57	34	5,788	36							
		3	Quite a bit	21	28	602	29	51	30	5,021	32							
		4	Very much	9	12	359	18	31	18	2,628	17							
		Total		76	100	2,046	100	170	100	15,921	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
15. About how many hours do you spend in a typical 7-day week doing the following?																			
a. Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)	tmprephrs	0	0 hrs	0	0	12	1	2	1	75	0	15.9	15.3	.07	15.6	.03	16.0	-.02	
	(Recorded version of tmprep created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	7	9	244	12	20	12	1,671	10								
		8	6-10 hrs	13	17	434	21	37	21	3,133	20								
		13	11-15 hrs	20	27	446	21	36	21	3,387	21								
		18	16-20 hrs	19	25	406	20	28	16	3,131	19								
		23	21-25 hrs	6	8	251	12	22	13	2,115	13								
		28	26-30 hrs	1	1	147	7	13	8	1,208	8								
		33	More than 30 hrs	9	12	136	7	15	9	1,346	8								
			Total	75	100	2,076	100	173	100	16,066	100								
b. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	tmcocurrhrs	0	0 hrs	17	22	745	36	52	30	5,013	31	7.1	5.1 *	.31	6.2	.11	5.5	.24	
	(Recorded version of tmcocurr created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	30	39	674	33	62	36	5,400	34								
		8	6-10 hrs	11	14	302	15	21	12	2,713	17								
		13	11-15 hrs	7	9	167	8	17	10	1,381	9								
		18	16-20 hrs	4	5	101	5	11	6	806	5								
		23	21-25 hrs	2	3	25	1	1	1	335	2								
		28	26-30 hrs	2	3	20	1	4	2	125	1								
		33	More than 30 hrs	3	4	26	1	5	3	205	1								
			Total	76	100	2,060	100	173	100	15,978	100								
c. Working for pay on campus	tmworkonhrs	0	0 hrs	51	68	1,657	80	143	83	12,701	79	3.5	2.4	.19	2.7	.12	2.3	.21	
	(Recorded version of tmworkon created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	1	1	80	4	4	2	670	4								
		8	6-10 hrs	15	20	125	6	7	4	1,098	7								
		13	11-15 hrs	3	4	84	4	5	3	766	5								
		18	16-20 hrs	3	4	86	4	7	4	567	4								
		23	21-25 hrs	2	3	21	1	2	1	144	1								
		28	26-30 hrs	0	0	4	0	1	1	35	0								
		33	More than 30 hrs	0	0	16	1	4	2	62	0								
			Total	75	100	2,073	100	173	100	16,043	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
												Your first-year students compared with							
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	60	80	1,534	74	125	72	12,182	76	2.5	4.4 *	-0.20	4.9 *	-0.27	3.8	-0.15	
	(Recoded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	5	7	86	4	8	5	654	4								
	8	6-10 hrs	2	3	81	4	6	3	679	4									
	13	11-15 hrs	3	4	94	5	7	4	617	4									
	18	16-20 hrs	2	3	78	4	10	6	674	4									
	23	21-25 hrs	1	1	68	3	4	2	437	3									
	28	26-30 hrs	1	1	27	1	3	2	225	1									
	33	More than 30 hrs	1	1	96	5	10	6	492	3									
	Total				75	100	2,064	100	173	100	15,960								100
Estimated number of hours working for pay	tmworkhrs											5.9	6.7	-0.08	7.6	-0.14	6.0	-0.01	
(Continuous variable created by NSSE)																			
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	43	57	1,286	62	85	49	10,077	63	2.7	2.3	.09	3.0	-0.06	2.1	.15	
	(Recoded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	21	28	540	26	67	39	4,316	27								
	8	6-10 hrs	7	9	111	5	9	5	717	5									
	13	11-15 hrs	2	3	65	3	4	2	364	2									
	18	16-20 hrs	2	3	26	1	3	2	237	1									
	23	21-25 hrs	1	1	14	1	1	1	95	1									
	28	26-30 hrs	0	0	8	0	2	1	35	0									
	33	More than 30 hrs	0	0	9	0	2	1	53	0									
	Total				76	100	2,059	100	173	100	15,894								100
f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	2	3	42	2	2	1	261	2	13.3	13.4	-0.01	14.0	-0.07	13.2	.01	
	(Recoded version of tmrelax created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	12	16	396	19	37	22	2,864	18								
	8	6-10 hrs	20	27	477	23	35	20	4,146	26									
	13	11-15 hrs	15	20	453	22	36	21	3,379	21									
	18	16-20 hrs	10	13	291	14	24	14	2,318	15									
	23	21-25 hrs	9	12	150	7	10	6	1,202	8									
	28	26-30 hrs	2	3	68	3	5	3	562	4									
	33	More than 30 hrs	5	7	187	9	22	13	1,220	8									
	Total				75	100	2,064	100	171	100	15,952								100

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k								
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		
												Your first-year students compared with								
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
g. Providing care for dependents (children, parents, etc.)	tmcarehrs	0	0 hrs	63	83	1,597	77	142	83	12,882	81	1.6	2.6	-.16	2.0	-.08	2.0	-.08		
		3	1-5 hrs	7	9	195	9	9	5	1,323	8									
		8	6-10 hrs	2	3	87	4	7	4	599	4									
		13	11-15 hrs	0	0	58	3	7	4	415	3									
		18	16-20 hrs	2	3	42	2	1	1	259	2									
		23	21-25 hrs	2	3	24	1	0	0	140	1									
		28	26-30 hrs	0	0	9	0	2	1	59	0									
		33	More than 30 hrs	0	0	56	3	3	2	253	2									
			Total			76	100	2,068	100	171	100								15,930	100
h. Commuting to campus (driving, walking, etc.)	tmcommutehrs	0	0 hrs	32	42	792	38	52	31	6,424	40	3.1	4.0	-.16	4.3	-.19	3.7	-.11		
		3	1-5 hrs	33	43	799	39	84	49	6,162	38									
		8	6-10 hrs	7	9	279	14	20	12	2,022	13									
		13	11-15 hrs	2	3	88	4	5	3	708	4									
		18	16-20 hrs	0	0	50	2	2	1	361	2									
		23	21-25 hrs	1	1	25	1	1	1	134	1									
		28	26-30 hrs	0	0	8	0	1	1	63	0									
		33	More than 30 hrs	1	1	25	1	5	3	141	1									
		Total			76	100	2,066	100	170	100	16,015	100								
16. Of the time you spend preparing for class in a typical 7-day week, about how much is on assigned reading?																				
	reading	1	Very little	15	20	397	19	62	36	3,383	21	2.3	2.4	-.13	2.0	.22	2.3	-.05		
		2	Some	35	46	857	41	62	36	6,737	42									
		3	About half	19	25	469	23	33	19	3,616	23									
		4	Most	4	5	254	12	8	5	1,718	11									
		5	Almost all	3	4	92	4	7	4	537	3									
			Total	76	100	2,069	100	172	100	15,991	100									
	tmreadinghrs											5.1	5.7	-.11	4.7	.09	5.7	-.11		
			(Continuous variable created by NSSE. Calculated as a proportion of tmprephrs based on reading, where Very little=.10; Some=.25; About half=.50; Most=.75; Almost all=.90)																	

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

Item wording or description				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
17. How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?																			
a. Writing clearly and effectively				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
1 Very little				18	24	217	10	22	13	1,960	12	2.4	2.7 *	-0.28	2.6	-0.18	2.6	-0.20	
2 Some				20	26	647	31	50	29	5,144	32								
3 Quite a bit				25	33	776	37	73	43	6,030	38								
4 Very much				13	17	435	21	26	15	2,933	18								
Total				76	100	2,075	100	171	100	16,067	100								
b. Speaking clearly and effectively				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
1 Very little				12	16	313	15	22	13	2,626	16	2.5	2.5	-0.05	2.6	-0.09	2.5	.02	
2 Some				26	34	706	34	56	33	5,651	35								
3 Quite a bit				27	36	686	33	69	40	5,295	33								
4 Very much				11	14	370	18	25	15	2,449	15								
Total				76	100	2,075	100	172	100	16,021	100								
c. Thinking critically and analytically				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
1 Very little				4	5	90	4	4	2	658	4	3.0	3.1	-0.04	3.2	-0.27	3.1	-0.07	
2 Some				15	20	401	19	26	15	3,050	19								
3 Quite a bit				33	43	897	43	68	40	6,856	43								
4 Very much				24	32	685	33	74	43	5,481	34								
Total				76	100	2,073	100	172	100	16,045	100								
d. Analyzing numerical and statistical information				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
1 Very little				6	8	156	8	6	3	1,136	7	2.9	2.9	.05	3.0	-0.18	2.9	-0.03	
2 Some				18	24	549	27	38	22	3,903	24								
3 Quite a bit				30	39	807	39	70	41	6,112	38								
4 Very much				22	29	558	27	58	34	4,860	30								
Total				76	100	2,070	100	172	100	16,011	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your first-year students compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Mean	Effect size ⁿ	
														Mean	Effect size ⁿ			
e. Acquiring job- or work-related knowledge and skills	pgwork	1	Very little	8	11	272	13	18	10	1,973	12	2.7	2.6	.12	2.7	.04	2.7	.08
		2	Some	22	29	654	32	56	33	5,027	31							
		3	Quite a bit	28	37	718	35	58	34	5,468	34							
		4	Very much	18	24	426	21	40	23	3,582	22							
		Total		76	100	2,070	100	172	100	16,050	100							
f. Working effectively with others	pgothers	1	Very little	2	3	161	8	14	8	1,170	7	2.8	2.8	.01	2.9	-.15	2.8	-.01
		2	Some	23	31	608	29	40	23	4,563	28							
		3	Quite a bit	38	51	795	38	61	35	6,421	40							
		4	Very much	12	16	505	24	57	33	3,858	24							
		Total		75	100	2,069	100	172	100	16,012	100							
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	13	17	300	14	23	13	2,623	16	2.5	2.6	-.15	2.6	-.18	2.6	-.08
		2	Some	26	34	641	31	47	27	5,048	31							
		3	Quite a bit	25	33	685	33	70	41	5,241	33							
		4	Very much	12	16	445	21	32	19	3,129	20							
		Total		76	100	2,071	100	172	100	16,041	100							
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	21	28	323	16	25	15	2,456	15	2.4	2.6	-.19	2.7 *	-.30	2.6	-.17
		2	Some	17	22	681	33	45	26	5,352	33							
		3	Quite a bit	26	34	634	31	60	35	5,165	32							
		4	Very much	12	16	432	21	42	24	3,058	19							
		Total		76	100	2,070	100	172	100	16,031	100							
i. Solving complex real-world problems	pgprobsolve	1	Very little	11	14	257	12	15	9	1,905	12	2.6	2.7	-.07	2.9 *	-.29	2.7	-.08
		2	Some	21	28	648	31	41	24	4,991	31							
		3	Quite a bit	32	42	722	35	70	41	5,710	36							
		4	Very much	12	16	445	21	46	27	3,444	21							
		Total		76	100	2,072	100	172	100	16,050	100							
j. Being an informed and active citizen	pgcitizen	1	Very little	20	26	366	18	26	16	2,811	18	2.3	2.5	-.11	2.5	-.18	2.4	-.09
		2	Some	19	25	747	36	57	34	5,903	37							
		3	Quite a bit	28	37	590	29	55	33	4,846	30							
		4	Very much	9	12	354	17	29	17	2,420	15							
		Total		76	100	2,057	100	167	100	15,980	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

First-Year Students^a in Engineering

Item wording or description	Variable name ^l	Values ^m	Response options	Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your first-year students compared with				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
18. How would you evaluate your entire educational experience at this institution?																		
	evalexp	1	Poor	1	1	54	3	5	3	339	2	3.1	3.2	-.09	3.2	-.19	3.2	-.16
		2	Fair	14	18	275	13	23	13	1,920	12							
		3	Good	39	51	1,052	50	71	41	7,886	49							
		4	Excellent	23	30	704	34	74	43	5,982	37							
		Total		77	100	2,085	100	173	100	16,127	100							
19. If you could start over again, would you go to the same institution you are now attending?																		
	sameinst	1	Definitely no	2	3	82	4	7	4	506	3	3.3	3.2	.14	3.3	.02	3.3	.06
		2	Probably no	6	8	237	11	22	13	1,782	11							
		3	Probably yes	36	47	965	46	60	34	7,005	43							
		4	Definitely yes	33	43	802	38	85	49	6,848	42							
		Total		77	100	2,086	100	174	100	16,141	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

Item wording or description	Variable name ^l	Values ^m	Response options	Frequency Distributions								Statistical Comparisons ^k																																																			
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your seniors compared with																																																	
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ																																													
1. During the current school year, about how often have you done the following?																																																															
a. Asked questions or contributed to course discussions in other ways	askquest	1 2 3 4	Never Sometimes Often Very often	2 32 34 26 94	2 34 36 28 100	86 718 794 749 2,347	4 31 34 32 100	8 63 79 81 231	3 27 34 35 100	767 6,494 6,360 5,706 19,327	4 34 33 30 100	2.9	2.9	-.05	3.0	-.13	2.9	.02																																													
b. Prepared two or more drafts of a paper or assignment before turning it in	drafts	1 2 3 4	Never Sometimes Often Very often	28 34 22 11 95	29 36 23 12 100	611 844 535 345 2,335	26 36 23 15 100	40 73 68 47 228	18 32 30 21 100	5,153 7,213 4,410 2,481 19,257	27 37 23 13 100								2.2	2.3	-.09	2.5 **	-.37	2.2	-.05																																						
																										c. Come to class without completing readings or assignments	unpreparedr <i>(Reverse-coded version of unprepared created by NSSE.)</i>	1 2 3 4	Very often Often Sometimes Never	4 9 58 24 95	4 9 61 25 100	150 353 1,251 581 2,335	6 15 54 25 100	16 23 137 54 230	7 10 60 23 100	1,351 3,182 10,492 4,219 19,244	7 17 55 22 100	3.1	3.0	.13	3.0	.10	2.9	.20																			
																																													d. Attended an art exhibit, play or other arts performance (dance, music, etc.)	attendart	1 2 3 4	Never Sometimes Often Very often	39 43 8 4 94	41 46 9 4 100	1,226 804 222 86 2,338	52 34 9 4 100	124 76 19 11 230	54 33 8 5 100	9,533 6,898 1,964 837 19,232	50 36 10 4 100	1.8	1.6	.14	1.6	.14	1.7	.08
f. Explained course material to one or more students	CLexplain	1 2 3 4	Never Sometimes Often Very often	1 17 46 31 95	1 18 48 33 100	103 688 890 658 2,339	4 29 38 28 100	3 60 94 71 228	1 26 41 31 100	599 5,510 7,698 5,444 19,251	3 29 40 28 100	3.1	2.9 **	.27	3.0	.13	2.9 *	.23																																													
																			Total	94	100	2,347	100	231	100	19,327	100	19,327	100																																		
																			Total	95	100	2,335	100	228	100	19,257	100	19,257	100																																		
																			Total	95	100	2,335	100	230	100	19,244	100	19,244	100																																		
Total	94	100	2,338	100	230	100	19,232	100	19,232	100																																																					
Total	95	100	2,344	100	230	100	19,261	100	19,261	100																																																					
Total	95	100	2,339	100	228	100	19,251	100	19,251	100																																																					

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

Item wording or description				Variable name ^l				Frequency Distributions				Statistical Comparisons ^k												
								Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your seniors compared with						
								Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
d. Examined the strengths and weaknesses of your own views on a topic or issue				RIownview				1	Never	13	14	193	8	12	5	1,884	10	2.5	2.6	-.17	2.7 *	-.25	2.6	-.11
								2	Sometimes	36	39	879	38	87	38	7,433	39							
								3	Often	31	33	881	38	93	40	6,962	36							
								4	Very often	13	14	380	16	38	17	2,918	15							
								Total		93	100	2,333	100	230	100	19,197	100							
e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective				RIperspect				1	Never	12	13	165	7	7	3	1,532	8	2.5	2.7 **	-.32	2.8 **	-.38	2.7 *	-.26
								2	Sometimes	39	41	780	33	81	36	6,611	34							
								3	Often	32	34	863	37	96	42	7,251	38							
								4	Very often	12	13	524	22	44	19	3,786	20							
								Total		95	100	2,332	100	228	100	19,180	100							
f. Learned something that changed the way you understand an issue or concept				RInewview				1	Never	7	7	101	4	8	4	787	4	2.7	2.8	-.10	2.8	-.15	2.8	-.10
								2	Sometimes	30	32	785	34	72	32	6,570	34							
								3	Often	42	45	986	42	102	45	8,051	42							
								4	Very often	15	16	456	20	45	20	3,759	20							
								Total		94	100	2,328	100	227	100	19,167	100							
g. Connected ideas from your courses to your prior experiences and knowledge				RIconnect				1	Never	2	2	40	2	5	2	368	2	3.0	3.1	-.14	3.0	-.04	3.1	-.11
								2	Sometimes	26	27	502	22	57	25	4,203	22							
								3	Often	40	42	1,018	44	98	43	8,500	44							
								4	Very often	27	28	763	33	68	30	6,051	32							
								Total		95	100	2,323	100	228	100	19,122	100							
3. During the current school year, about how often have you done the following?																								
a. Talked about career plans with a faculty member				SFcareer				1	Never	20	22	532	23	38	16	4,538	24	2.3	2.2	.02	2.4	-.13	2.2	.04
								2	Sometimes	41	44	1,021	44	102	44	8,248	43							
								3	Often	20	22	466	20	56	24	4,058	21							
								4	Very often	12	13	309	13	35	15	2,344	12							
								Total		93	100	2,328	100	231	100	19,188	100							
b. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)				SFotherwork				1	Never	33	35	1,087	47	102	44	8,432	44	2.1	1.9 *	.21	1.9	.15	1.9	.17
								2	Sometimes	34	37	669	29	66	29	5,708	30							
								3	Often	10	11	326	14	38	16	3,041	16							
								4	Very often	16	17	242	10	25	11	1,964	10							
								Total		93	100	2,324	100	231	100	19,145	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Carnegie Class				THEC Peer Group				NSSE 2015 & 2016				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech	Carnegie Class	THEC Peer Group	NSSE 2015 & 2016	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ	Effect size ⁿ				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean				
6. During the current school year, about how often have you done the following?																							
a. Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	QRconclude	1	Never	7	7	125	5	8	3	901	5	3.2	3.0 *	.22	3.1	.08	3.0	.17					
		2	Sometimes	14	15	544	23	47	20	4,298	22												
		3	Often	28	30	919	39	88	38	7,280	38												
		4	Very often	45	48	758	32	88	38	6,803	35												
			Total	94	100	2,346	100	231	100	19,282	100												
b. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	QRproblem	1	Never	17	18	468	20	42	18	3,623	19	2.7	2.5	.19	2.5	.18	2.5	.15					
		2	Sometimes	24	26	782	33	78	34	6,306	33												
		3	Often	26	28	611	26	66	29	5,127	27												
		4	Very often	27	29	480	21	44	19	4,200	22												
			Total	94	100	2,341	100	230	100	19,256	100												
c. Evaluated what others have concluded from numerical information	QRevaluate	1	Never	16	17	326	14	24	10	2,457	13	2.6	2.5	.10	2.6	.01	2.6	.05					
		2	Sometimes	27	29	853	36	86	37	6,942	36												
		3	Often	27	29	755	32	76	33	6,099	32												
		4	Very often	24	26	410	17	45	19	3,742	19												
			Total	94	100	2,344	100	231	100	19,240	100												
7. During the current school year, about how many papers, reports, or other writing tasks of the following length have you been assigned? (Include those not yet completed.)																							
a. Up to 5 pages	wrshortnum	0	None	18	19	238	10	23	10	1,937	10	4.7	6.6 ***	-.29	7.2 ***	-.37	6.2 **	-.24					
	(Recoded version of wrshort created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	26	27	524	23	50	22	4,628	25												
		4	3-5	23	24	622	27	59	26	5,270	28												
		8	6-10	16	17	413	18	38	17	3,455	18												
		13	11-15	8	8	190	8	24	11	1,531	8												
		18	16-20	1	1	109	5	12	5	762	4												
		23	More than 20	3	3	178	8	21	9	1,176	6												
			Total	95	100	2,274	100	227	100	18,759	100												
b. Between 6 and 10 pages	wrmednum	0	None	37	40	622	28	68	31	5,499	30	2.8	3.6	-.17	4.0	-.24	3.2	-.10					
	(Recoded version of wrmed created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	29	31	716	32	54	25	6,105	33												
		4	3-5	11	12	459	20	42	19	3,763	20												
		8	6-10	10	11	261	12	36	16	1,848	10												
		13	11-15	4	4	97	4	8	4	668	4												
		18	16-20	1	1	42	2	5	2	266	1												
		23	More than 20	1	1	47	2	6	3	320	2												
			Total	93	100	2,244	100	219	100	18,469	100												

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering Tennessee Technological University

Seniors^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
c. 11 pages or more	wrlongnum	0	None	35	38	974	44	81	37	8,277	45	2.2	2.7	-0.12	4.1 ***	-0.36	2.4	-0.06	
	(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	34	37	670	30	55	25	5,721	31								
		4	3-5	14	15	265	12	32	14	2,223	12								
		8	6-10	7	8	157	7	25	11	1,158	6								
		13	11-15	1	1	79	4	12	5	517	3								
		18	16-20	0	0	32	1	6	3	222	1								
		23	More than 20	1	1	49	2	10	5	297	2								
		Total			92	100	2,226	100	221	100	18,415	100							
Estimated number of assigned pages of student writing.	wpages		(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)									68.1	87.2 *	-0.18	113.9 ***	-0.38	78.1	-0.10	
8. During the current school year, about how often have you had discussions with people from the following groups?																			
a. People of a race or ethnicity other than your own	DDrace	1	Never	4	4	152	6	10	4	1,258	7	3.0	3.1	-0.11	3.2	-0.19	3.0	-0.04	
		2	Sometimes	28	29	498	21	47	20	4,782	25								
		3	Often	28	29	676	29	69	30	5,492	28								
		4	Very often	35	37	1,016	43	105	45	7,748	40								
			Total	95	100	2,342	100	231	100	19,280	100								
b. People from an economic background other than your own	DDeconomic	1	Never	3	3	145	6	7	3	1,067	6	3.0	3.1	-0.05	3.2	-0.21	3.0	-0.02	
		2	Sometimes	23	24	513	22	40	17	4,534	24								
		3	Often	39	41	753	32	87	38	6,503	34								
		4	Very often	30	32	926	40	97	42	7,143	37								
			Total	95	100	2,337	100	231	100	19,247	100								
c. People with religious beliefs other than your own	DDreligion	1	Never	7	7	173	7	11	5	1,433	7	3.0	3.0	-0.01	3.1	-0.11	3.0	.00	
		2	Sometimes	23	24	595	25	59	26	4,892	25								
		3	Often	31	33	669	29	63	27	5,767	30								
		4	Very often	34	36	897	38	97	42	7,128	37								
			Total	95	100	2,334	100	230	100	19,220	100								
d. People with political views other than your own	DDpolitical	1	Never	4	4	161	7	7	3	1,260	7	3.0	3.0	.01	3.1	-0.13	3.0	.02	
		2	Sometimes	26	27	601	26	57	25	4,889	25								
		3	Often	32	34	699	30	72	31	6,146	32								
		4	Very often	33	35	871	37	95	41	6,881	36								
			Total	95	100	2,332	100	231	100	19,176	100								

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

			Frequency Distributions								Statistical Comparisons ^k							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
b. Hold a formal leadership role in a student organization or group	leader		Have not decided	13	14	237	10	22	10	1,821	9	45%	37%	.16	37%	.16	40%	.09
			Do not plan to do	32	34	1,050	45	101	44	8,154	42							
			Plan to do	7	7	192	8	22	10	1,499	8							
			Done or in progress	42	45	855	37	85	37	7,775	40							
			Total	94	100	2,334	100	230	100	19,249	100							
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	learncom		Have not decided	11	12	307	13	34	15	2,246	12	23%	24%	-.01	25%	-.05	24%	-.02
			Do not plan to do	55	58	1,299	56	117	51	10,826	56							
			Plan to do	7	7	181	8	22	10	1,545	8							
			Done or in progress	22	23	551	24	58	25	4,616	24							
			Total	95	100	2,338	100	231	100	19,233	100							
d. Participate in a study abroad program	abroad		Have not decided	10	11	255	11	28	12	1,867	10	12%	7%	.16	7%	.18	10%	.05
			Do not plan to do	68	72	1,758	75	169	74	14,157	74							
			Plan to do	6	6	157	7	17	7	1,256	7							
			Done or in progress	11	12	162	7	15	7	1,935	10							
			Total	95	100	2,332	100	229	100	19,215	100							
e. Work with a faculty member on a research project	research		Have not decided	9	9	389	17	36	16	2,978	16	26%	23%	.07	23%	.09	27%	-.02
			Do not plan to do	46	48	1,041	45	103	45	8,008	42							
			Plan to do	15	16	358	15	39	17	2,996	16							
			Done or in progress	25	26	540	23	52	23	5,170	27							
			Total	95	100	2,328	100	230	100	19,152	100							
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone		Have not decided	3	3	167	7	16	7	1,101	6	65%	49% ^{**}	.33	49% ^{**}	.33	53% [*]	.25
			Do not plan to do	4	4	311	13	15	6	1,913	10							
			Plan to do	26	27	716	31	87	38	5,974	31							
			Done or in progress	62	65	1,146	49	113	49	10,237	53							
			Total	95	100	2,340	100	231	100	19,225	100							

12. About how many of your courses at this institution have included a community-based project (service-learning)?

servcourse	1	2	3	4	Total	Count	%	Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ
1	None	45	47	1,205	52	85	37	10,731	56	1.6	1.6	.09	1.7	-.18	1.5	.17			
2	Some	43	45	967	42	122	54	7,389	39										
3	Most	6	6	134	6	17	7	860	4										
4	All	1	1	19	1	3	1	187	1										
Total		95	100	2,325	100	227	100	19,167	100										

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k											
				Tennessee Tech				Carnegie Class				THEC Peer Group				NSSE 2015 & 2016				Your seniors compared with			
Item wording or description	Variable name ^l	Values ^m	Response options	Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016					
				Count	%	Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ				
13. Indicate the quality of your interactions with the following people at your institution.																							
a. Students	QIstudent	1	Poor	1	1	32	1	1	0	189	1	5.7	5.6	.02	5.7	-.05	5.7	-.02					
		2		4	4	39	2	3	1	251	1												
		3		2	2	80	3	6	3	728	4												
		4		4	4	210	9	19	8	1,648	9												
		5		23	24	549	23	61	26	4,380	23												
		6		34	36	710	30	65	28	5,963	31												
		7	Excellent	27	28	700	30	74	32	6,025	31												
		—	Not applicable	0	0	22	1	2	1	107	1												
			Total	95	100	2,342	100	231	100	19,291	100												
b. Academic advisors	QIadvisor	1	Poor	8	8	101	4	9	4	1,025	5	5.0	5.2	-.12	5.3	-.17	5.1	-.03					
		2		6	6	105	4	9	4	1,026	5												
		3		4	4	191	8	13	6	1,553	8												
		4		11	12	279	12	31	13	2,500	13												
		5		16	17	405	17	43	19	3,634	19												
		6		26	27	510	22	53	23	3,984	21												
		7	Excellent	23	24	721	31	70	30	5,260	27												
		—	Not applicable	1	1	23	1	2	1	284	1												
			Total	95	100	2,335	100	230	100	19,266	100												
c. Faculty	QIfaculty	1	Poor	5	5	43	2	9	4	372	2	5.3	5.4	-.02	5.3	.01	5.3	.02					
		2		2	2	65	3	5	2	573	3												
		3		4	4	138	6	11	5	1,139	6												
		4		14	15	292	13	32	14	2,563	13												
		5		12	13	575	25	52	23	4,829	25												
		6		34	37	656	28	66	29	5,504	29												
		7	Excellent	22	24	546	23	54	23	4,137	22												
		—	Not applicable	0	0	15	1	1	0	84	0												
			Total	93	100	2,330	100	230	100	19,201	100												

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

Item wording or description	Variable name ^l	Values ^m	Response options	Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your seniors compared with				
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	22	24	490	21	44	19	3,837	20	2.3	2.4	-.12	2.4	-.07	2.4	-.12
		2	Some	33	36	749	32	90	39	6,576	34							
		3	Quite a bit	24	26	695	30	60	26	5,481	29							
		4	Very much	13	14	384	17	35	15	3,242	17							
		Total		92	100	2,318	100	229	100	19,136	100							
e. Providing opportunities to be involved socially	SEsocial	1	Very little	11	12	279	12	26	11	1,849	10	2.7	2.7	.01	2.7	.02	2.7	-.07
		2	Some	26	28	706	30	77	34	5,577	29							
		3	Quite a bit	38	41	851	37	72	32	7,406	39							
		4	Very much	18	19	487	21	52	23	4,336	23							
		Total		93	100	2,323	100	227	100	19,168	100							
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	19	20	379	16	37	16	2,403	13	2.5	2.6	-.11	2.6	-.15	2.7	-.20
		2	Some	26	28	653	28	62	27	5,464	29							
		3	Quite a bit	31	33	806	35	75	33	7,050	37							
		4	Very much	17	18	482	21	55	24	4,212	22							
		Total		93	100	2,320	100	229	100	19,129	100							
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	36	39	905	39	96	42	6,908	36	2.0	2.0	-.03	1.9	.03	2.0	-.05
		2	Some	30	32	744	32	73	32	6,775	35							
		3	Quite a bit	21	23	443	19	37	16	3,751	20							
		4	Very much	6	6	225	10	23	10	1,693	9							
		Total		93	100	2,317	100	229	100	19,127	100							
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	11	12	439	19	39	17	2,819	15	2.6	2.5	.07	2.5	.02	2.6	-.03
		2	Some	33	36	730	32	71	31	5,934	31							
		3	Quite a bit	34	37	714	31	75	33	6,707	35							
		4	Very much	14	15	427	18	43	19	3,648	19							
		Total		92	100	2,310	100	228	100	19,108	100							
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	25	27	642	28	61	27	4,560	24	2.1	2.2	-.06	2.1	.00	2.2	-.11
		2	Some	36	39	834	36	96	42	7,404	39							
		3	Quite a bit	24	26	552	24	49	21	4,890	26							
		4	Very much	7	8	281	12	22	10	2,196	12							
		Total		92	100	2,309	100	228	100	19,050	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

Item wording or description	Variable name ^l	Values ^m	Response options	Frequency Distributions								Statistical Comparisons ^k									
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your seniors compared with							
				Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ			
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	66	70	1,211	52	116	50	10,491	55	5.7	▼	10.9 ***	-0.39	▼	11.1 ***	-0.43	▼	9.1 **	-0.28
	(Recoded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	3	3	89	4	10	4	812	4										
	8	6-10 hrs	4	4	106	5	9	4	1,113	6											
	13	11-15 hrs	2	2	95	4	10	4	1,071	6											
	18	16-20 hrs	6	6	162	7	20	9	1,519	8											
	23	21-25 hrs	3	3	144	6	11	5	1,055	6											
	28	26-30 hrs	7	7	89	4	16	7	623	3											
	33	More than 30 hrs	3	3	432	19	38	17	2,434	13											
	Total			94	100	2,328	100	230	100	19,118	100										
Estimated number of hours working for pay	tmworkhrs											10.3	▼	14.9 ***	-0.34	▼	14.9 **	-0.34	▼	13.2 *	-0.23
	(Continuous variable created by NSSE)																				
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	59	62	1,429	62	141	61	11,812	62	1.8	▼	2.3	-0.10	▼	2.6	-0.16	▼	2.1	-0.07
	(Recoded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	27	28	636	27	64	28	5,389	28										
	8	6-10 hrs	6	6	105	5	11	5	896	5											
	13	11-15 hrs	2	2	61	3	3	1	425	2											
	18	16-20 hrs	1	1	46	2	4	2	288	2											
	23	21-25 hrs	0	0	21	1	5	2	121	1											
	28	26-30 hrs	0	0	9	0	1	0	43	0											
	33	More than 30 hrs	0	0	6	0	2	1	74	0											
	Total			95	100	2,313	100	231	100	19,048	100										
f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	2	2	85	4	13	6	554	3	11.2	▼	11.2	.00	▼	10.4	.09	▼	11.6	-0.04
	(Recoded version of tmrelax created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	22	24	620	27	70	31	4,569	24										
	8	6-10 hrs	29	32	627	27	57	25	5,364	28											
	13	11-15 hrs	14	15	398	17	38	17	3,556	19											
	18	16-20 hrs	15	16	265	11	18	8	2,465	13											
	23	21-25 hrs	4	4	130	6	13	6	1,033	5											
	28	26-30 hrs	2	2	56	2	8	4	483	3											
	33	More than 30 hrs	4	4	143	6	11	5	1,111	6											
	Total			92	100	2,324	100	228	100	19,135	100										

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ	
g. Providing care for dependents (children, parents, etc.)																			
	tmcarehrs	0	0 hrs	72	79	1,539	66	144	63	13,599	71	2.7	5.3 ***	-.26	6.0 **	-.34	4.2 *	-.17	
	(Recoded version of tmcare created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	6	7	232	10	23	10	1,822	10								
		8	6-10 hrs	6	7	110	5	11	5	871	5								
		13	11-15 hrs	0	0	100	4	12	5	633	3								
		18	16-20 hrs	2	2	81	3	7	3	591	3								
		23	21-25 hrs	2	2	44	2	9	4	265	1								
		28	26-30 hrs	1	1	26	1	3	1	175	1								
		33	More than 30 hrs	2	2	188	8	19	8	1,155	6								
			Total	91	100	2,320	100	228	100	19,111	100								
h. Commuting to campus (driving, walking, etc.)																			
	tmcommutehrs	0	0 hrs	12	13	454	19	30	13	2,955	15	3.7	4.8 **	-.20	5.5 **	-.28	4.8 **	-.21	
	(Recoded version of tmcommute created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	68	73	1,229	53	144	63	10,946	57								
		8	6-10 hrs	8	9	420	18	29	13	3,490	18								
		13	11-15 hrs	2	2	109	5	7	3	1,058	6								
		18	16-20 hrs	3	3	61	3	5	2	402	2								
		23	21-25 hrs	0	0	23	1	5	2	145	1								
		28	26-30 hrs	0	0	12	1	1	0	69	0								
		33	More than 30 hrs	0	0	26	1	8	3	153	1								
			Total	93	100	2,334	100	229	100	19,218	100								
16. Of the time you spend preparing for class in a typical 7-day week, about how much is on assigned reading?																			
	reading	1	Very little	44	47	675	29	73	32	5,914	31	1.9	2.3 ***	-.37	2.1 *	-.25	2.2 **	-.28	
	(Revised for 2014. Comparison data are limited to NSSE 2014 participating institutions.)	2	Some	31	33	838	36	90	40	7,376	38								
		3	About half	11	12	447	19	37	16	3,574	19								
		4	Most	5	5	275	12	17	7	1,682	9								
		5	Almost all	3	3	96	4	10	4	625	3								
			Total	94	100	2,331	100	227	100	19,171	100								
	tmreadinghrs											5.2	5.7	-.08	5.7	-.08	5.5	-.06	
	(Continuous variable created by NSSE. Calculated as a proportion of tmprephrs based on reading, where Very little=.10; Some=.25; About half=.50; Most=.75; Almost all=.90)																		

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

Item wording or description	Variable name ^l	Values ^m	Response options	Frequency Distributions								Statistical Comparisons ^k							
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
				Count	%	Count	%	Count	%	Count	%	Mean	Effect size ⁿ	Mean	Effect size ⁿ	Mean	Effect size ⁿ		
	tmreadinghrscol	1	0 hrs	0	0	16	1	1	0	88	0								
	(Collapsed version of tmreadinghrs created by NSSE.)	2	More than zero, up to 5 hrs	62	66	1,384	60	143	63	11,587	61								
		3	More than 5, up to 10 hrs	22	23	604	26	54	24	4,912	26								
		4	More than 10, up to 15 hrs	4	4	130	6	8	4	1,129	6								
		5	More than 15, up to 20 hrs	2	2	91	4	8	4	770	4								
		6	More than 20, up to 25 hrs	3	3	74	3	10	4	427	2								
		7	More than 25 hrs	1	1	27	1	3	1	180	1								
			Total	94	100	2,326	100	227	100	19,093	100								

17. How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

a. Writing clearly and effectively	pgwrite	1	Very little	12	13	252	11	23	10	2,193	11	2.6	2.7	-.18	2.8 *	-.28	2.7	-.13
		2	Some	36	38	664	28	55	24	5,774	30							
		3	Quite a bit	26	28	850	36	88	38	6,979	36							
		4	Very much	20	21	569	24	64	28	4,303	22							
			Total	94	100	2,335	100	230	100	19,249	100							
b. Speaking clearly and effectively	pgspeak	1	Very little	14	15	287	12	24	10	2,442	13	2.7	2.7	-.03	2.8	-.10	2.7	.03
		2	Some	24	26	639	27	62	27	5,722	30							
		3	Quite a bit	33	35	841	36	82	36	6,821	36							
		4	Very much	23	24	560	24	61	27	4,200	22							
			Total	94	100	2,327	100	229	100	19,185	100							
c. Thinking critically and analytically	pgthink	1	Very little	4	4	92	4	9	4	616	3	3.3	3.3	.10	3.3	.00	3.3	.05
		2	Some	9	10	327	14	31	13	2,555	13							
		3	Quite a bit	32	34	805	35	62	27	6,567	34							
		4	Very much	49	52	1,107	47	128	56	9,480	49							
			Total	94	100	2,331	100	230	100	19,218	100							
d. Analyzing numerical and statistical information	pganalyze	1	Very little	5	5	146	6	7	3	776	4	3.3	3.1	.16	3.3	.03	3.3	.04
		2	Some	11	12	395	17	42	18	2,889	15							
		3	Quite a bit	29	31	758	32	63	27	6,085	32							
		4	Very much	49	52	1,036	44	118	51	9,464	49							
			Total	94	100	2,335	100	230	100	19,214	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Engineering

Tennessee Technological University

Seniors^a in Engineering

				Frequency Distributions								Statistical Comparisons ^k						
				Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Your seniors compared with				
Item wording or description	Variable name ^l	Values ^m	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size ⁿ		Mean	Effect size ⁿ	
														Mean	Effect size ⁿ		Mean	Effect size ⁿ
e. Acquiring job- or work-related knowledge and skills	pgwork	1	Very little	8	9	211	9	20	9	1,588	8	3.0	3.0	-.01	3.0	.01	3.0	-.01
		2	Some	22	23	507	22	48	21	4,190	22							
		3	Quite a bit	29	31	751	32	83	36	6,509	34							
		4	Very much	35	37	867	37	78	34	6,943	36							
		Total		94	100	2,336	100	229	100	19,230	100							
f. Working effectively with others	pgothers	1	Very little	6	7	138	6	11	5	1,115	6	3.1	3.0	.11	3.1	.06	3.0	.12
		2	Some	17	18	502	22	50	22	4,222	22							
		3	Quite a bit	30	33	896	38	84	37	7,347	38							
		4	Very much	39	42	797	34	85	37	6,515	34							
		Total		92	100	2,333	100	230	100	19,199	100							
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	21	22	442	19	53	23	3,439	18	2.6	2.6	.03	2.5	.06	2.6	.03
		2	Some	20	21	688	30	60	26	5,822	30							
		3	Quite a bit	30	32	660	28	61	27	5,745	30							
		4	Very much	23	24	540	23	55	24	4,217	22							
		Total		94	100	2,330	100	229	100	19,223	100							
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	18	19	491	21	44	19	3,953	21	2.4	2.4	-.02	2.4	.01	2.4	-.01
		2	Some	33	35	744	32	83	36	6,465	34							
		3	Quite a bit	28	30	651	28	65	28	5,283	28							
		4	Very much	15	16	441	19	37	16	3,485	18							
		Total		94	100	2,327	100	229	100	19,186	100							
i. Solving complex real-world problems	pgprobsolve	1	Very little	8	9	270	12	26	11	1,803	9	3.0	2.8	.16	2.9	.08	2.9	.09
		2	Some	17	18	568	24	54	23	4,537	24							
		3	Quite a bit	35	38	748	32	62	27	6,416	33							
		4	Very much	33	35	742	32	88	38	6,463	34							
		Total		93	100	2,328	100	230	100	19,219	100							
j. Being an informed and active citizen	pgcitizen	1	Very little	26	28	575	25	64	28	4,682	24	2.3	2.3	-.06	2.3	-.01	2.3	-.05
		2	Some	29	31	825	35	80	35	6,825	36							
		3	Quite a bit	28	30	539	23	48	21	4,792	25							
		4	Very much	11	12	386	17	38	17	2,850	15							
		Total		94	100	2,325	100	230	100	19,149	100							

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
20a. How many majors do you plan to complete? (Do not count minors.)	MAJnum	One	75	97	1,893	90	158	91	14,394	89	86	91	2,134	91	210	91	17,514	90
		More than one	2	3	199	10	16	9	1,794	11	9	9	220	9	21	9	1,858	10
		Total	77	100	2,092	100	174	100	16,188	100	95	100	2,354	100	231	100	19,372	100
First major or expected first major, in NSSE's default related-major categories. (Does not reflect any customization made for the Major Field Report)	MAJfirstcol <i>(Recorded from MAJfirst.)</i>	Arts & Humanities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Biological Sci., Agriculture, & Natural Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Physical Sci., Mathematics, & Computer Science	12	16	513	25	52	30	4,043	25	9	9	406	17	53	23	3,742	19
		Social Sciences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Business	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Communications, Media, & Public Relations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Education	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Engineering	65	84	1,358	65	116	67	10,980	68	81	85	1,562	66	163	71	13,637	70
		Health Professions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Social Service Professions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		All Other	0	0	221	11	6	3	1,166	7	5	5	386	16	15	6	1,993	10
		Undecided, Undeclared	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	77	100	2,092	100	174	100	16,189	100	95	100	2,354	100	231	100	19,372	100		
Second major or expected second major, in NSSE's default related-major categories. (Does not reflect any customization made for the Major Field Report)	MAJsecondcol <i>(Recorded from MAJsecond.)</i>	Arts & Humanities	0	0	16	8	4	25	239	13	3	38	7	3	2	10	203	11
		Biological Sci., Agriculture, & Natural Resources	0	0	3	2	0	0	49	3	0	0	4	2	0	0	43	2
		Physical Sci., Mathematics, & Computer Science	0	0	55	28	4	25	484	27	0	0	62	28	7	33	540	29
		Social Sciences	0	0	8	4	0	0	86	5	0	0	7	3	0	0	100	5
		Business	1	50	29	15	3	19	188	11	2	25	27	12	2	10	185	10
		Communications, Media, & Public Relations	0	0	1	1	0	0	17	1	0	0	3	1	1	5	14	1
		Education	0	0	2	1	0	0	30	2	0	0	4	2	0	0	16	1
		Engineering	1	50	61	31	5	31	523	29	3	38	67	31	5	24	524	29
		Health Professions	0	0	4	2	0	0	21	1	0	0	2	1	0	0	22	1
		Social Service Professions	0	0	6	3	0	0	28	2	0	0	7	3	1	5	33	2
		All Other	0	0	11	6	0	0	88	5	0	0	25	11	3	14	131	7
		Undecided, Undeclared	0	0	0	0	0	0	24	1	0	0	3	1	0	0	26	1
Total	2	100	196	100	16	100	1,777	100	8	100	218	100	21	100	1,837	100		

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a								
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
21. What is your class level?	class	Freshman/First-year	66	86	1,782	86	141	82	14,308	89	0	0	4	0	0	0	70	0	
		Sophomore	10	13	235	11	29	17	1,404	9	0	0	40	2	7	3	347	2	
		Junior	1	1	32	2	1	1	237	1	4	4	251	11	33	14	2,587	13	
		Senior	0	0	10	0	0	0	64	0	87	92	2,002	85	188	82	15,897	82	
		Unclassified	0	0	10	0	0	0	70	0	4	4	51	2	2	1	390	2	
		Total	77	100	2,069	100	171	100	16,083	100	95	100	2,348	100	230	100	19,291	100	
22. Thinking about this current academic term, are you a full-time student?	fulltime	No	1	1	90	4	6	3	505	3	13	14	478	20	45	19	3,382	18	
		Yes	75	99	1,976	96	166	97	15,516	97	79	86	1,862	80	186	81	15,800	82	
		Total	76	100	2,066	100	172	100	16,021	100	92	100	2,340	100	231	100	19,182	100	
23a. How many courses are you taking for credit this current academic term?	coursenum	0	0	0	0	11	1	1	1	47	0	3	3	89	4	0	0	441	2
		1	0	0	20	1	1	1	105	1	4	4	94	4	6	3	612	3	
		2	0	0	27	1	2	1	212	1	3	3	192	8	19	8	1,248	6	
		3	1	1	78	4	11	6	594	4	9	10	276	12	43	19	1,958	10	
		4	17	22	527	25	51	29	4,379	27	23	25	661	28	77	33	5,380	28	
		5	42	55	826	40	54	31	6,433	40	23	25	540	23	31	13	5,616	29	
		6	12	16	343	17	19	11	2,636	16	16	17	277	12	21	9	2,350	12	
		7 or more	5	6	239	12	34	20	1,667	10	12	13	214	9	34	15	1,677	9	
Total	77	100	2,071	100	173	100	16,073	100	93	100	2,343	100	231	100	19,282	100			
b. Of these, how many are entirely online?	onlinenum	0	70	91	1,739	85	144	84	14,194	89	82	88	1,734	74	186	81	15,426	80	
		1	4	5	199	10	21	12	1,212	8	9	10	311	13	27	12	2,262	12	
		2	2	3	41	2	1	1	295	2	1	1	126	5	3	1	806	4	
		3	1	1	19	1	3	2	92	1	0	0	52	2	8	3	315	2	
		4	0	0	21	1	2	1	82	1	0	0	39	2	1	0	171	1	
		5	0	0	7	0	0	0	27	0	0	0	22	1	0	0	78	0	
		6	0	0	9	0	0	0	26	0	0	0	15	1	1	0	48	0	
		7 or more	0	0	17	1	1	1	48	0	1	1	31	1	3	1	88	0	
Total	77	100	2,052	100	172	100	15,976	100	93	100	2,330	100	229	100	19,194	100			
Collapsed recode of courses taken online (Based on responses to coursenum and onlinenum)	onlinecrscol	No courses taken online	70	91	1,739	85	144	84	14,192	89	82	88	1,734	74	186	81	15,426	80	
		Some courses taken online	7	9	233	11	24	14	1,468	9	9	10	380	16	37	16	2,816	15	
		All courses taken online	0	0	80	4	4	2	314	2	2	2	216	9	6	3	952	5	
		Total	77	100	2,052	100	172	100	15,974	100	93	100	2,330	100	229	100	19,194	100	

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
24. What have most of your grades been up to now at this institution?	grades	C- or lower	1	1	47	2	4	2	294	2	2	2	14	1	1	0	96	0
		C	2	3	52	3	7	4	473	3	6	6	48	2	4	2	508	3
		C+	4	5	82	4	6	3	703	4	4	4	130	6	19	8	1,042	5
		B-	5	6	144	7	14	8	1,093	7	7	8	205	9	29	13	1,644	9
		B	15	19	370	18	28	16	3,020	19	25	27	497	21	45	19	4,059	21
		B+	12	16	415	20	36	21	2,987	19	7	8	405	17	41	18	3,535	18
		A-	12	16	376	18	29	17	3,050	19	17	18	394	17	34	15	3,376	18
		A	26	34	586	28	49	28	4,428	28	25	27	650	28	58	25	5,006	26
		Total	77	100	2,072	100	173	100	16,048	100	93	100	2,343	100	231	100	19,266	100
25. Did you begin college at this institution or elsewhere?	begincol	Started here	67	87	1,875	91	154	90	14,748	92	61	66	1,307	56	132	57	11,365	59
		Started elsewhere	10	13	187	9	18	10	1,288	8	32	34	1,038	44	99	43	7,885	41
		Total	77	100	2,062	100	172	100	16,036	100	93	100	2,345	100	231	100	19,250	100
26. Since graduating from high school, which of the following types of schools have you attended <i>other than</i> the one you are now attending? (Select all that apply.)	attend_voc	Vocational or technical school	1	1	84	4	8	5	479	3	4	4	201	9	28	12	1,323	7
	attend_com	Community or junior college	13	17	139	7	9	5	1,147	7	32	34	851	36	69	30	7,136	37
	attend_col	4-year college or university other than this one	1	1	176	9	19	11	1,178	7	17	18	603	26	68	30	4,640	24
	attend_none	None	61	79	1,620	79	134	78	12,974	81	47	51	1,013	43	99	43	8,745	46
	attend_other	Other	2	3	105	5	6	3	591	4	3	3	118	5	10	4	750	4
27. What is the highest level of education you ever expect to complete?	edaspire	Some college but less than a bachelor's degree	3	4	102	5	10	6	616	4	3	3	110	5	18	8	750	4
		Bachelor's degree (B.A., B.S., etc.)	36	47	808	39	82	47	6,303	39	34	37	969	41	110	48	7,659	40
		Master's degree (M.A., M.S., etc.)	31	40	889	43	57	33	6,985	44	42	46	981	42	69	30	8,411	44
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	7	9	259	13	24	14	2,079	13	13	14	281	12	34	15	2,413	13
		Total	77	100	2,058	100	173	100	15,983	100	92	100	2,341	100	231	100	19,233	100

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
28. What is the highest level of education completed by either of your parents (or those who raised you)?	parented	Did not finish high school	2	3	134	7	9	5	702	4	4	4	139	6	6	3	803	4
		High school diploma or G.E.D.	13	17	321	16	36	21	2,231	14	20	22	401	17	41	18	2,910	15
		Attended college, but did not complete degree	8	10	213	10	25	14	1,460	9	5	5	237	10	23	10	1,796	9
		Associate's degree (A.A., A.S., etc.)	6	8	168	8	8	5	1,370	9	4	4	256	11	22	10	1,854	10
		Bachelor's degree (B.A., B.S., etc.)	29	38	614	30	45	26	5,199	33	28	30	744	32	84	37	6,330	33
		Master's degree (M.A., M.S., etc.)	16	21	461	22	40	23	3,742	23	24	26	395	17	34	15	4,030	21
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	3	4	145	7	10	6	1,267	8	8	9	167	7	20	9	1,500	8
		Total	77	100	2,056	100	173	100	15,971	100	93	100	2,339	100	230	100	19,223	100
First-generation status (No parent holds a bachelor's degree)	firstgen (Recoded from parented)	Not first-generation	48	62	1,220	59	95	55	10,208	64	60	65	1,306	56	138	60	11,860	62
		First-generation	29	38	836	41	78	45	5,763	36	33	35	1,033	44	92	40	7,363	38
		Total	77	100	2,056	100	173	100	15,971	100	93	100	2,339	100	230	100	19,223	100
29. What is your gender identity?	genderid	Man	52	68	1,516	74	131	76	11,524	72	70	75	1,780	76	179	78	14,252	74
		Woman	22	29	498	24	40	23	4,120	26	21	23	517	22	47	20	4,488	23
		Another gender identity	2	3	19	1	0	0	134	1	2	2	9	0	3	1	125	1
		I prefer not to respond	0	0	24	1	1	1	226	1	0	0	36	2	1	0	345	2
		Total	76	100	2,057	100	172	100	16,004	100	93	100	2,342	100	230	100	19,210	100
30. Enter your year of birth (e.g., 1994):	agecat (Recoded from the information entered in birthyear)	19 or younger	70	92	1,752	85	142	83	14,005	88	0	0	14	1	1	0	122	1
		20-23	5	7	177	9	19	11	1,287	8	68	73	1,359	59	131	57	12,247	64
		24-29	0	0	49	2	7	4	296	2	15	16	464	20	44	19	3,838	20
		30-39	1	1	38	2	3	2	206	1	7	8	315	14	37	16	1,919	10
		40-55	0	0	31	2	0	0	126	1	1	1	146	6	14	6	881	5
		Over 55	0	0	4	0	1	1	16	0	2	2	23	1	1	0	99	1
		Total	76	100	2,051	100	172	100	15,936	100	93	100	2,321	100	228	100	19,106	100
31a. Are you an international student?	internat	No	73	97	1,852	90	151	88	14,528	91	86	92	2,205	95	210	91	18,038	94
		Yes	2	3	198	10	21	12	1,360	9	7	8	122	5	20	9	1,070	6
		Total	75	100	2,050	100	172	100	15,888	100	93	100	2,327	100	230	100	19,108	100
International student country of citizenship, collapsed into regions by NSSE. Responses to country are in the data file. U.S. (domestic) students did not receive this question.	countrycol (Recoded from country.)	Africa Sub-Saharan	0	0	17	9	1	6	128	10	0	0	12	10	2	10	88	9
		Asia	0	0	45	23	8	44	565	43	0	0	32	27	3	15	469	46
		Canada	0	0	1	1	0	0	18	1	0	0	0	0	0	0	18	2
		Europe	0	0	14	7	1	6	93	7	0	0	7	6	1	5	78	8
		Latin America and Caribbean	0	0	43	22	0	0	227	17	1	14	19	16	1	5	146	14
		Middle East and North Africa	1	50	71	37	8	44	273	21	6	86	49	41	13	65	216	21
		Oceania	1	50	1	1	0	0	4	0	0	0	0	0	0	0	3	0
		Unknown region/uncoded	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Total	2	100	193	100	18	100	1,309	100	7	100	119	100	20	100	1,018	100		

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a								
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
32. What is your racial or ethnic identification? (Select all that apply.)	re_amind	American Indian or Alaska Native	1	1	35	2	5	3	310	2	1	1	31	1	4	2	325	2	
	re_asian	Asian	2	3	242	12	19	11	2,140	13	5	5	218	9	11	5	2,120	11	
	re_black	Black or African American	3	4	239	12	40	23	1,311	8	3	3	196	8	35	15	1,203	6	
	re_latino	Hispanic or Latino	4	5	372	18	9	5	1,914	12	1	1	320	14	9	4	1,814	9	
	re_pacific	Native Hawaiian or Other Pacific Islander	1	1	25	1	3	2	166	1	0	0	14	1	2	1	163	1	
	re_white	White	69	91	1,164	57	98	57	10,514	66	81	87	1,567	67	169	73	13,685	71	
	re_other	Other	0	0	88	4	9	5	514	3	3	3	74	3	12	5	476	2	
	re_pnr	I prefer not to respond	2	3	81	4	6	3	624	4	2	2	114	5	8	3	921	5	
	Racial or ethnic identification <i>(Recoded from re_all through re_pnr where each student is represented only once)</i>	re_all	American Indian or Alaska Native	0	0	12	1	2	1	58	0	0	0	6	0	1	0	73	0
		re_asian	Asian	1	1	189	9	14	8	1,746	11	5	5	170	7	8	3	1,709	9
re_black		Black or African American	1	1	199	10	35	20	1,032	6	2	2	160	7	31	13	989	5	
re_latino		Hispanic or Latino	2	3	298	15	5	3	1,371	9	1	1	252	11	5	2	1,301	7	
re_pnr		Native Hawaiian/Other Pac. Islander	1	1	5	0	0	0	38	0	0	0	4	0	0	0	46	0	
re_white		White	63	83	1,049	51	92	53	9,492	59	79	85	1,427	61	158	69	12,602	66	
re_other		Other	0	0	65	3	7	4	353	2	2	2	44	2	7	3	309	2	
re_multiracial		Multiracial	6	8	153	7	11	6	1,259	8	2	2	161	7	12	5	1,248	7	
re_pnr	I prefer not to respond	2	3	81	4	6	3	624	4	2	2	114	5	8	3	921	5		
	Total		76	100	2,051	100	172	100	15,973	100	93	100	2,338	100	230	100	19,198	100	
33. Are you a member of a social fraternity or sorority?	greek	No	70	92	1,947	95	154	91	14,611	92	85	92	2,122	91	201	88	17,000	89	
		Yes	6	8	101	5	16	9	1,324	8	7	8	205	9	28	12	2,153	11	
		Total	76	100	2,048	100	170	100	15,935	100	92	100	2,327	100	229	100	19,153	100	
34. Which of the following best describes where you are living while attending college?	living	Dormitory or other campus housing (not fraternity or sorority house)	57	75	1,196	58	104	61	10,179	64	13	14	323	14	33	14	2,461	13	
		Fraternity or sorority house	0	0	13	1	0	0	208	1	1	1	42	2	2	1	516	3	
		Residence (house, apartment, etc.) within walking distance to the institution	7	9	170	8	23	14	1,353	8	31	33	459	20	52	23	5,653	29	
		Residence (house, apartment, etc.) farther than walking distance to the institution	9	12	572	28	43	25	3,726	23	47	51	1,379	59	134	58	9,945	52	
		None of the above	3	4	99	5	0	0	468	3	1	1	132	6	9	4	614	3	
		Total	76	100	2,050	100	170	100	15,934	100	93	100	2,335	100	230	100	19,189	100	
35. Are you a student-athlete on a team sponsored by your institution's athletics department?	athlete	No	75	99	1,941	95	161	94	14,803	93	90	97	2,234	96	225	98	18,416	96	
		Yes	1	1	105	5	11	6	1,081	7	3	3	89	4	4	2	675	4	
		Total	76	100	2,046	100	172	100	15,884	100	93	100	2,323	100	229	100	19,091	100	

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

			First-Year Students ^a								Seniors ^a							
			Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
Item wording or description	Variable name	Response options	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
36. Are you a current or former member of the U.S. Armed Forces, Reserves, or National Guard?	veteran	No	75	100	1,982	97	167	98	15,508	97	85	93	2,089	90	210	93	17,691	93
		Yes	0	0	64	3	4	2	399	3	6	7	231	10	17	7	1,424	7
		Total	75	100	2,046	100	171	100	15,907	100	91	100	2,320	100	227	100	19,115	100
37a. Have you been diagnosed with any disability or impairment?	disability	No	67	88	1,765	86	147	85	13,960	88	82	88	1,979	85	196	86	16,578	86
		Yes	5	7	199	10	17	10	1,408	9	8	9	257	11	24	10	1,939	10
		I prefer not to respond	4	5	89	4	8	5	585	4	3	3	93	4	9	4	675	4
		Total	76	100	2,053	100	172	100	15,953	100	93	100	2,329	100	229	100	19,192	100
b. [If answered "yes"] Which of the following has been diagnosed? (Select all that apply.)	dis_sense	A sensory impairment (vision or hearing)	0	0	31	16	3	19	241	17	0	0	56	22	1	4	334	17
	dis_mobility	A mobility impairment	1	20	14	7	0	0	88	6	0	0	27	11	1	4	188	10
	dis_learning	A learning disability (e.g., ADHD, dyslexia)	3	60	109	55	13	81	749	54	3	38	119	47	17	71	954	50
	dis_mental	A mental health disorder	1	20	44	22	2	13	354	25	5	63	67	26	3	13	531	28
	dis_other	A disability or impairment not listed above	0	0	31	16	1	6	244	17	2	25	58	23	4	17	401	21
Disability or impairment	disability_all	A sensory impairment	0	0	22	1	2	1	165	1	0	0	37	2	1	0	216	1
	(Recoded from disability and dis_sense through dis_other where each student is represented only once)	A mobility impairment	1	1	11	1	0	0	53	0	0	0	12	1	1	0	88	0
		A learning disability	3	4	84	4	10	6	572	4	2	2	82	4	15	7	695	4
		A mental health disorder	1	1	23	1	0	0	195	1	3	3	26	1	1	0	275	1
		A disability or impairment not listed	0	0	27	1	1	1	171	1	1	1	39	2	4	2	257	1
		More than one disability or impairment	0	0	30	1	3	2	244	2	2	2	59	3	2	1	391	2
		No disability or impairment	67	88	1,765	86	147	86	13,960	88	82	88	1,979	85	196	86	16,578	86
	Prefer not to respond	4	5	89	4	8	5	585	4	3	3	93	4	9	4	675	4	
	Total	76	100	2,051	100	171	100	15,945	100	93	100	2,327	100	229	100	19,175	100	
38. Which of the following best describes your sexual orientation? (Question administered per institution request)	sexorient14	Heterosexual	--	--	722	82	35	90	6,322	86	--	--	841	86	71	86	7,943	87
		Gay	--	--	16	2	1	3	93	1	--	--	14	1	4	5	136	1
		Lesbian	--	--	6	1	0	0	42	1	--	--	6	1	1	1	59	1
		Bisexual	--	--	22	3	0	0	206	3	--	--	25	3	2	2	244	3
		Another sexual orientation	--	--	24	3	0	0	123	2	--	--	10	1	2	2	112	1
		Questioning or unsure	--	--	14	2	0	0	127	2	--	--	14	1	0	0	77	1
		I prefer not to respond	--	--	72	8	3	8	441	6	--	--	69	7	3	4	609	7
		Total	--	--	876	100	39	100	7,354	100	--	--	979	100	83	100	9,180	100

NSSE 2016 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Engineering

Tennessee Technological University

Engineering

First-Year Students^a

Seniors^a

Item wording or description	Variable name	Response options	Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016		Tennessee Tech		Carnegie Class		THEC Peer Group		NSSE 2015 & 2016	
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Institution-reported information																		
(Variables provided by your institution in your NSSE population file.)																		
Institution-reported sex	IRsex	Female	23	30	525	25	41	24	4,266	26	22	23	524	22	46	20	4,608	24
		Male	54	70	1,567	75	133	76	11,920	74	73	77	1,830	78	185	80	14,763	76
		Total	77	100	2,092	100	174	100	16,186	100	95	100	2,354	100	231	100	19,371	100
Institution-reported race or ethnicity	IRrace	American Indian or Alaska Native	0	0	6	0	1	1	69	0	0	0	15	1	2	1	102	1
		Asian	1	1	115	6	6	3	1,084	7	4	4	115	5	5	2	1,136	6
		Black or African American	1	1	173	9	37	21	949	6	2	2	161	7	30	13	951	5
		Hispanic or Latino	0	0	324	17	3	2	1,649	11	0	0	280	13	5	2	1,630	9
		Native Hawaiian/Other Pac. Islander	0	0	0	0	0	0	42	0	0	0	3	0	0	0	63	0
		White	67	87	1,003	51	91	52	9,052	60	89	94	1,324	60	158	68	12,093	67
		Other	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
		Foreign or nonresident alien	0	0	167	9	21	12	1,158	8	0	0	102	5	21	9	918	5
		Two or more races/ethnicities	7	9	64	3	7	4	469	3	0	0	53	2	4	2	507	3
		Unknown	1	1	107	5	8	5	484	3	0	0	160	7	6	3	723	4
		Total	77	100	1,959	100	174	100	14,962	100	95	100	2,213	100	231	100	18,123	100
Institution-reported class level	IRclass	Freshman/First-Year	77	100	2,092	100	174	100	16,189	100	0	0	0	0	0	0	0	0
		Sophomore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Junior	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Senior	0	0	0	0	0	0	0	0	95	100	2,354	100	231	100	19,372	100
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	77	100	2,092	100	174	100	16,189	100	95	100	2,354	100	231	100	19,372	100
Institution-reported first-time first-year (FTFY) status	IRftfy	No	6	8	273	13	35	20	1,694	10	95	100	2,354	100	231	100	19,208	99
		Yes	71	92	1,819	87	139	80	14,491	90	0	0	0	0	0	0	164	1
		Total	77	100	2,092	100	174	100	16,185	100	95	100	2,354	100	231	100	19,372	100
Institution-reported enrollment status	IRenrollment	Not full-time	1	1	90	4	4	2	664	4	14	15	365	16	42	18	3,050	16
		Full-time	76	99	2,002	96	170	98	15,525	96	81	85	1,989	84	189	82	16,322	84
		Total	77	100	2,092	100	174	100	16,189	100	95	100	2,354	100	231	100	19,372	100

Endnotes

- a. All results are unweighted.
- b. Standard deviation is a measure of the amount the individual scores deviate from the mean of all the scores in the distribution.
- c. Standard error of the mean, used to compute a confidence interval (CI) around the sample mean. For example, the 95% CI is the range of values that is 95% likely to contain the true population mean, equal to the sample mean $\pm 1.96 * SEM$.
- d. A percentile is the point in the distribution of student-level EI scores at or below which a given percentage of EI scores fall.
- e. Degrees of freedom used to compute the t -tests. Values differ from Ns due to whether equal variances were assumed.
- f. Statistical significance represents the probability that the difference between the mean of your institution and that of the comparison group occurred by chance: $*p < .05$, $**p < .01$, $***p < .001$ (2-tailed).
- g. Cohen's d : The mean difference divided by the pooled standard deviation. Effect size indicates the practical importance of an observed difference. For EI comparisons, NSSE research has concluded that an effect size of about .1 may be considered small, .3 medium, and .5 large (Rocconi & Gonyea, 2015). Comparisons with an effect size of at least .3 in magnitude (before rounding) are highlighted in the Overview.
- h. Percentage of students who responded "Done or in progress" except for service-learning which is the percentage who responded that at least "Some" courses included a community-based project.
- i. $*p < .05$, $**p < .01$, $***p < .001$ (z -test comparing participation rates).
- j. Cohen's h : The standardized difference between two proportions. Effect size indicates the practical importance of an observed difference. NSSE research has found that interpretations vary by HIP: For service-learning, internships, study abroad, and culminating senior experiences, an effect size of about .2 may be considered small, .5 medium, and .8 large. For learning community and research with faculty, an effect size of about .1 may be considered small, .3 medium, and .5 large (Rocconi & Gonyea, 2015).
- k. Means calculated from ordered response options (e.g., Very Often, Often, Sometimes, Never) assume equal intervals and should be interpreted with caution. Unless otherwise noted, statistical comparisons are two-tailed independent t -tests. Exceptions are the dichotomous high-impact practice items (11a to 11f) which are compared using a z -test.
- l. Items that make up the Engagement Indicators include the following two-letter prefixes: CL = Collaborative Learning, DD = Discussions with Diverse Others, ET = Effective Teaching Practices, HO = Higher-Order Learning, LS = Learning Strategies, QI = Quality of Interactions, QR = Quantitative Reasoning, RI = Reflective and Integrative Learning, SE = Supportive Environment, and SF = Student-Faculty Interaction.
- m. These are the values used to calculate means. For the majority of items, these values match the codes in the data file and codebook. For items estimating number of papers and hours per week, the values represent actual units using the midpoints of response option ranges and an estimate for unbounded options.
- n. Effect size for independent t -tests uses Cohen's d ; z -tests use Cohen's h .
- o. Statistical comparison uses z -test to compare the percentage who responded "Done or in progress."

Key to symbols:

- ▲ Your students' average was significantly higher ($p < .05$) with an effect size at least .3 in magnitude.
- △ Your students' average was significantly higher ($p < .05$) with an effect size less than .3 in magnitude.
- ▽ Your students' average was significantly lower ($p < .05$) with an effect size less than .3 in magnitude.
- ▼ Your students' average was significantly lower ($p < .05$) with an effect size at least .3 in magnitude.

Note: It is important to interpret the direction of differences relative to item wording and your institutional context.

Reference: Rocconi, L., & Gonyea, R. M. (2015). Contextualizing student engagement effect sizes: An empirical analysis. Paper presented at the Association for Institutional Research Annual Forum, Denver, CO.