

**2015 NSSE SURVEY  
SUMMARY REPORT FOR  
SCHOOL OF ENGINEERING AND TECHNOLOGY**

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## Introduction

The National Survey of Student Engagement (NSSE) was developed to document dimensions of quality in undergraduate education and provides information and assistance to college, universities, and other organizations to improve student learning. The final NSSE report consists of four scales called Benchmarks of Engagement Indicators (Benchmarks). These Engagement Indicators provide valuable information about distinct aspects of student engagement. The Engagement Indicators are grouped into four themes. The four themes are Level of Academic Challenge, Learning with Peers, Experiences with Faculty, Campus Environment.

The following report is a summary of responses for the School of Engineering and Technology compared to responses from students enrolled in similar programs at peer institutions. This report organizes the NSSE items according to Engagement Indicators, or clusters of highly related items that measure a specific aspect of the educational experiences of a group of students. Each Engagement Indicator is nested under a corresponding theme with which it is associated. The table below depicts the number of items corresponding with an Engagement Indicator in each theme for both first-year and senior respondents identified as an “area of strength” (an effect size of 0.1 standard deviations greater than the Peer Institution average), “asset to protect” (between 0.05 and 0.1 standard deviations greater than the Peer Institution average), “issue to be mindful of” (between -0.01 and -0.2 standard deviations below Peer Institution average) and “opportunity for improvement” (an effect size of -0.1 standard deviations below the Peer Institution average or more.) The Peer institution mean represents the mean from students at peer institutions in programs similar to those in your school.

In spring semester 2015, a census of 4,382 seniors and 3,112 first-year students at IUPUI and IUPUC were invited to complete the NSSE survey. A total of 931 seniors responded to the survey for a response rate of 21.2%. Similarly, 592 first-year students responded to the survey for a response rate of 19.0%. Of Engineering and Technology respondents, 48 were first-years and 146 were seniors. For further information on NSSE, please contact Steven Graunke in the Office of Institutional Research and Decision Support at [sgraunke@iupui.edu](mailto:sgraunke@iupui.edu).

Table 1  
 Areas of Strength, Assets to Protect, Issues to be Mindful of, and Opportunities for Improvement  
 First-Year Students

<b>Overall Descriptor</b>	<b>Areas of Strength</b>	<b>Assets to Protect</b>	<b>Issues to be Mindful of</b>	<b>Opportunities for Improvement</b>
Level of Academic Challenge	2	1	3	8
Learning with Peers	2	0	4	2
Experiences with Faculty	1	4	0	1
Campus Environment	6	2	0	4

Table 2  
 Areas of Strength, Assets to Protect, Issues to be Mindful of, and Opportunities for Improvement  
 Seniors

<b>Overall Descriptor</b>	<b>Areas of Strength</b>	<b>Assets to Protect</b>	<b>Issues to be Mindful of</b>	<b>Opportunities for Improvement</b>
Level of Academic Challenge	2	2	5	6
Learning with Peers	0	0	0	7
Experiences with Faculty	1	0	1	2
Campus Environment	5	1	1	6

Table 3  
Academic Challenge  
First-Year Students

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Higher-Order Learning<sup>a</sup></b>						
Applying facts, theories, or methods to practical problems or new situations	46	3.20	0.86	0.13	3.20	0.00
Analyzing an idea, experience, or line of reasoning in depth by examining its parts <sup>2</sup>	45	3.04	0.82	0.12	3.00	0.05
Evaluating a point of view, decision, or information source <sup>4</sup>	45	2.62	0.78	0.12	2.80	-0.23
Forming a new idea or understanding from various pieces of information <sup>1</sup>	45	2.89	0.86	0.13	2.80	0.10
<b>Reflective &amp; Integrative Learning<sup>b</sup></b>						
Combined ideas from different courses when completing assignments <sup>1</sup>	48	2.79	0.68	0.10	2.70	0.13
Connected your learning to societal problems or issues	47	2.51	0.83	0.12	2.50	0.01
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments <sup>4</sup>	45	2.20	0.89	0.13	2.40	-0.22
Examined the strengths and weaknesses of your own views on a topic or issue <sup>4</sup>	45	2.64	0.80	0.12	2.80	-0.20
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective <sup>3</sup>	45	2.73	0.92	0.14	2.80	-0.08
Learned something that changed the way you understand an issue or concept <sup>4</sup>	45	2.64	0.80	0.12	2.80	-0.20
Connected ideas from your courses to your prior experiences and knowledge <sup>3</sup>	45	2.93	0.78	0.12	3.00	-0.09
<b>Learning Strategies<sup>b</sup></b>						
Identified key information from reading assignments <sup>4</sup>	44	2.70	0.82	0.12	3.00	<b>-0.37</b>
Reviewed your notes after class	44	2.93	0.79	0.12	2.90	0.04
Summarized what you learned in class or from course materials <sup>4</sup>	43	2.72	0.83	0.13	2.80	-0.10
<b>Quantitative Reasoning<sup>b</sup></b>						
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.) <sup>3</sup>	45	2.82	1.03	0.15	2.90	-0.08
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.) <sup>4</sup>	45	2.36	1.03	0.15	2.50	-0.14
Evaluated what others have concluded from numerical information <sup>4</sup>	45	2.33	0.98	0.15	2.50	-0.17

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 4  
Learning with Peers  
First-Year Students

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Collaborative Learning<sup>a</sup></b>						
Asked another student to help you understand course material <sup>1</sup>	48	2.88	0.82	0.12	2.80	0.10
Explained course material to one or more students <sup>3</sup>	48	2.85	0.83	0.12	2.90	-0.06
Prepared for exams by discussing or working through course material with other students <sup>4</sup>	47	2.64	1.05	0.15	2.80	-0.15
Worked with other students on course projects or assignments <sup>1</sup>	48	3.00	0.83	0.12	2.90	0.12
<b>Discussions with Diverse Others<sup>a</sup></b>						
People from a race or ethnicity other than your own <sup>4</sup>	44	3.00	1.03	0.16	3.30	-0.29
People from an economic background other than your own <sup>3</sup>	44	3.14	1.05	0.16	3.20	-0.06
People with religious beliefs other than your own <sup>3</sup>	44	3.05	1.01	0.15	3.10	-0.05
People with political views other than your own <sup>3</sup>	44	3.02	1.09	0.16	3.10	-0.07

<sup>a</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 5  
Experiences with Faculty  
First-Year Students

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Student-Faculty Interaction<sup>b</sup></b>						
Talked about career plans with a faculty member	46	2.11	0.90	0.13	2.10	0.01
Worked w/faculty on activities other than coursework (committees, student groups, etc.)	46	1.74	0.95	0.14	1.70	0.04
Discussed course topics, ideas, or concepts with a faculty member outside of class	46	1.93	0.95	0.14	1.90	0.03
Discussed your academic performance with a faculty member <sup>2</sup>	46	2.07	0.80	0.12	2.00	0.09
<b>Effective Teaching Practices<sup>a</sup></b>						
Clearly explained course goals and requirements <sup>1</sup>	45	3.18	0.81	0.12	3.10	0.10
Taught course sessions in an organized way <sup>2</sup>	45	3.09	0.95	0.14	3.00	0.09
Used examples or illustrations to explain difficult points <sup>4</sup>	45	3.00	0.80	0.12	3.10	-0.13
Provided feedback on a draft or work in progress <sup>2</sup>	44	2.77	0.74	0.11	2.70	0.09
Provided prompt and detailed feedback on tests or completed assignments <sup>2</sup>	45	2.64	0.80	0.12	2.60	0.05

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 6  
Campus Environment  
First-Year Students

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Quality of Interactions<sup>b</sup></b>						
Students <sup>1</sup>	43	5.86	1.13	0.17	5.60	0.23
Academic advisors <sup>1</sup>	43	5.28	1.56	0.24	5.10	0.12
Faculty <sup>2</sup>	42	5.12	1.42	0.22	5.00	0.08
Student Services Staff (career services, student activities, housing, etc.) <sup>1</sup>	35	4.97	1.58	0.27	4.80	0.11
Other administrative staff and offices (registrar, financial aid, etc.) <sup>1</sup>	40	5.10	1.55	0.25	4.70	0.26
<b>Supportive Environment<sup>a</sup></b>						
Providing support to help students succeed academically <sup>1</sup>	39	3.26	0.68	0.11	3.10	0.24
Using learning support services (tutoring services, writing center, etc.) <sup>1</sup>	39	3.28	0.83	0.13	3.20	0.10
Encouraging contact among students from diff. backgrounds (soc., racial/eth., relig., etc.) <sup>2</sup>	40	2.85	0.92	0.15	2.80	0.05
Providing opportunities to be involved socially	40	3.00	0.82	0.13	3.00	0.00
Providing support for your overall well-being (recreation, health care, counseling, etc.) <sup>4</sup>	39	2.87	0.92	0.15	3.00	-0.14
Helping you manage your non-academic responsibilities (work, family, etc.) <sup>4</sup>	37	2.24	0.93	0.15	2.40	-0.17
Attending campus activities and events (performing arts, athletic events, etc.) <sup>4</sup>	38	2.76	0.91	0.15	2.90	-0.15
Attending events that address important social, economic, or political issues <sup>4</sup>	39	2.51	0.91	0.15	2.60	-0.10

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Poor, 2, 3, 4, 5, 6, 7=Excellent

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 7  
Academic Challenge  
Seniors

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Higher-Order Learning<sup>a</sup></b>						
Applying facts, theories, or methods to practical problems or new situations <sup>4</sup>	134	3.07	0.88	0.08	3.30	-0.26
Analyzing an idea, experience, or line of reasoning in depth by examining its parts <sup>4</sup>	135	2.90	0.93	0.08	3.10	-0.21
Evaluating a point of view, decision, or information source <sup>3</sup>	134	2.43	0.99	0.09	2.50	-0.07
Forming a new idea or understanding from various pieces of information <sup>3</sup>	134	2.75	0.90	0.08	2.80	-0.06
<b>Reflective &amp; Integrative Learning<sup>b</sup></b>						
Combined ideas from different courses when completing assignments <sup>4</sup>	142	2.87	0.86	0.07	3.00	-0.15
Connected your learning to societal problems or issues <sup>3</sup>	139	2.32	0.92	0.08	2.40	-0.09
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	138	1.96	0.92	0.08	2.00	-0.04
Examined the strengths and weaknesses of your own views on a topic or issue <sup>1</sup>	138	2.64	0.90	0.08	2.50	0.16
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective <sup>2</sup>	135	2.68	0.94	0.08	2.60	0.09
Learned something that changed the way you understand an issue or concept <sup>1</sup>	135	2.78	0.81	0.07	2.70	0.10
Connected ideas from your courses to your prior experiences and knowledge <sup>3</sup>	135	3.04	0.81	0.07	3.10	-0.07
<b>Learning Strategies<sup>b</sup></b>						
Identified key information from reading assignments <sup>2</sup>	126	2.94	0.86	0.80	2.90	0.05
Reviewed your notes after class	127	2.79	0.92	0.08	2.80	-0.01
Summarized what you learned in class or from course materials <sup>3</sup>	127	2.65	0.95	0.08	2.70	-0.05
<b>Quantitative Reasoning<sup>b</sup></b>						
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.) <sup>4</sup>	134	2.69	0.86	0.07	3.10	<b>-0.48</b>
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.) <sup>4</sup>	134	2.36	1.04	0.09	2.60	-0.23
Evaluated what others have concluded from numerical information <sup>4</sup>	133	2.35	0.90	0.08	2.70	<b>-0.39</b>

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 8  
Learning with Peers  
Seniors

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Collaborative Learning<sup>a</sup></b>						
Asked another student to help you understand course material <sup>4</sup>	145	2.41	0.879	0.073	2.80	<b>-0.44</b>
Explained course material to one or more students <sup>4</sup>	146	2.78	0.809	0.067	3.00	-0.27
Prepared for exams by discussing or working through course material with other students <sup>4</sup>	146	2.44	0.968	0.080	2.80	<b>-0.37</b>
Worked with other students on course projects or assignments <sup>4</sup>	146	2.85	0.858	0.071	3.20	<b>-0.41</b>
<b>Discussions with Diverse Others<sup>a</sup></b>						
People from a race or ethnicity other than your own	127	3.09	0.886	0.079	3.10	-0.01
People from an economic background other than your own <sup>4</sup>	126	2.97	0.963	0.086	3.10	-0.13
People with religious beliefs other than your own <sup>4</sup>	126	2.98	0.942	0.084	3.10	-0.13
People with political views other than your own <sup>4</sup>	125	2.93	0.977	0.087	3.10	-0.17

<sup>a</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement

Table 9  
Experiences with Faculty  
Seniors

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Student-Faculty Interaction<sup>b</sup></b>						
Talked about career plans with a faculty member	135	2.20	0.92	0.08	2.20	0.00
Worked w/faculty on activities other than coursework (committees, student groups, etc.)	135	1.82	0.98	0.09	1.80	0.02
Discussed course topics, ideas, or concepts with a faculty member outside of class <sup>4</sup>	134	1.99	0.94	0.08	2.10	-0.12
Discussed your academic performance with a faculty member	133	2.01	0.92	0.08	2.00	0.01
<b>Effective Teaching Practices<sup>a</sup></b>						
Clearly explained course goals and requirements <sup>4</sup>	135	2.90	0.85	0.07	3.00	-0.12
Taught course sessions in an organized way	133	2.92	0.90	0.08	2.90	0.02
Used examples or illustrations to explain difficult points <sup>3</sup>	134	2.95	0.94	0.08	3.00	-0.05
Provided feedback on a draft or work in progress <sup>1</sup>	133	2.57	0.99	0.09	2.40	0.17
Provided prompt and detailed feedback on tests or completed assignments	134	2.60	0.92	0.08	2.60	0.00

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Never, 2=Sometimes, 3=Often, 4=Very Often

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement



Table 10  
Campus Environment  
Seniors

	N	Mean	Standard Deviation	Standard Error	Peer Mean	Effect Size
<b>Quality of Interactions<sup>b</sup></b>						
Students <sup>3</sup>	127	5.57	1.38	0.12	5.70	-0.09
Academic advisors <sup>1</sup>	126	5.07	1.79	0.16	4.80	0.15
Faculty <sup>1</sup>	126	5.21	1.56	0.14	5.00	0.13
Student Services Staff (career services, student activities, housing, etc.) <sup>1</sup>	97	4.97	1.97	0.20	4.60	0.19
Other administrative staff and offices (registrar, financial aid, etc.) <sup>1</sup>	113	4.98	1.71	0.16	4.40	<b>0.34</b>
<b>Supportive Environment<sup>a</sup></b>						
Providing support to help students succeed academically <sup>2</sup>	113	2.84	0.85	0.08	2.80	0.05
Using learning support services (tutoring services, writing center, etc.) <sup>1</sup>	111	2.88	0.89	0.09	2.70	0.20
Encouraging contact among students from diff. backgrounds (soc., racial/eth., relig., etc.) <sup>4</sup>	111	2.39	1.02	0.10	2.50	-0.11
Providing opportunities to be involved socially <sup>4</sup>	111	2.65	1.05	0.10	2.80	-0.14
Providing support for your overall well-being (recreation, health care, counseling, etc.) <sup>4</sup>	111	2.30	0.94	0.09	2.70	<b>-0.43</b>
Helping you manage your non-academic responsibilities (work, family, etc.) <sup>4</sup>	112	1.87	0.96	0.09	2.00	-0.13
Attending campus activities and events (performing arts, athletic events, etc.) <sup>4</sup>	111	2.16	0.93	0.09	2.60	<b>-0.47</b>
Attending events that address important social, economic, or political issues <sup>4</sup>	112	2.04	0.94	0.09	2.30	-0.28

<sup>a</sup> 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much

<sup>b</sup> 1=Poor, 2, 3, 4, 5, 6, 7=Excellent

<sup>1</sup> Area of Strength <sup>2</sup> Asset to Protect <sup>3</sup> Issue to be Mindful of <sup>4</sup> Opportunity for Improvement