NSSE
national survey of
student engagement

NSSE 2016
Multi-Year Report

Tennessee Technological University

IPEDS: 221847

About Your Multi-Year Report

For institutions participating in multiple NSSE administrations since 2013, the year of the last survey update, this report presents year-to-year results for Engagement Indicators (EIs), High-Impact Practices (HIPs), and key academic challenge items to illustrate patterns of change or stability. It also provides details such as number of respondents, standard deviation, and standard error so that statistical tests can be calculated.

For more information and recommendations for analyzing NSSE data over time, consult the *Multi-Year Data Analysis Guide* on the NSSE website. **nsse.indiana.edu/pdf/MYDAG.pdf**

This report contains three main parts: (a) a page that provides a quick reference to important information about each year's administration, (b) multi-year figures, and (c) detailed statistics. Key terms and features are illustrated below.

Report sections

Administration Summaries (p. 3)	A summary of respondent counts, response rates, sampling errors, and administration details for each participation year.
Engagement Results by Theme (pp. 4-7)	Results for ten EIs and selected individual survey items are displayed, organized under four broad themes. The Academic Challenge theme is represented by four EIs as well as several individual items. The three remaining engagement themes (Learning with Peers, Experiences with Faculty, and Campus Environment) follow, each represented by two EIs.
High-Impact Practices (pp. 8-9)	Results for six HIPs are displayed. First-year results indicate students who *participated* in a Learning Community, Service-Learning, and Research with Faculty, and who *planned to do* an Internship or Field Experience, Study Abroad, and a Culminating Senior Experience. Senior results indicate students who participated in all six.
Detailed Statistics (pp. 10-13)	Displays detailed information for results including counts, standard errors, and confidence intervals (CIs) for each measure.

Interpreting year-to-year results

When examining year-to-year results, you may wonder whether observed differences signify meaningful change and whether a trend is indicated. Figures display CIs around each score showing the range of values that will contain the population score 95% of the time. Upper and lower CI bounds are also reported in the Detailed Statistics section.

For further investigation

The Report Builder—Institution Version, updated with current data in the fall, allows for multi-year analysis of Engagement Indicators and individual items. It also affords the analysis of results by subpopulation.

NSSE 2016 Multi-Year Report

Administration Summaries

Tennessee Technological University

The precision of an institution's population estimates can vary between administrations. An important early step in conducting a multi-year analysis is to review data quality. The values in the tables below were drawn from your *Administration Summary* reports.

Response Details by Participation Year

	First-year students					Seniors				
Year	Response rate[a]	Sampling error[b]	Total respondents[c]	Full completions	Partial completions	Response rate[a]	Sampling error[b]	Total respondents[c]	Full completions	Partial completions
2013										
2014	19%	+/- 3.7%	571	466	105	29%	+/- 3.1%	732	612	120
2015										
2016	17%	+/- 4.8%	353	265	88	19%	+/- 3.9%	522	400	122
2017										
2018										
2019										
2020										

Administration Details by Participation Year

Year	Recruitment method	Sample type	Incentives offered	Topical module(s)	Consortium	BCSSE	FSSE
2013							
2014	Email	Census	Yes	Transferable Skills, Global Perspectives	None	No	No
2015							
2016	Email	Census	Yes	Transferable Skills, Information Literacy	None	No	No
2017							
2018							
2019							
2020							

Note: All of your institution's participation years since 2013 (the first year of the updated NSSE) are reported. Years in which your institution did not participate are blank.

a. Response rates (number of respondents divided by sample size) are adjusted for ineligibility, nondeliverable addresses, and students who were unavailable during the survey administration.

b. Sampling error gauges the precision of results based on a sample survey. It is an estimate (at the 95% confidence level) of how much survey item percentages for your respondents could differ from those of the entire population of students at your institution. While data with larger sampling errors (such as +/-10%) need not be dismissed out of hand, such results should be interpreted more conservatively.

c. This is the count used to calculate response rates and sampling errors for each year's *Administration Summary* report. This number includes all census-administered and randomly sampled students.

NSSE 2016 Multi-Year Report

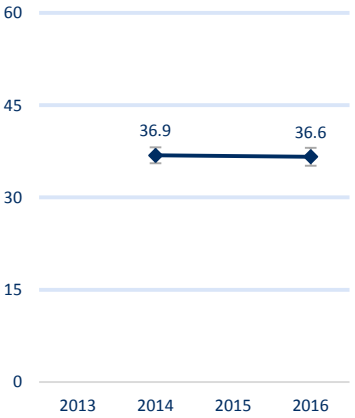
Engagement Results by Theme

Tennessee Technological University

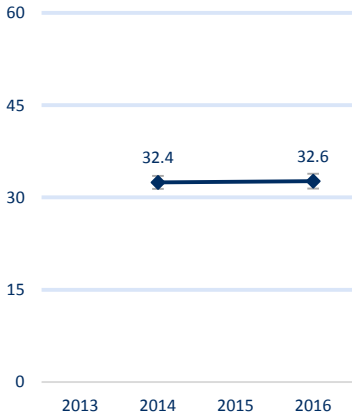
Engagement Indicators (EIs) provide valuable information about distinct aspects of student engagement, organized within four themes. EI scores represent the averaged student responses to a set of related survey questions. The Academic Challenge theme contains four EIs as well as several important individual items. See page 10 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Academic Challenge: First-year students

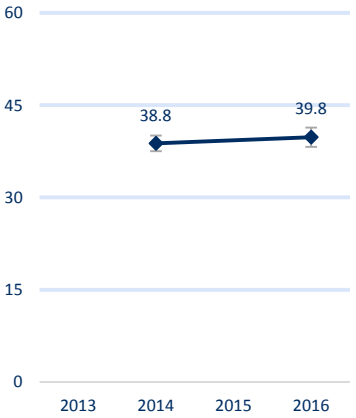
Higher-Order Learning



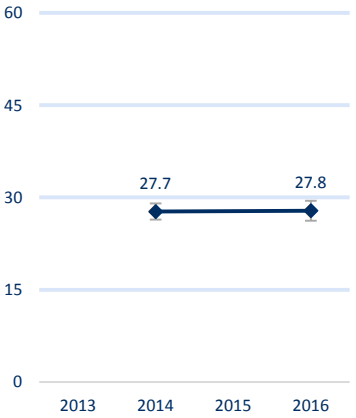
Reflective & Integrative Learning



Learning Strategies

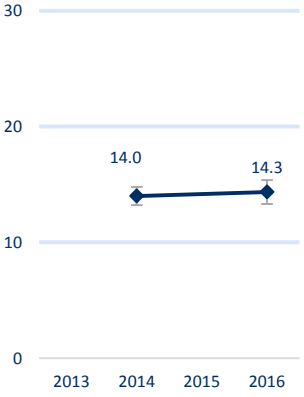


Quantitative Reasoning

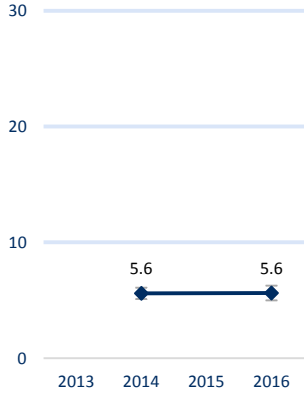


Academic Challenge (additional items): First-year students

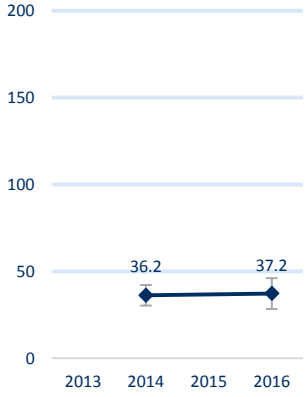
Preparing for Class (hrs/wk)



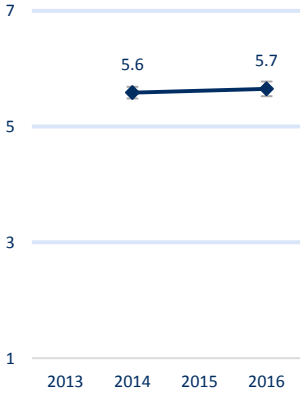
Course Reading (hrs/wk)[a]



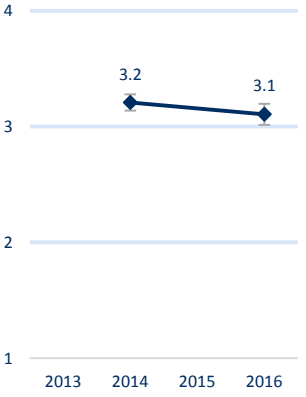
Assigned Writing (pages)[a]



Course Challenge[b]



Academic Emphasis[c]



a. Values for Course Reading and Assigned Writing are estimates calculated from two or more survey questions.
b. Extent to which courses challenged students to do their best work (from 1 = "Not at all" to 7 = "Very much").
c. How much students said the institution emphasizes spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").

NSSE 2016 Multi-Year Report

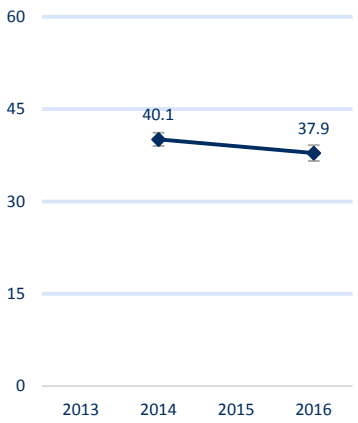
Engagement Results by Theme

Tennessee Technological University

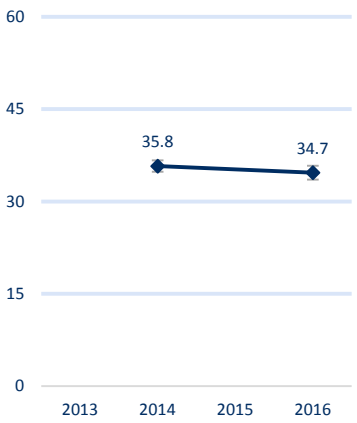
Engagement Indicators (EIs) provide valuable information about distinct aspects of student engagement, organized within four themes. EI scores represent the averaged student responses to a set of related survey questions. The Academic Challenge theme contains four EIs as well as several important individual items. See page 10 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Academic Challenge: Seniors

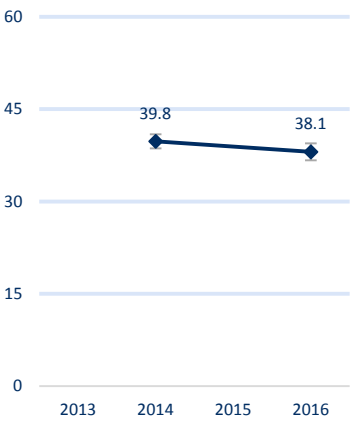
Higher-Order Learning



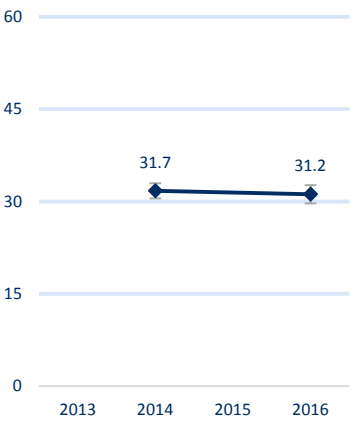
Reflective & Integrative Learning



Learning Strategies

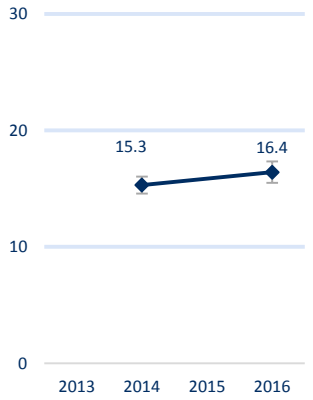


Quantitative Reasoning

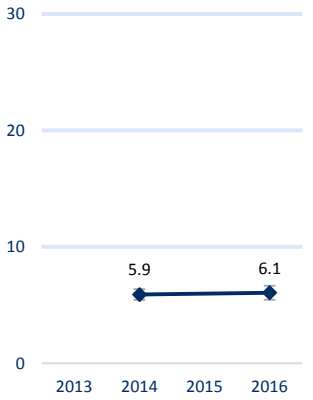


Academic Challenge (additional items): Seniors

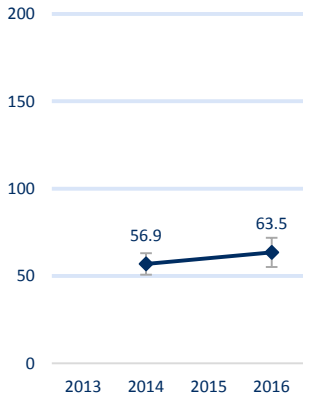
Preparing for Class (hrs/wk)



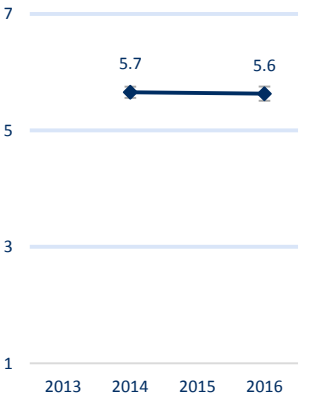
Course Reading (hrs/wk)[a]



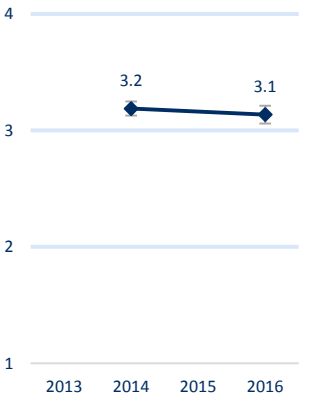
Assigned Writing (pages)[a]



Course Challenge[b]



Academic Emphasis[c]



a. Values for Course Reading and Assigned Writing are estimates calculated from two or more survey questions.
b. Extent to which courses challenged students to do their best work (from 1 = "Not at all" to 7 = "Very much").
c. How much students said the institution emphasizes spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").

NSSE 2016 Multi-Year Report

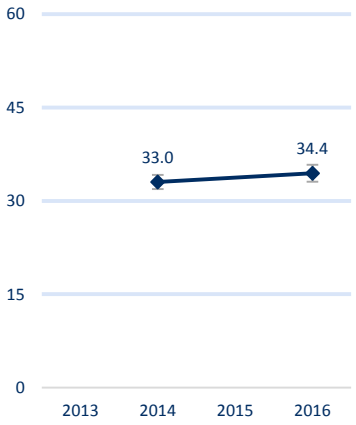
Engagement Results by Theme

Tennessee Technological University

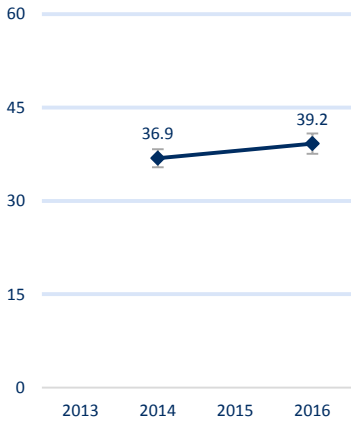
Engagement Indicators (EIs) provide valuable information about distinct aspects of student engagement, organized within four themes. EI scores represent the averaged student responses to a set of related survey questions. The Learning with Peers, Experiences with Faculty, and Campus Environment themes are each represented by two EIs. See pages 10-11 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Learning with Peers: First-year students

Collaborative Learning

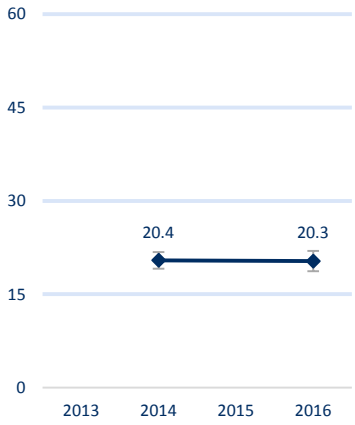


Discussions with Diverse Others

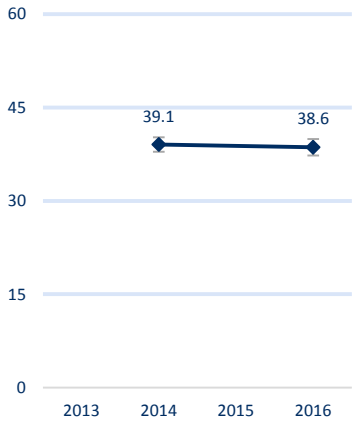


Experiences with Faculty: First-year students

Student-Faculty Interaction

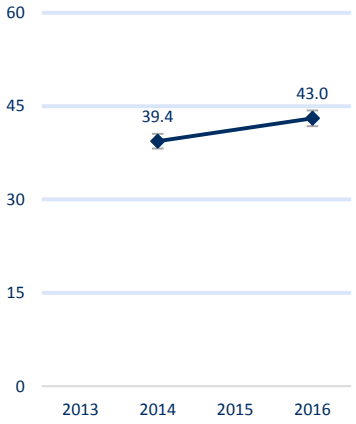


Effective Teaching Practices

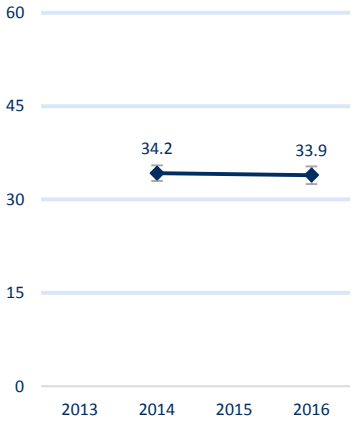


Campus Environment: First-year students

Quality of Interactions



Supportive Environment



NSSE 2016 Multi-Year Report

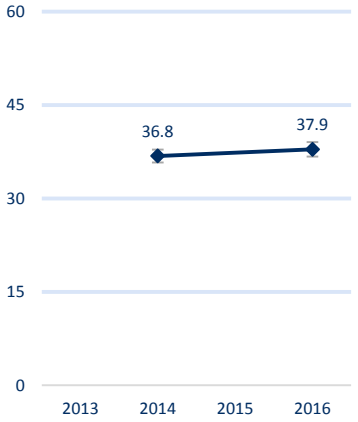
Engagement Results by Theme

Tennessee Technological University

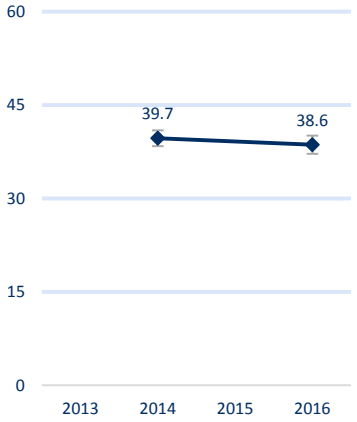
Engagement Indicators (EIs) provide valuable information about distinct aspects of student engagement, organized within four themes. EI scores represent the averaged student responses to a set of related survey questions. The Learning with Peers, Experiences with Faculty, and Campus Environment themes are each represented by two EIs. See pages 10-11 for detailed statistics. For more information, including the items that make up each EI, refer to your *Engagement Indicators* report.

Learning with Peers: Seniors

Collaborative Learning

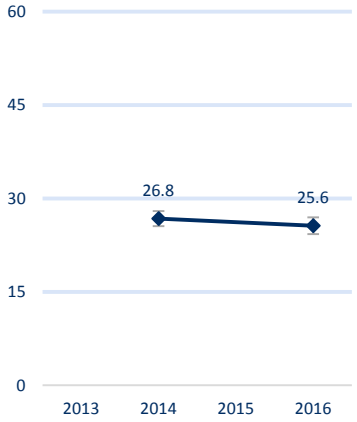


Discussions with Diverse Others

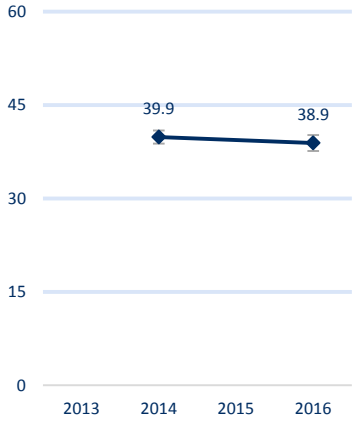


Experiences with Faculty: Seniors

Student-Faculty Interaction

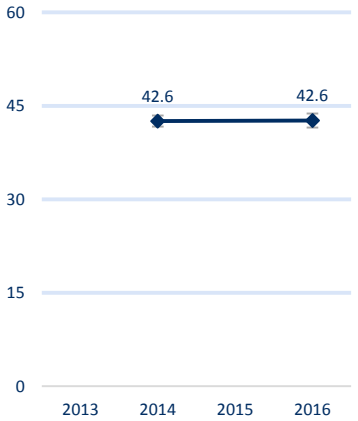


Effective Teaching Practices

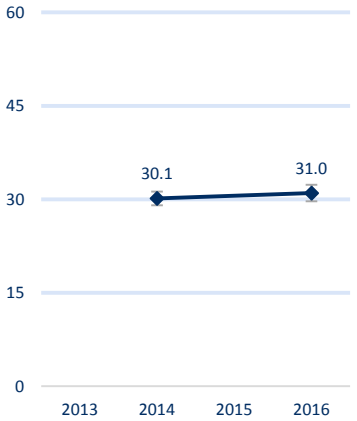


Campus Environment: Seniors

Quality of Interactions



Supportive Environment



NSSE 2016 Multi-Year Report

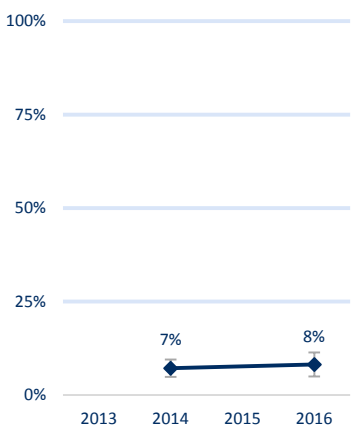
High-Impact Practices

Tennessee Technological University

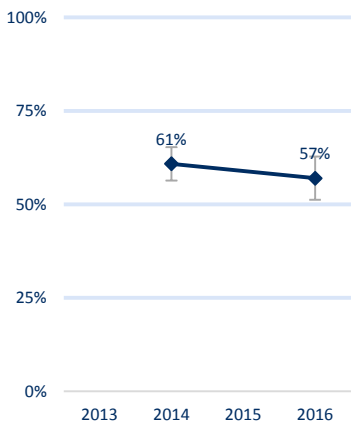
Due to their positive associations with student learning and retention, special undergraduate opportunities are designated "high-impact." The figures below display first-year students' participation, or intent to participate, in High-Impact Practices (HIPs) by year. See page 12 for detailed statistics. For more information, refer to your *High-Impact Practices* report.

High-Impact Practices: First-year students

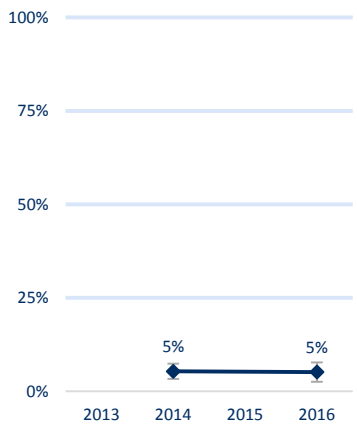
Learning Community
(Done or in progress)



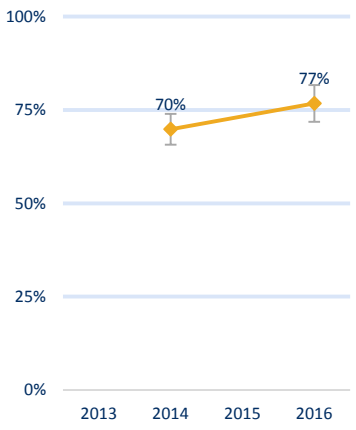
Service-Learning
(Some, most, or all courses)



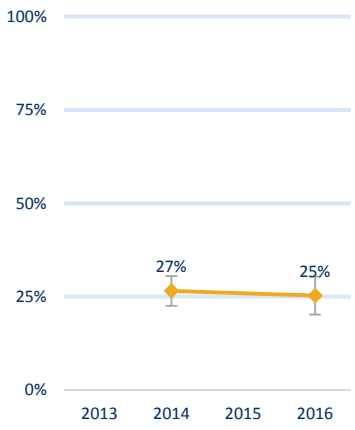
Research with Faculty
(Done or in progress)



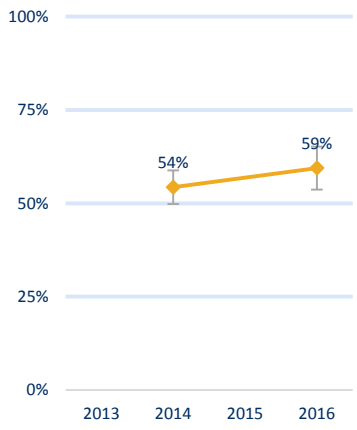
Internship/Field Experience
(Plan to do)



Study Abroad
(Plan to do)

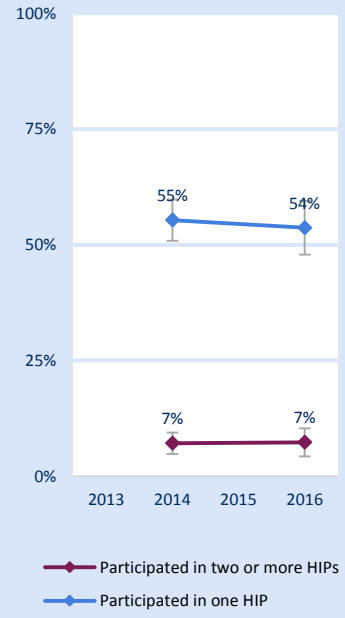


Culminating Senior Experience
(Plan to do)



Overall first-year HIP participation

The figure below displays the percentages of first-year students who participated in one, and two or more, HIPs. The figure is limited to participation in a learning community, service-learning, and research with faculty.



NSSE 2016 Multi-Year Report

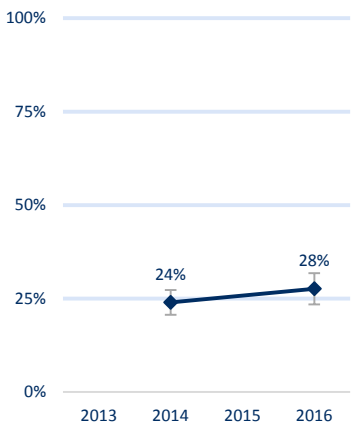
High-Impact Practices

Tennessee Technological University

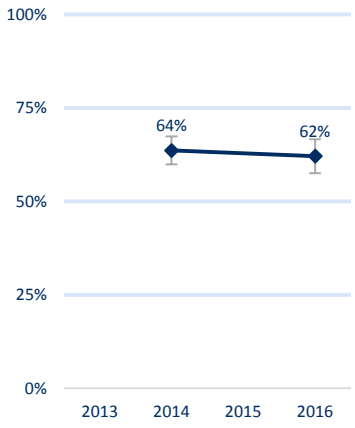
Due to their positive associations with student learning and retention, special undergraduate opportunities are designated "high-impact." Participation in High-Impact Practices (HIPs) by year is displayed in the figures below. See page 12 for detailed statistics. For more information, refer to your *High-Impact Practices* report.

High-Impact Practices: Seniors

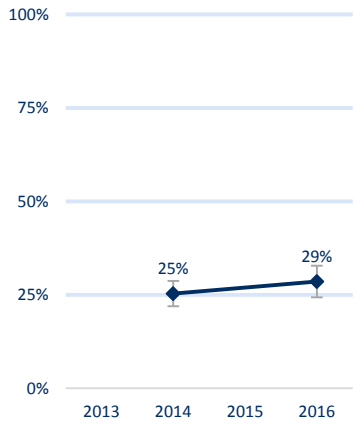
Learning Community
(Done or in progress)



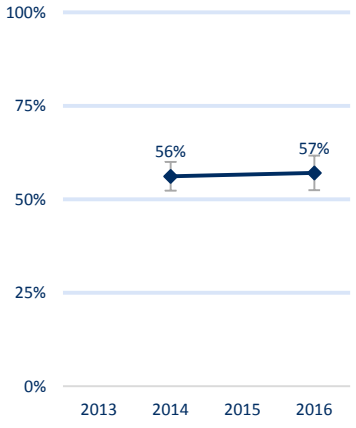
Service-Learning
(Some, most, or all courses)



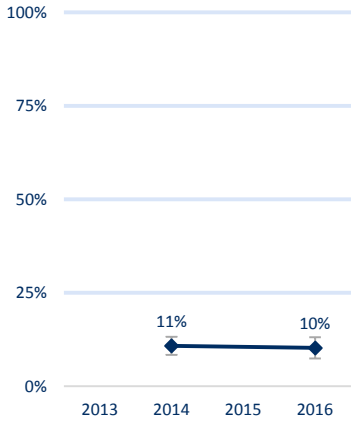
Research with Faculty
(Done or in progress)



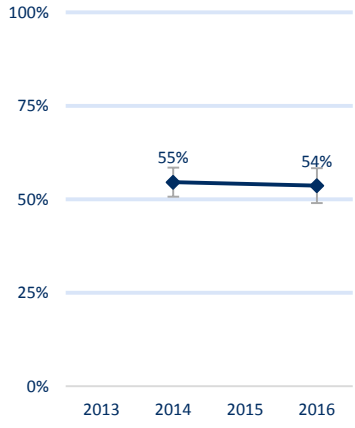
Internship/Field Experience
(Done or in progress)



Study Abroad
(Done or in progress)



Culminating Senior Experience
(Done or in progress)



Overall senior HIP participation

The figure below displays the percentages of seniors who participated in one, and two or more, HIPs. The figure includes all six HIPs.

NSSE 2016 Multi-Year Report

Detailed Statistics: Engagement Indicators and Additional Items

Tennessee Technological University

		First-year students								Seniors							
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
Academic Challenge																	
Higher-Order Learning	*Mean*		**36.9**		**36.6**						**40.1**		**37.9**				
	n		512		321						666		480				
	SD		14.9		13.3						14.2		14.4				
	SE		.66		.74						.55		.66				
	CI upper bound		38.1		38.1						41.2		39.1				
	CI lower bound		35.6		35.2						39.0		36.6				
Reflective & Integrative Learning	*Mean*		**32.4**		**32.6**						**35.8**		**34.7**				
	n		531		329						689		492				
	SD		12.4		11.1						12.4		12.7				
	SE		.54		.61						.47		.57				
	CI upper bound		33.5		33.9						36.7		35.8				
	CI lower bound		31.4		31.4						34.8		33.6				
Learning Strategies	*Mean*		**38.8**		**39.8**						**39.8**		**38.1**				
	n		464		278						632		437				
	SD		14.0		13.3						14.7		14.7				
	SE		.65		.80						.58		.70				
	CI upper bound		40.1		41.4						40.9		39.4				
	CI lower bound		37.5		38.2						38.6		36.7				
Quantitative Reasoning	*Mean*		**27.7**		**27.8**						**31.7**		**31.2**				
	n		520		324						676		487				
	SD		15.3		14.9						16.3		16.7				
	SE		.67		.83						.63		.76				
	CI upper bound		29.0		29.5						33.0		32.7				
	CI lower bound		26.4		26.2						30.5		29.7				
Academic Challenge (additional items)																	
Preparing for Class (hours/week)	*Mean*		**14.0**		**14.3**						**15.3**		**16.4**				
	n		432		266						583		409				
	SD		8.3		8.6						9.0		9.5				
	SE		.40		.53						.37		.47				
	CI upper bound		14.8		15.4						16.0		17.3				
	CI lower bound		13.2		13.3						14.6		15.5				
Course Reading Estimated hours per week calculated from two survey questions.	*Mean*		**5.6**		**5.6**						**5.9**		**6.1**				
	n		419		261						574		404				
	SD		5.1		5.2						5.6		6.2				
	SE		.25		.32						.23		.31				
	CI upper bound		6.1		6.3						6.4		6.7				
	CI lower bound		5.1		5.0						5.4		5.5				

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

Academic Challenge (additional items, continued)																	
Assigned Writing	*Mean*		**36.2**		**37.2**						**56.9**		**63.5**				

		First-year students								Seniors							
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
Estimated number of pages calculated from three survey questions.	*n*		443		277						593		426				
	SD		63.6		75.4						76.4		88.0				
	SE		3.02		4.53						3.14		4.27				
	CI upper bound		42.2		46.1						63.0		71.9				
	CI lower bound		30.3		28.3						50.7		55.1				
Course Challenge	*Mean*		**5.6**		**5.7**						**5.7**		**5.6**				
Extent to which courses challenged students to do their best work (1 = "Not at all" to 7 = "Very much").	*n*		477		285						636		441				
	SD		1.1		1.1						1.2		1.3				
	SE		.05		.06						.05		.06				
	CI upper bound		5.7		5.8						5.8		5.8				
	CI lower bound		5.5		5.5						5.6		5.5				
Academic Emphasis	*Mean*		**3.2**		**3.1**						**3.2**		**3.1**				
Perceived institutional emphasis on spending significant time studying and on academic work (1 = "Very little," 2 = "Some," 3 = "Quite a bit," and 4 = "Very much").	*n*		437		268						593		414				
	SD		0.7		0.8						0.8		0.8				
	SE		.04		.05						.03		.04				
	CI upper bound		3.3		3.2						3.2		3.2				
	CI lower bound		3.1		3.0						3.1		3.1				
Learning with Peers																	
Collaborative Learning	*Mean*		**33.0**		**34.4**						**36.8**		**37.9**				
	n		529		342						705		499				
	SD		13.3		12.8						14.0		13.2				
	SE		.58		.69						.53		.59				
	CI upper bound		34.2		35.8						37.8		39.0				
	CI lower bound		31.9		33.1						35.8		36.7				
Discussions with Diverse Others	*Mean*		**36.9**		**39.2**						**39.7**		**38.6**				
	n		482		286						636		445				
	SD		16.2		14.1						16.3		15.7				
	SE		.74		.83						.65		.75				
	CI upper bound		38.3		40.8						40.9		40.1				
	CI lower bound		35.4		37.6						38.4		37.2				

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

Experiences with Faculty																	
Student-Faculty Interaction	*Mean*		**20.4**		**20.3**						**26.8**		**25.6**				
	n		522		323						681		481				
	SD		15.6		14.9						16.1		15.0				

NSSE 2016 Multi-Year Report

Detailed Statistics: Engagement Indicators and Additional Items

Tennessee Technological University

		First-year students								Seniors							
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
	SE		.68		.83						.62		.69				
	CI upper bound		21.8		22.0						28.0		27.0				
	CI lower bound		19.1		18.7						25.5		24.3				
Effective Teaching Practices	*Mean*		**39.1**		**38.6**						**39.9**		**38.9**				
	n		527		325						682		488				
	SD		13.6		12.2						14.0		14.4				
	SE		.59		.67						.54		.65				
	CI upper bound		40.2		39.9						40.9		40.2				
	CI lower bound		37.9		37.3						38.8		37.6				
Campus Environment																	
Quality of Interactions	*Mean*		**39.4**		**43.0**						**42.6**		**42.6**				
	n		465		275						621		432				
	SD		13.0		10.7						11.3		12.0				
	SE		.60		.64						.45		.58				
	CI upper bound		40.5		44.3						43.4		43.8				
	CI lower bound		38.2		41.8						41.7		41.5				
Supportive Environment	*Mean*		**34.2**		**33.9**						**30.1**		**31.0**				
	n		433		266						588		405				
	SD		13.3		11.8						13.6		13.6				
	SE		.64		.73						.56		.68				
	CI upper bound		35.5		35.3						31.2		32.3				
	CI lower bound		33.0		32.5						29.0		29.7				

Notes: n = Number of respondents; SD = Standard deviation; SE = Standard error of the mean; upper and lower bounds represent the 95% confidence interval (mean +/- 1.96 * SE).

NSSE national survey of student engagement

NSSE 2016 Multi-Year Report

Detailed Statistics: High-Impact Practices

Tennessee Technological University

		First-year students								Seniors							
		2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016	2017	2018	2019	2020
Learning Community[a]	*%*		**7**		**8**						**24**		**28**				
	n		475		281						638		440				
	SE		1.2		1.6						1.7		2.1				
	CI upper bound (%)		9		11						27		32				
	CI lower bound (%)		5		5						21		23				
Service-Learning[a]	*%*		**61**		**57**						**64**		**62**				
	n		459		283						636		439				
	SE		2.3		2.9						1.9		2.3				
	CI upper bound (%)		65		63						67		67				
	CI lower bound (%)		56		51						60		58				
Research with Faculty[a]	*%*		**5**		**5**						**25**		**29**				
	n		470		279						634		439				
	SE		1.0		1.3						1.7		2.2				
	CI upper bound (%)		7		8						29		33				
	CI lower bound (%)		3		3						22		24				
Internship or Field Experience[b]	*%*		**70**		**77**						**56**		**57**				
	n		477		284						642		442				
	SE		2.1		2.5						2.0		2.4				
	CI upper bound (%)		74		82						60		62				
	CI lower bound (%)		66		72						52		52				
Study Abroad[b]	*%*		**27**		**25**						**11**		**10**				
	n		470		281						634		440				
	SE		2.0		2.6						1.2		1.4				
	CI upper bound (%)		31		30						13		13				
	CI lower bound (%)		23		20						8		7				
Culminating Senior Experience[b]	*%*		**54**		**59**						**55**		**54**				
	n		472		281						631		440				
	SE		2.3		2.9						2.0		2.4				
	CI upper bound (%)		59		65						58		58				
	CI lower bound (%)		50		54						51		49				
Overall HIP Participation[c]																	
Participated in one HIP	*%*		**55**		**54**						**22**		**20**				
	n		479		284						642		442				
	SE		2.3		3.0						1.6		1.9				
	CI upper bound (%)		60		59						25		24				
	CI lower bound (%)		51		48						19		16				
Participated in two or more HIPs	*%*		**7**		**7**						**69**		**71**				
	n		479		284						642		442				
	SE		1.2		1.5						1.8		2.2				
	CI upper bound (%)		9		10						73		75				
	CI lower bound (%)		5		4						66		66				

Notes: n = Number of respondents; SE = Standard error of the proportion (sqrt[(p * (1 - p)) / (n - 1)]) where p is the proportion; upper and lower bounds represent the 95% confidence interval (p +/- 1.96 * SE).

a. Results are the percentage who had done the activity.

b. First-year results are the percentage who planned to do the activity, and senior results are the percentage who had done the activity.

c. First-year results are limited to participation in a Learning Community, Service-Learning, and Research with Faculty; senior results include all six HIPs.

IPEDS: 221847