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# University of Minnesota Duluth

## ***NSSE 2014 Major Field Report, Part II***

### ***Comparisons to Other Institutions***

### **Phys Sci, Math, CS**

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

*The Major Field Report category 'Phys Sci, Math, CS' includes the following majors: Physical sciences (general); Astronomy; Atmospheric science (including meteorology); Chemistry; Computer science; Earth science (including geology); Mathematics; Physics; Statistics; Other physical sciences.*

*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: Phys Sci, Math, CS.

#### NSSE results included in MFR, Part II

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

### Majors

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 categories. Institutions choosing not to customize their major categories receive NSSE's ten major field categories. 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. First-year students' majors may include undeclared but intended majors and much of the first-year experience may take place outside of the major field. As a result, first-year results should be interpreted with caution.

### Technical Requirements

Major categories 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 category 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 adapted from the former Benchmarks of Effective Educational Practice. 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.

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Overview of Engagement Indicators: Phys Sci, Math, CS

University of Minnesota Duluth

## 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<sup>a</sup> 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 Phys Sci, Math, CS			Seniors in Phys Sci, Math, CS		
		Your first-year students compared with UMD Peers	Your first-year students compared with Competitors	Your first-year students compared with National Comparison	Your seniors compared with UMD Peers	Your seniors compared with Competitors	Your seniors compared with National Comparison
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	--	--	--	--	--	--

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Phys Sci, Math, CS

University of Minnesota Duluth

## First-year students<sup>a</sup> in Phys Sci, Math, CS

	Mean statistics			Percentile <sup>d</sup> scores					Comparison results			
	Mean	SD <sup>b</sup>	SEM <sup>c</sup>	5th	25th	50th	75th	95th	Deg. of freedom <sup>e</sup>	Mean diff.	Sig. <sup>f</sup>	Effect size <sup>g</sup>
<b>Academic Challenge</b>												
<b>Higher-Order Learning</b>												
UMD (N = 39)	35.6	13.5	2.17	15	25	35	40	60				
UMD Peers	38.4	13.2	.94	15	30	40	50	60	232	-2.7		-.205
Competitors	37.1	12.4	.85	15	30	35	45	60	250	-1.4		-.113
National Comparison	39.7	13.4	.86	15	30	40	50	60	284	-4.1		-.301
<b>Reflective &amp; Integrative Learning</b>												
UMD (N = 40)	33.2	12.7	2.00	11	26	31	40	57				
UMD Peers	33.7	12.4	.88	13	26	34	40	57	238	-.5		-.041
Competitors	32.0	12.3	.83	11	23	31	40	54	257	1.2		.096
National Comparison	33.2	11.8	.75	14	26	34	40	54	288	.0		-.003
<b>Learning Strategies</b>												
UMD (N = 39)	38.1	16.4	2.63	7	27	40	53	60				
UMD Peers	37.5	13.2	.95	20	27	40	47	60	233	.6		.046
Competitors	36.3	14.0	.95	13	27	33	47	60	255	1.8		.126
National Comparison	37.5	14.8	.94	13	27	40	47	60	285	.6		.043
<b>Quantitative Reasoning</b>												
UMD (N = 41)	32.2	14.1	2.21	13	20	27	40	53				
UMD Peers	29.3	16.0	1.14	0	20	27	40	60	236	2.9		.187
Competitors	29.6	14.2	.96	7	20	27	40	53	257	2.6		.182
National Comparison	30.3	16.7	1.06	0	20	27	40	60	288	1.9		.119
<b>Learning with Peers</b>												
<b>Collaborative Learning</b>												
UMD (N = 41)	34.9	14.2	2.22	15	25	35	45	60				
UMD Peers	31.4	13.3	.96	10	20	30	40	60	233	3.5		.260
Competitors	31.0	12.9	.88	10	20	30	40	55	255	3.9		.297
National Comparison	30.7	12.8	.81	10	20	30	40	55	287	4.2		.321
<b>Discussions with Diverse Others</b>												
UMD (N = 40)	36.1	15.0	2.37	13	23	40	45	60				
UMD Peers	41.2	14.5	1.03	20	30	40	55	60	235	-5.1	*	-.351
Competitors	38.4	14.1	.96	15	30	40	50	60	255	-2.3		-.160
National Comparison	40.8	15.7	.99	15	30	40	55	60	288	-4.7		-.300

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Phys Sci, Math, CS

University of Minnesota Duluth

## First-year students<sup>a</sup> in Phys Sci, Math, CS

	Mean statistics			Percentile <sup>d</sup> scores					Comparison results			
	Mean	SD <sup>b</sup>	SEM <sup>c</sup>	5th	25th	50th	75th	95th	Deg. of freedom <sup>e</sup>	Mean diff.	Sig. <sup>f</sup>	Effect size <sup>g</sup>
<b>Experiences with Faculty</b>												
<b>Student-Faculty Interaction</b>												
UMD (N = 39)	18.3	11.8	1.89	0	10	15	25	40				
UMD Peers	15.9	12.9	.92	0	5	15	20	40	235	2.4		.192
Competitors	18.4	13.5	.91	0	10	15	25	45	258	.0		-.003
National Comparison	20.6	14.9	.95	0	10	20	30	55	285	-2.3		-.155
<b>Effective Teaching Practices</b>												
UMD (N = 41)	38.6	12.2	1.90	20	32	36	48	60				
UMD Peers	38.9	12.4	.88	18	32	40	48	60	239	-.4		-.029
Competitors	38.4	12.1	.82	20	32	40	48	60	260	.2		.013
National Comparison	41.4	12.8	.81	20	32	40	52	60	290	-2.8		-.223
<b>Campus Environment</b>												
<b>Quality of Interactions</b>												
UMD (N = 40)	43.8	12.2	1.93	21	39	48	50	59				
UMD Peers	41.1	11.4	.86	20	34	42	50	60	216	2.7		.232
Competitors	43.5	10.5	.72	25	38	45	50	60	252	.3		.028
National Comparison	43.2	11.3	.73	23	38	45	50	60	278	.6		.050
<b>Supportive Environment</b>												
UMD (N = 41)	34.6	10.4	1.63	20	25	33	40	50				
UMD Peers	35.5	11.9	.85	18	28	35	43	60	237	-.9		-.080
Competitors	36.4	12.6	.86	18	28	38	45	60	257	-1.9		-.152
National Comparison	37.1	12.3	.78	15	30	38	45	60	287	-2.5		-.209

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Phys Sci, Math, CS

University of Minnesota Duluth

## Seniors<sup>a</sup> in

## Phys Sci, Math, CS

	Mean statistics			Percentile <sup>d</sup> scores					Comparison results			
	Mean	SD <sup>b</sup>	SEM <sup>c</sup>	5th	25th	50th	75th	95th	Deg. of freedom <sup>e</sup>	Mean diff.	Sig. <sup>f</sup>	Effect size <sup>g</sup>
<b>Academic Challenge</b>												
<b>Higher-Order Learning</b>												
UMD (N = 55)	37.3	13.1	1.76	15	25	35	50	60				
UMD Peers	39.4	14.1	.88	15	30	40	50	60	308	-2.1		-.149
Competitors	38.5	13.7	.74	15	30	40	50	60	393	-1.2		-.091
National Comparison	38.9	13.9	.69	15	30	40	50	60	460	-1.6		-.117
<b>Reflective &amp; Integrative Learning</b>												
UMD (N = 59)	31.1	11.1	1.44	14	23	29	40	54				
UMD Peers	33.7	12.0	.75	14	26	34	40	54	316	-2.6		-.219
Competitors	34.1	12.1	.65	14	26	34	43	54	406	-3.0		-.249
National Comparison	34.5	13.2	.65	11	26	34	43	60	469	-3.4		-.262
<b>Learning Strategies</b>												
UMD (N = 59)	32.3	16.0	2.08	7	20	33	47	60				
UMD Peers	36.8	14.3	.90	13	27	37	47	60	311	-4.5	*	-.308
Competitors	36.3	15.0	.81	13	27	33	47	60	401	-4.0		-.263
National Comparison	37.5	14.6	.72	13	27	40	47	60	462	-5.2	*	-.350
<b>Quantitative Reasoning</b>												
UMD (N = 57)	35.7	14.9	1.98	20	27	33	47	60				
UMD Peers	36.0	17.8	1.10	7	20	40	53	60	316	-.3		-.020
Competitors	36.3	15.8	.84	7	27	40	47	60	404	-.6		-.037
National Comparison	35.2	17.0	.84	7	20	33	47	60	463	.4		.025
<b>Learning with Peers</b>												
<b>Collaborative Learning</b>												
UMD (N = 57)	36.6	12.1	1.60	20	25	35	45	60				
UMD Peers	36.9	13.5	.85	15	25	35	45	60	310	-.3		-.023
Competitors	34.2	13.5	.73	15	25	35	45	60	399	2.4		.181
National Comparison	36.2	14.5	.72	10	25	35	45	60	80	.4		.029
<b>Discussions with Diverse Others</b>												
UMD (N = 59)	38.0	14.6	1.90	20	25	40	50	60				
UMD Peers	39.0	16.6	1.03	10	30	40	55	60	318	-1.0		-.062
Competitors	39.2	14.6	.78	15	30	40	50	60	404	-1.2		-.083
National Comparison	38.6	15.7	.78	10	28	40	50	60	461	-.6		-.039

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Engagement Indicators: Phys Sci, Math, CS

University of Minnesota Duluth

## Seniors<sup>a</sup> in

## Phys Sci, Math, CS

	Mean statistics			Percentile <sup>d</sup> scores					Comparison results			
	Mean	SD <sup>b</sup>	SEM <sup>c</sup>	5th	25th	50th	75th	95th	Deg. of freedom <sup>e</sup>	Mean diff.	Sig. <sup>f</sup>	Effect size <sup>g</sup>
<b>Experiences with Faculty</b>												
<b>Student-Faculty Interaction</b>												
UMD (N = 57)	23.7	14.9	1.97	5	15	20	35	50				
UMD Peers	24.5	15.7	.98	0	10	20	35	55	312	-.8		-.053
Competitors	24.3	15.0	.81	0	15	25	35	50	401	-.6		-.040
National Comparison	26.3	16.3	.81	0	15	25	40	60	463	-2.6		-.164
<b>Effective Teaching Practices</b>												
UMD (N = 59)	38.4	11.8	1.54	20	32	40	48	60				
UMD Peers	40.0	13.5	.83	16	32	40	52	60	319	-1.6		-.122
Competitors	39.9	12.2	.65	20	32	40	48	60	406	-1.5		-.122
National Comparison	40.4	12.7	.62	20	32	40	52	60	471	-2.0		-.162
<b>Campus Environment</b>												
<b>Quality of Interactions</b>												
UMD (N = 58)	41.8	10.8	1.41	24	36	43	50	56				
UMD Peers	42.0	11.3	.72	22	35	42	50	60	305	-.2		-.019
Competitors	42.7	10.5	.58	23	36	44	50	58	390	-.9		-.088
National Comparison	43.4	11.3	.57	22	36	45	50	60	451	-1.6		-.145
<b>Supportive Environment</b>												
UMD (N = 58)	33.1	13.4	1.76	10	23	35	43	58				
UMD Peers	32.3	13.9	.86	10	23	33	43	55	317	.9		.062
Competitors	33.8	13.0	.70	13	25	33	43	58	404	-.7		-.056
National Comparison	33.3	13.1	.65	13	23	33	40	60	467	-.2		-.013

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

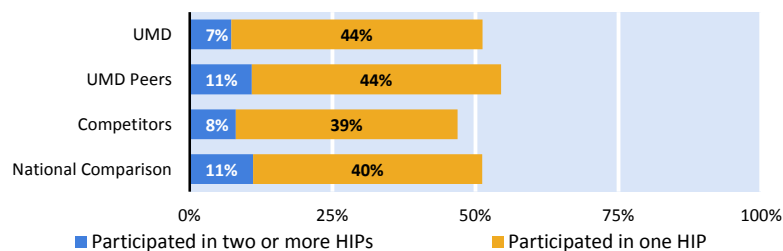
High-Impact Practices: Phys Sci, Math, CS

University of Minnesota Duluth

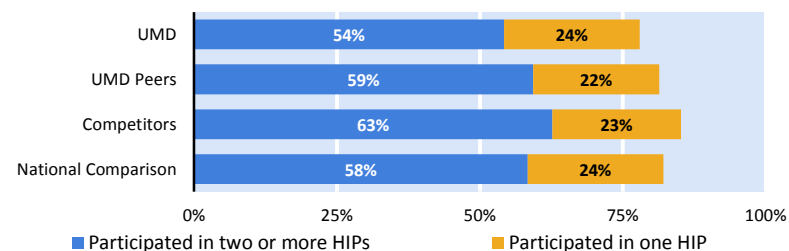
## Overall HIP Participation<sup>a</sup>

The figures below display the percentage<sup>h</sup> 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 Phys Sci, Math, CS*



*Seniors in Phys Sci, Math, CS*



## Statistical Comparisons<sup>a</sup>

The table below compares the percentage<sup>h</sup> 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.

	UMD			UMD Peers			Competitors			National Comparison		
<i>First-Year Students in Phys Sci, Math, CS</i>	%			% <sup>i</sup>		Effect size <sup>j</sup>	% <sup>i</sup>		Effect size <sup>j</sup>	% <sup>i</sup>		Effect size <sup>j</sup>
11c. Learning community	10			15		-.17	13		-.10	13		-.12
12. Service-learning	46			47		-.02	38		.17	46		.00
11e. Research with faculty	5			5		.02	5		-.01	5		-.02
<b>Participated in at least one</b>	51			54		-.06	47		.09	51		.00
<b>Participated in two or more</b>	7			11		-.12	8		-.03	11		-.13
<i>Seniors in Phys Sci, Math, CS</i>	%			% <sup>i</sup>		Effect size <sup>j</sup>	% <sup>i</sup>		Effect size <sup>j</sup>	% <sup>i</sup>		Effect size <sup>j</sup>
11c. Learning community	20			16		.12	19		.02	21		-.01
12. Service-learning	44			36		.17	39		.11	47		-.07
11e. Research with faculty	36			41		-.12	46		-.20	41		-.11
11a. Internship or field exp.	51			45		.12	48		.06	39		.23
11d. Study abroad	10			8		.08	13		-.09	9		.04
11f. Culminating senior exp.	27			56 ***		-.59	47 **		-.41	44 *		-.35
<b>Participated in at least one</b>	78			81		-.08	85		-.19	82		-.10
<b>Participated in two or more</b>	54			59		-.10	63		-.17	58		-.08



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
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	Never	2	5	9	4	5	2	6	2	2.5	2.7	-.29	2.8 *	-.44	2.8 **	-.44	
		2	Sometimes	22	54	87	43	82	37	96	38									
		3	Often	13	32	57	28	85	38	87	34									
		4	Very often	4	10	48	24	50	23	64	25									
		Total		41	100	201	100	222	100	253	100									
b. Prepared two or more drafts of a paper or assignment before turning it in		drafts	1	Never	11	27	47	24	42	19	56	23	2.2	2.2	.01	2.4	-.18	2.4	-.11	
		2	Sometimes	14	34	80	40	80	37	82	33									
		3	Often	11	27	52	26	60	27	76	31									
		4	Very often	5	12	21	11	37	17	34	14									
		Total		41	100	200	100	219	100	248	100									
c. Come to class without completing readings or assignments		unpreparedr	1	Very often	1	2	7	4	11	5	8	3	3.1	3.0	.07	3.0	.11	3.1	-.09	
		(Reverse-coded version of unprepared created by NSSE.)	2	Often	10	24	30	15	33	15	28	11								
		3	Sometimes	15	37	115	58	123	56	135	54									
		4	Never	15	37	48	24	53	24	79	32									
		Total		41	100	200	100	220	100	250	100									
d. Attended an art exhibit, play or other arts performance (dance, music, etc.)		attendart	1	Never	16	40	70	36	72	33	95	38	2.0	1.8	.17	1.9	.04	1.9	.11	
		2	Sometimes	14	35	99	50	101	46	106	42									
		3	Often	5	13	19	10	37	17	36	14									
		4	Very often	5	13	9	5	11	5	14	6									
		Total		40	100	197	100	221	100	251	100									
e. Asked another student to help you understand course material		CLaskhelp	1	Never	2	5	24	12	20	9	22	9	2.9	2.5 *	.37	2.5 *	.44	2.5 **	.45	
		2	Sometimes	14	34	85	43	98	44	123	49									
		3	Often	13	32	50	26	78	35	72	29									
		4	Very often	12	29	37	19	25	11	34	14									
		Total		41	100	196	100	221	100	251	100									
f. Explained course material to one or more students		CLexplain	1	Never	0	0	10	5	10	5	8	3	2.9	2.8	.18	2.7	.23	2.8	.16	
		2	Sometimes	13	32	72	36	77	35	83	33									
		3	Often	18	44	70	35	90	41	110	44									
		4	Very often	10	24	47	24	41	19	50	20									
		Total		41	100	199	100	218	100	251	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>									
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with							
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
g. Prepared for exams by discussing or working through course material with other students	CLstudy	1	Never	4	10	34	17	31	14	39	15	2.6	2.4	.22	2.5	.19	2.4	.27			
		2	Sometimes	16	39	77	39	85	38	112	44										
		3	Often	12	29	58	29	77	35	65	26										
		4	Very often	9	22	30	15	28	13	36	14										
		Total	41	100	199	100	221	100	252	100											
h. Worked with other students on course projects or assignments	CLproject	1	Never	5	12	8	4	12	5	20	8	2.6	2.6	-.02	2.5	.06	2.5	.07			
		2	Sometimes	17	41	96	48	109	49	123	49										
		3	Often	10	24	65	33	76	34	74	29										
		4	Very often	9	22	29	15	25	11	36	14										
		Total	41	100	198	100	222	100	253	100											
i. Gave a course presentation	present	1	Never	18	45	62	31	63	29	70	28	1.8	1.9	-.16	1.9	-.15	2.0	-.26			
		2	Sometimes	15	38	98	49	122	55	122	48										
		3	Often	4	10	27	14	28	13	45	18										
		4	Very often	3	8	11	6	8	4	15	6										
		Total	40	100	198	100	221	100	252	100											
2. During the current school year, about how often have you done the following?																					
a. Combined ideas from different courses when completing assignments	RIintegrate	1	Never	3	7	16	8	18	8	23	9	2.7	2.6	.09	2.5	.15	2.5	.13			
		2	Sometimes	16	39	86	43	93	43	101	40										
		3	Often	14	34	64	32	79	36	93	37										
		4	Very often	8	20	34	17	28	13	34	14										
		Total	41	100	200	100	218	100	251	100											
b. Connected your learning to societal problems or issues	RIsocietal	1	Never	6	15	18	9	24	11	32	13	2.3	2.5	-.18	2.4	-.13	2.5	-.17			
		2	Sometimes	20	50	92	46	95	44	99	39										
		3	Often	9	23	67	34	76	35	90	36										
		4	Very often	5	13	23	12	21	10	30	12										
		Total	40	100	200	100	216	100	251	100											
c. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	RIdiverse	1	Never	11	28	31	16	37	17	45	18	2.1	2.4	-.32	2.3	-.21	2.3	-.23			
		2	Sometimes	17	44	79	40	105	48	111	44										
		3	Often	7	18	69	35	53	24	68	27										
		4	Very often	4	10	19	10	23	11	27	11										
		Total	39	100	198	100	218	100	251	100											

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	UMD	UMD Peers	Effect size <sup>n</sup>	Competitors	Effect size <sup>n</sup>	National Comparison	Effect size <sup>n</sup>
d. Examined the strengths and weaknesses of your own views on a topic or issue	RIownview	1	Never			4	10	17	9	19	9	14	6	2.6	2.7	-.08	2.6	.06	2.7	-.06
		2	Sometimes			14	35	65	33	91	42	92	37							
		3	Often			15	38	80	40	74	34	104	42							
		4	Very often			7	18	38	19	35	16	39	16							
		Total				40	100	200	100	219	100	249	100							
e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	RIperspect	1	Never			2	5	12	6	13	6	10	4	2.8	2.8	.05	2.7	.15	2.8	.01
		2	Sometimes			11	27	61	31	75	35	84	34							
		3	Often			20	49	81	41	92	42	96	38							
		4	Very often			8	20	43	22	37	17	60	24							
		Total				41	100	197	100	217	100	250	100							
f. Learned something that changed the way you understand an issue or concept	RInewview	1	Never			1	3	12	6	13	6	9	4	2.9	2.8	.13	2.7	.23	2.7	.22
		2	Sometimes			11	28	65	33	69	32	94	38							
		3	Often			19	48	74	37	102	47	101	41							
		4	Very often			9	23	47	24	34	16	44	18							
		Total				40	100	198	100	218	100	248	100							
g. Connected ideas from your courses to your prior experiences and knowledge	RIconnect	1	Never			1	3	6	3	8	4	5	2	3.2	3.1	.05	3.0	.25	3.1	.09
		2	Sometimes			6	15	41	21	47	22	61	24							
		3	Often			19	48	79	40	110	50	93	37							
		4	Very often			14	35	74	37	53	24	91	36							
		Total				40	100	200	100	218	100	250	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			10	24	78	39	56	25	60	24	2.0	1.9	.11	2.1	-.15	2.2	-.24
		2	Sometimes			23	56	81	41	109	49	115	46							
		3	Often			8	20	30	15	39	18	48	19							
		4	Very often			0	0	10	5	17	8	26	10							
		Total				41	100	199	100	221	100	249	100							
b. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	SFotherwork	1	Never			24	59	132	66	123	56	142	57	1.6	1.5	.18	1.7	-.03	1.7	-.03
		2	Sometimes			9	22	44	22	61	28	62	25							
		3	Often			7	17	16	8	27	12	33	13							
		4	Very often			1	2	7	4	10	5	12	5							
		Total				41	100	199	100	221	100	249	100							

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>										
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with								
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
c. Discussed course topics, ideas, or concepts with a faculty member outside of class	SFdiscuss	1	Never		7	18			63	32			58	26								
		2	Sometimes		21	54			92	46			102	46								
		3	Often		11	28			35	18			50	23								
		4	Very often		0	0			8	4			11	5								
		Total			39	100			198	100			221	100								
d. Discussed your academic performance with a faculty member	SFperform	1	Never		10	25			66	33			79	36								
		2	Sometimes		22	55			101	51			101	46								
		3	Often		8	20			17	9			30	14								
		4	Very often		0	0			15	8			11	5								
		Total			40	100			199	100			221	100								
4. During the current school year, how much has your coursework emphasized the following?																						
a. Memorizing course material	memorize	1	Very little		1	2			8	4			5	2								
		2	Some		15	37			54	27			61	28								
		3	Quite a bit		15	37			85	43			102	47								
		4	Very much		10	24			51	26			50	23								
		Total			41	100			198	100			218	100								
b. Applying facts, theories, or methods to practical problems or new situations	HOapply	1	Very little		0	0			3	2			4	2								
		2	Some		9	22			41	21			38	18								
		3	Quite a bit		12	29			88	45			105	48								
		4	Very much		20	49			64	33			70	32								
		Total			41	100			196	100			217	100								
c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts	HOanalyze	1	Very little		3	8			6	3			5	2								
		2	Some		10	25			46	23			58	27								
		3	Quite a bit		20	50			83	42			96	45								
		4	Very much		7	18			62	31			56	26								
		Total			40	100			197	100			215	100								
d. Evaluating a point of view, decision, or information source	HOevaluate	1	Very little		7	17			18	9			14	6								
		2	Some		17	41			64	32			73	34								
		3	Quite a bit		10	24			75	38			99	46								
		4	Very much		7	17			41	21			31	14								
		Total			41	100			198	100			217	100								

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
e. Forming a new idea or understanding from various pieces of information	HOform	1	Very little	3	8	9	5	20	9	15	6	2.7	2.9	-.23	2.7	.01	2.9	-.26	
		2	Some	15	38	62	31	68	31	57	23								
		3	Quite a bit	14	35	72	36	93	43	115	46								
		4	Very much	8	20	55	28	36	17	62	25								
		Total	40	100	198	100	217	100	249	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	1	3	7	3	5	2	7	3	3.2	3.1	.09	3.1	.10	3.2	-.04	
		2	Some	4	10	33	16	38	17	37	15								
		3	Quite a bit	22	55	93	46	108	49	105	42								
		4	Very much	13	33	68	34	70	32	103	41								
		Total	40	100	201	100	221	100	252	100									
b. Taught course sessions in an organized way	ETorganize	1	Very little	1	2	4	2	3	1	3	1	3.1	3.1	.05	3.1	.04	3.2	-.10	
		2	Some	6	15	33	17	36	16	28	11								
		3	Quite a bit	20	49	100	50	114	52	131	52								
		4	Very much	14	34	63	32	68	31	89	35								
		Total	41	100	200	100	221	100	251	100									
c. Used examples or illustrations to explain difficult points	ETexample	1	Very little	0	0	8	4	5	2	3	1	3.4	3.1	.29	3.1	.31	3.2	.17	
		2	Some	3	8	33	17	43	19	43	17								
		3	Quite a bit	20	50	86	43	96	43	99	40								
		4	Very much	17	43	73	37	77	35	105	42								
		Total	40	100	200	100	221	100	250	100									
d. Provided feedback on a draft or work in progress	ETdraftfb	1	Very little	7	17	20	10	20	9	21	8	2.4	2.7 *	-.34	2.6	-.31	2.8 **	-.49	
		2	Some	18	44	69	35	77	35	75	30								
		3	Quite a bit	10	24	64	32	86	39	75	30								
		4	Very much	6	15	47	24	38	17	77	31								
		Total	41	100	200	100	221	100	248	100									
e. Provided prompt and detailed feedback on tests or completed assignments	ETfeedback	1	Very little	3	7	14	7	20	9	17	7	2.6	2.7	-.11	2.6	.00	2.9	-.24	
		2	Some	15	37	71	36	75	34	81	33								
		3	Quite a bit	17	41	70	35	90	41	72	29								
		4	Very much	6	15	45	23	35	16	79	32								
		Total	41	100	200	100	220	100	249	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>						
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with				
UMD Peers		Competitors												National Comparison		UMD Peers		Competitors
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
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	1	2	20	10	12	5	19	8	3.0	2.8	.25	2.8	.30	2.8	.24
		2	Sometimes	10	24	56	28	67	30	73	29							
		3	Often	17	41	69	35	100	45	94	38							
		4	Very often	13	32	54	27	42	19	64	26							
		Total	41	100	199	100	221	100	250	100								
b. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	QRproblem	1	Never	10	24	42	21	36	16	51	20	2.3	2.3	-.07	2.3	-.09	2.4	-.13
		2	Sometimes	14	34	80	40	92	42	93	37							
		3	Often	13	32	47	24	72	33	65	26							
		4	Very often	4	10	31	16	20	9	43	17							
		Total	41	100	200	100	220	100	252	100								
c. Evaluated what others have concluded from numerical information	QRevaluate	1	Never	4	10	41	21	36	16	52	21	2.5	2.3	.31	2.3	.26	2.3	.22
		2	Sometimes	18	44	86	43	99	45	101	40							
		3	Often	12	29	50	25	64	29	62	25							
		4	Very often	7	17	21	11	20	9	36	14							
		Total	41	100	198	100	219	100	251	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  (Recoded version of wrshort created by NSSE. Values are estimated number of papers, reports, etc.)	0	None	1	2	12	6	9	4	14	6	8.1	5.6 *	.48	6.2 *	.34	6.1 *	.35
		1.5	1-2	5	12	43	22	57	26	59	24							
		4	3-5	16	39	73	37	68	31	77	31							
		8	6-10	8	20	45	23	54	24	61	24							
		13	11-15	3	7	14	7	16	7	20	8							
		18	16-20	5	12	7	4	8	4	6	2							
		23	More than 20	3	7	4	2	10	5	12	5							
		Total	41	100	198	100	222	100	249	100								
b. Between 6 and 10 pages	wrmednum  (Recoded version of wrmed created by NSSE. Values are estimated number of papers, reports, etc.)	0	None	19	46	61	33	85	41	78	33	2.2	1.6	.24	1.5	.28	2.1	.05
		1.5	1-2	13	32	92	49	91	44	116	49							
		4	3-5	4	10	24	13	26	12	23	10							
		8	6-10	2	5	9	5	3	1	13	5							
		13	11-15	3	7	0	0	4	2	4	2							
		18	16-20	0	0	0	0	0	0	1	0							
		23	More than 20	0	0	0	0	0	0	2	1							
		Total	41	100	186	100	209	100	237	100								

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
c. 11 pages or more	wrlongnum	0	None	34	83	151	83	175	85	182	78	.9	.5	.20	.4	.26	.8	.04	
	(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2	3	7	28	15	20	10	36	16								
	4	3-5	2	5	0	0	6	3	3	1									
	8	6-10	1	2	1	1	3	1	6	3									
	13	11-15	0	0	1	1	1	0	3	1									
	18	16-20	1	2	0	0	0	0	1	0									
	23	More than 20	0	0	1	1	0	0	1	0									
	Total		41	100	182	100	205	100	232	100									
Estimated number of assigned pages of student writing.	wrpages	(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)										56.1	36.8	.38	37.3	.36	47.1	.13	
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	5	5	2	10	5	15	6	2.7	3.0	-.34	2.8	-.07	3.0	-.29	
	2	Sometimes	15	38	58	29	89	40	71	28									
	3	Often	15	38	68	34	59	27	66	26									
	4	Very often	8	20	71	35	62	28	100	40									
	Total	40	100	202	100	220	100	252	100										
b. People from an economic background other than your own	DDeconomic	1	Never	3	8	3	2	10	5	13	5	2.8	3.1 *	-43	2.9	-.22	3.0	-.29	
	2	Sometimes	14	35	48	24	55	25	64	25									
	3	Often	13	33	71	36	93	42	81	32									
	4	Very often	10	25	77	39	62	28	94	37									
	Total	40	100	199	100	220	100	252	100										
c. People with religious beliefs other than your own	DDreligion	1	Never	1	3	5	3	11	5	17	7	2.9	3.1	-.30	3.0	-.12	3.1	-.26	
	2	Sometimes	14	35	49	25	58	26	54	21									
	3	Often	15	38	65	33	81	37	70	28									
	4	Very often	10	25	80	40	70	32	111	44									
	Total	40	100	199	100	220	100	252	100										
d. People with political views other than your own	DDpolitical	1	Never	5	13	7	4	9	4	18	7	2.9	3.0	-.13	3.0	-.10	3.0	-.15	
	2	Sometimes	7	18	53	27	55	25	51	20									
	3	Often	15	38	69	35	85	39	83	33									
	4	Very often	13	33	70	35	71	32	98	39									
	Total	40	100	199	100	220	100	250	100										

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
9. During the current school year, about how often have you done the following?																			
a. Identified key information from reading assignments	LSreading	1	Never	2	5	3	1	5	2	3	1	3.0	3.1	-.10	3.1	-.05	3.1	-.11	
		2	Sometimes	10	25	40	20	45	20	51	20								
		3	Often	13	33	92	46	103	46	113	45								
		4	Very often	15	38	67	33	69	31	84	33								
		Total	40	100	202	100	222	100	251	100									
b. Reviewed your notes after class	LSnotes	1	Never	4	10	10	5	18	8	19	8	2.9	2.9	.00	2.8	.11	2.8	.06	
		2	Sometimes	10	25	67	34	72	33	88	35								
		3	Often	14	35	66	33	77	35	69	27								
		4	Very often	12	30	57	29	53	24	75	30								
		Total	40	100	200	100	220	100	251	100									
c. Summarized what you learned in class or from course materials	LSsummary	1	Never	3	8	16	8	24	11	25	10	2.8	2.7	.20	2.6	.23	2.7	.13	
		2	Sometimes	13	33	73	37	74	34	83	33								
		3	Often	10	26	70	35	80	36	76	31								
		4	Very often	13	33	39	20	42	19	64	26								
		Total	39	100	198	100	220	100	248	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	0	0	2	1	1	0	5.8	5.3 *	.35	5.4	.32	5.3 *	.38	
		2	0	0	7	3	3	1	5	2									
		3	0	0	10	5	10	5	14	6									
		4	4	10	28	14	25	11	33	13									
		5	12	29	55	27	68	31	79	31									
		6	14	34	63	31	74	33	76	30									
		7	Very much	11	27	38	19	39	18	43	17								
		Total	41	100	201	100	221	100	251	100									
11. Which of the following have you done or do you plan to do before you graduate? <sup>o</sup>																			
a. Participate in an internship, co-op, field experience, student teaching, or clinical placement	intern	Have not decided		5	12	26	13	27	12	47	19	7%	3%	.17	4%	.14	6%	.07	
		Do not plan to do		3	7	8	4	3	1	16	6								
		Plan to do		30	73	160	80	183	82	175	69								
		Done or in progress		3	7	7	3	9	4	14	6								
		Total		41	100	201	100	222	100	252	100								
(Means indicate the percentage who responded "Done or in progress.")																			



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
b. Hold a formal leadership role in a student organization or group	leader	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	11	27	63	32	69	31	82	33	10%	11%	-.02	12%	-.08	12%	-.06		
			Do not plan to do	14	34	65	33	46	21	69	27									
			Plan to do	12	29	51	26	79	36	71	28									
			Done or in progress	4	10	21	11	27	12	29	12									
			Total	41	100	200	100	221	100	251	100									
c. Participate in a learning community or some other formal program where groups of students take two or more classes together	learncom	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	11	27	64	32	79	36	94	37	10%	15%	-.17	13%	-.10	13%	-.12		
			Do not plan to do	17	41	70	36	76	34	76	30									
			Plan to do	9	22	33	17	38	17	48	19									
			Done or in progress	4	10	30	15	29	13	34	13									
			Total	41	100	197	100	222	100	252	100									
d. Participate in a study abroad program	abroad	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	11	27	55	28	65	30	91	36	7%	2%	.26	3%	.22	2%	.24		
			Do not plan to do	12	29	68	34	64	29	78	31									
			Plan to do	15	37	73	37	85	39	77	31									
			Done or in progress	3	7	4	2	6	3	6	2									
			Total	41	100	200	100	220	100	252	100									
e. Work with a faculty member on a research project	research	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	17	41	70	35	87	40	100	40	5%	5%	.02	5%	-.01	5%	-.02		
			Do not plan to do	8	20	27	14	27	12	29	12									
			Plan to do	14	34	93	47	95	43	107	43									
			Done or in progress	2	5	9	5	11	5	13	5									
			Total	41	100	199	100	220	100	249	100									
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone	(Means indicate the percentage who responded "Done or in progress.")	Have not decided	15	38	46	23	85	39	86	34	10%	2% * ▲	.36	2% ** ▲	.37	4%	.26		
			Do not plan to do	6	15	9	5	19	9	24	10									
			Plan to do	15	38	140	70	111	51	131	52									
			Done or in progress	4	10	4	2	4	2	9	4									
			Total	40	100	199	100	219	100	250	100									

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

servcourse	1	None	22	54	104	53	137	62	134	54	1.5	1.5	-.04	1.4	.13	1.5	-.07
	2	Some	18	44	86	44	77	35	103	41							
	3	Most	1	2	6	3	6	3	7	3							
	4	All	0	0	1	1	1	0	5	2							
	Total		41	100	197	100	221	100	249	100							

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
13. Indicate the quality of your interactions with the following people at your institution.																			
a. Students	QIstudent	1	Poor	0	0	4	2	3	1	3	1	5.6	5.4	.15	5.6	.05	5.5	.13	
		2	2	5	5	2	2	1	6	2									
		3	1	2	6	3	10	5	9	4									
		4	3	7	25	12	18	8	31	12									
		5	10	24	55	27	50	23	57	23									
		6	13	32	54	27	91	41	84	33									
		7	Excellent	12	29	50	25	45	20	55	22								
		—	Not applicable	0	0	2	1	3	1	7	3								
		Total	41	100	201	100	222	100	252	100									
b. Academic advisors	QIadvisor	1	Poor	3	7	10	5	6	3	6	2	5.2	5.0	.11	5.4	-.14	5.5	-.20	
		2	0	0	4	2	7	3	12	5									
		3	4	10	19	10	15	7	17	7									
		4	4	10	30	15	19	9	20	8									
		5	6	15	37	19	51	23	47	19									
		6	14	34	41	21	59	27	56	22									
		7	Excellent	8	20	37	19	58	26	87	35								
		—	Not applicable	2	5	22	11	6	3	6	2								
		Total	41	100	200	100	221	100	251	100									
c. Faculty	QIfaculty	1	Poor	1	2	2	1	4	2	5	2	5.3	5.2	.08	5.3	.02	5.5	-.12	
		2	1	2	2	1	2	1	4	2									
		3	1	2	17	9	10	5	9	4									
		4	5	12	28	14	30	14	25	10									
		5	13	32	58	29	68	31	64	25									
		6	12	29	52	26	68	31	80	32									
		7	Excellent	8	20	35	18	37	17	60	24								
		—	Not applicable	0	0	6	3	2	1	4	2								
		Total	41	100	200	100	221	100	251	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>i</sup>	Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
d. Student services staff (career services, student activities, housing, etc.)	Qlstaff	1	Poor	1	2	8	4	6	3	8	3	5.3	5.0	.18	5.3	-.01	5.1	.13		
		2		2	5	10	5	4	2	12	5									
		3		3	7	14	7	12	5	17	7									
		4		2	5	25	12	21	10	28	11									
		5		10	24	42	21	62	28	46	18									
		6		10	24	37	18	56	25	62	25									
		7	Excellent	9	22	37	18	41	19	41	16									
		—	Not applicable	4	10	28	14	19	9	37	15									
		Total		41	100	201	100	221	100	251	100									
e. Other administrative staff and offices (registrar, financial aid, etc.)	Qladmin	1	Poor	2	5	6	3	5	2	8	3	5.3	4.9	.27	5.1	.13	5.1	.17		
		2		0	0	15	8	7	3	12	5									
		3		0	0	11	6	16	7	19	8									
		4		6	15	32	16	23	10	31	12									
		5		10	25	37	19	60	27	54	22									
		6		12	30	36	18	51	23	66	27									
		7	Excellent	7	18	33	17	36	16	42	17									
		—	Not applicable	3	8	30	15	22	10	17	7									
		Total		40	100	200	100	220	100	249	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	2	5	2	1	7	3	3	1	3.2	3.2	-.05	3.1	.03	3.2	.01		
		2	Some	6	15	34	17	34	16	41	17									
		3	Quite a bit	15	38	84	42	97	44	116	47									
		4	Very much	17	43	80	40	80	37	88	35									
		Total		40	100	200	100	218	100	248	100									
b. Providing support to help students succeed academically	SEacademic	1	Very little	2	5	8	4	8	4	5	2	3.0	3.1	-.07	3.0	-.06	3.1	-.18		
		2	Some	7	17	41	21	41	19	48	19									
		3	Quite a bit	21	51	82	41	100	46	102	41									
		4	Very much	11	27	68	34	67	31	93	38									
		Total		41	100	199	100	216	100	248	100									
c. Using learning support services (tutoring services, writing center, etc.)	SElearnsup	1	Very little	3	8	3	2	8	4	12	5	3.1	3.2	-.14	3.1	-.06	3.2	-.14		
		2	Some	4	10	33	17	37	17	35	14									
		3	Quite a bit	20	50	88	44	92	42	94	38									
		4	Very much	13	33	75	38	81	37	107	43									
		Total		40	100	199	100	218	100	248	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>									
				UMD		UMD Peers		Competitors		National Comparison		Your first-year students compared with									
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	UMD		UMD Peers		Competitors		National Comparison	
														Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	8	20	26	13	27	12	22	9	2.4	2.6	-.21	2.6	-.21	2.7 *	▼	-0.36		
		2	Some	15	37	80	40	81	37	89	36										
		3	Quite a bit	13	32	47	24	68	31	78	31										
		4	Very much	5	12	46	23	41	19	59	24										
		Total	41	100	199	100	217	100	248	100											
e. Providing opportunities to be involved socially	SEsocial	1	Very little	2	5	6	3	7	3	13	5	2.9	2.9	-.06	3.0	-.17	3.0	-0.16			
		2	Some	9	22	58	29	52	24	50	20										
		3	Quite a bit	22	54	80	40	89	41	105	42										
		4	Very much	8	20	55	28	70	32	80	32										
		Total	41	100	199	100	218	100	248	100											
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	0	0	9	5	5	2	12	5	2.9	3.0	-.20	3.1 *	▼	-0.37				
		2	Some	14	34	42	21	40	18	49	20										
		3	Quite a bit	19	46	84	42	91	42	115	46										
		4	Very much	8	20	64	32	82	38	72	29										
		Total	41	100	199	100	218	100	248	100											
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	9	23	41	21	39	18	45	18	2.3	2.2	.02	2.4	-.12	2.4	-0.12			
		2	Some	16	40	90	45	86	40	94	38										
		3	Quite a bit	11	28	48	24	66	31	82	33										
		4	Very much	4	10	20	10	25	12	26	11										
		Total	40	100	199	100	216	100	247	100											
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	3	7	10	5	12	6	15	6	2.9	2.8	.04	2.9	.02	2.9	.02			
		2	Some	10	24	55	28	64	30	65	27										
		3	Quite a bit	17	41	88	45	82	38	102	42										
		4	Very much	11	27	44	22	58	27	62	25										
		Total	41	100	197	100	216	100	244	100											
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	3	8	31	16	29	13	29	12	2.5	2.4	.10	2.4	.06	2.6	-0.08			
		2	Some	19	48	77	39	95	44	89	36										
		3	Quite a bit	13	33	66	34	58	27	85	35										
		4	Very much	5	13	23	12	33	15	42	17										
		Total	40	100	197	100	215	100	245	100											

Frequency Distributions								Statistical Comparisons <sup>k</sup>						
UMD		UMD Peers		Competitors		National Comparison		Your first-year students compared with						
								UMD Peers		Competitors		National Comparison		
Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
What are you doing the following?														
0	0	1	1	2	1	1	0	17.3	14.6 *	.34	16.5	.09	14.5	.32
2	5	20	10	16	7	29	12							
10	24	48	24	42	19	72	29							
7	17	49	25	38	17	43	17							
7	17	38	19	57	26	45	18							
7	17	26	13	34	15	31	12							
4	10	9	5	17	8	14	6							
4	10	9	5	15	7	15	6							
41	100	200	100	221	100	250	100							
10	25	81	40	54	25	93	38	5.4	4.2	.21	5.1	.05	4.3	.19
14	35	68	34	91	42	91	37							
9	23	25	12	42	19	31	13							
6	15	16	8	21	10	18	7							
0	0	7	3	5	2	9	4							
1	3	2	1	2	1	4	2							
0	0	1	0	2	1	1	0							
0	0	1	0	1	0	1	0							
40	100	201	100	218	100	248	100							
32	78	176	87	170	78	202	81	2.7	1.7	.20	2.3	.09	2.3	.07
1	2	4	2	7	3	8	3							
3	7	5	2	25	11	16	6							
3	7	10	5	10	5	12	5							
1	2	3	1	5	2	5	2							
0	0	3	1	1	0	1	0							
1	2	0	0	0	0	2	1							
0	0	1	0	1	0	3	1							
41	100	202	100	219	100	249	100							

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	33	80	165	82	189	86	171	69	1.7	2.7	-.15	2.2	-.09	4.7 ***	▼	
	(Recorded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	3	7	6	3	5	2	12	5								
		8	6-10 hrs	3	7	9	4	6	3	17	7								
		13	11-15 hrs	0	0	4	2	6	3	17	7								
		18	16-20 hrs	2	5	8	4	4	2	10	4								
		23	21-25 hrs	0	0	4	2	4	2	11	4								
		28	26-30 hrs	0	0	1	0	2	1	2	1								
		33	More than 30 hrs	0	0	4	2	4	2	9	4								
		Total	41	100	201	100	220	100	249	100									
	Estimated number of hours working for pay	tmworkhrs										4.4	4.4	.01	4.3	.01	6.9	-.23	
	(Continuous variable created by NSSE)																		
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	27	68	137	68	139	64	163	66	1.9	2.0	-.02	1.6	.09	2.0	-.03	
	(Recorded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	8	20	47	23	67	31	62	25								
		8	6-10 hrs	3	8	6	3	7	3	11	4								
		13	11-15 hrs	2	5	4	2	1	0	4	2								
		18	16-20 hrs	0	0	3	1	1	0	1	0								
		23	21-25 hrs	0	0	3	1	1	0	2	1								
		28	26-30 hrs	0	0	1	0	1	0	1	0								
		33	More than 30 hrs	0	0	0	0	0	0	2	1								
		Total	40	100	201	100	217	100	246	100									
	f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	0	0	4	2	3	1	6	2	15.4	15.6	-.02	14.7	.08	14.8	.06
(Recorded version of tmrelax created by NSSE. Values are estimated number of hours per week.)		3	1-5 hrs	3	8	28	14	31	14	35	14								
		8	6-10 hrs	10	25	41	21	45	20	56	23								
		13	11-15 hrs	11	28	31	16	52	24	52	21								
		18	16-20 hrs	7	18	38	19	37	17	40	16								
		23	21-25 hrs	3	8	20	10	24	11	18	7								
		28	26-30 hrs	2	5	9	5	8	4	7	3								
		33	More than 30 hrs	4	10	26	13	20	9	33	13								
		Total	40	100	197	100	220	100	247	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
g. Providing care for dependents (children, parents, etc.)	tmcarehrs	0	0 hrs	34	87	168	84	197	91	196	79	1.0	1.6	-.12	.9	.02	2.2	-.20		
	(Recorded version of tmcare created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	1	3	17	9	10	5	27	11									
	8	6-10 hrs	3	8	4	2	3	1	3	1										
	13	11-15 hrs	1	3	3	2	4	2	7	3										
	18	16-20 hrs	0	0	3	2	0	0	5	2										
	23	21-25 hrs	0	0	1	1	0	0	2	1										
	28	26-30 hrs	0	0	1	1	0	0	3	1										
	33	More than 30 hrs	0	0	3	2	3	1	4	2										
	Total	39	100	200	100	217	100	247	100											
h. Commuting to campus (driving, walking, etc.)	tmcommutehrs	0	0 hrs	22	55	83	42	91	41	92	37	2.1	3.2	-.23	2.8	-.17	3.4	-.26		
	(Recorded version of tmcommute created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	13	33	84	43	102	46	117	47									
	8	6-10 hrs	4	10	19	10	20	9	26	10										
	13	11-15 hrs	1	3	2	1	3	1	7	3										
	18	16-20 hrs	0	0	4	2	1	0	2	1										
	23	21-25 hrs	0	0	3	2	0	0	0	0										
	28	26-30 hrs	0	0	0	0	1	0	2	1										
	33	More than 30 hrs	0	0	2	1	2	1	3	1										
	Total	40	100	197	100	220	100	249	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	9	22	20	14	15	10	23	15	2.6	2.7	-.08	2.8	-.20	2.6	.05		
(Revised for 2014. Comparison data are limited to NSSE 2014 participating institutions.)		2	Some	12	29	45	32	48	32	56	36									
		3	About half	7	17	42	30	46	31	46	30									
		4	Most	12	29	23	16	29	19	25	16									
		5	Almost all	1	2	10	7	12	8	4	3									
		Total		41	100	140	100	150	100	154	100									
tmreadinghrs												8.2	6.2	.34	8.1	.01	5.8	.42		
(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 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
		UMD Peers												Competitors		National Comparison			
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
	tmreadinghrscol	1	0 hrs	0	0	1	1	0	0	0	0								
	(Collapsed version of tmreadinghrs created by NSSE.)	2	More than zero, up to 5 hrs	16	39	67	49	59	39	91	59								
		3	More than 5, up to 10 hrs	14	34	46	33	53	35	38	25								
		4	More than 10, up to 15 hrs	5	12	17	12	18	12	15	10								
		5	More than 15, up to 20 hrs	0	0	4	3	8	5	6	4								
		6	More than 20, up to 25 hrs	5	12	1	1	9	6	3	2								
		7	More than 25 hrs	1	2	2	1	3	2	1	1								
		Total		41	100	138	100	150	100	154	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	7	18	31	15	21	10	25	10	2.7	2.5	.17	2.6	.08	2.7	-.02	
		2	Some	10	25	72	36	72	33	77	31								
		3	Quite a bit	12	30	62	31	101	46	100	40								
		4	Very much	11	28	36	18	27	12	49	20								
		Total		40	100	201	100	221	100	251	100								
b. Speaking clearly and effectively	pgspeak	1	Very little	8	20	44	22	50	23	43	17	2.6	2.3	.26	2.3	.25	2.4	.12	
		2	Some	9	23	74	37	73	33	87	35								
		3	Quite a bit	16	40	58	29	76	34	89	35								
		4	Very much	7	18	23	12	22	10	32	13								
		Total		40	100	199	100	221	100	251	100								
c. Thinking critically and analytically	pgthink	1	Very little	0	0	9	5	12	5	11	4	3.2	3.0	.18	3.0	.21	3.0	.12	
		2	Some	9	23	41	21	42	19	48	19								
		3	Quite a bit	16	40	89	45	106	48	110	44								
		4	Very much	15	38	59	30	61	28	82	33								
		Total		40	100	198	100	221	100	251	100								
d. Analyzing numerical and statistical information	pganalyze	1	Very little	0	0	19	10	20	9	24	10	3.2	2.8 **	.48	2.7 **	.56	2.8 **	.50	
		2	Some	8	20	56	28	66	30	71	28								
		3	Quite a bit	15	38	71	36	88	40	93	37								
		4	Very much	17	43	51	26	47	21	62	25								
		Total		40	100	197	100	221	100	250	100								



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with						
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
e. Acquiring job- or work- related knowledge and skills	pgwork	1	Very little	9	23	39	20	40	18	46	18	2.4	2.3	.06	2.4	-.02	2.4	-.02		
		2	Some	12	30	77	39	79	36	91	36									
		3	Quite a bit	13	33	59	30	71	32	77	31									
		4	Very much	6	15	24	12	31	14	37	15									
		Total	40	100	199	100	221	100	251	100										
f. Working effectively with others	pgothers	1	Very little	5	13	17	9	18	8	24	10	2.5	2.7	-.18	2.6	-.16	2.7	-.22		
		2	Some	17	43	68	34	79	36	81	33									
		3	Quite a bit	11	28	80	40	86	39	88	35									
		4	Very much	7	18	34	17	36	16	56	22									
		Total	40	100	199	100	219	100	249	100										
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	10	25	43	22	42	19	49	20	2.1	2.4	-.24	2.4	-.30	2.5 *	▼		
		2	Some	18	45	68	34	79	36	78	31									
		3	Quite a bit	9	23	65	33	69	31	73	29									
		4	Very much	3	8	24	12	31	14	50	20									
		Total	40	100	200	100	221	100	250	100										
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	9	23	37	19	33	15	36	14	2.2	2.4	-.24	2.5	-.33	2.5 *	▼		
		2	Some	16	40	70	35	78	35	92	37									
		3	Quite a bit	13	33	61	31	77	35	72	29									
		4	Very much	2	5	31	16	33	15	51	20									
		Total	40	100	199	100	221	100	251	100										
i. Solving complex real- world problems	pgprobsolve	1	Very little	5	13	28	14	34	15	30	12	2.5	2.5	-.01	2.4	.16	2.6	-.07		
		2	Some	16	40	71	36	100	45	100	40									
		3	Quite a bit	13	33	70	35	60	27	71	28									
		4	Very much	6	15	30	15	27	12	50	20									
		Total	40	100	199	100	221	100	251	100										
j. Being an informed and active citizen	pgcitizen	1	Very little	10	25	33	17	32	15	41	16	2.3	2.3	-.05	2.4	-.13	2.5	-.23		
		2	Some	12	30	87	44	92	42	83	33									
		3	Quite a bit	14	35	56	28	68	31	80	32									
		4	Very much	4	10	23	12	28	13	46	18									
		Total	40	100	199	100	220	100	250	100										

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Frequencies and Statistical Comparisons: Phys Sci, Math, CS

University of Minnesota Duluth

## First-Year Students<sup>a</sup> in Phys Sci, Math, CS

First-Year Students <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your first-year students compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>j</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
18. How would you evaluate your entire educational experience at this institution?																			
	evalexp	1	Poor	0	0	7	3	7	3	2	1	3.2	3.1	.13	3.2	.03	3.3	-.07	
		2	Fair	4	10	19	9	19	9	20	8								
		3	Good	23	58	115	57	117	53	138	55								
		4	Excellent	13	33	60	30	79	36	91	36								
		Total		40	100	201	100	222	100	251	100								
19. If you could start over again, would you go to the <i>same institution</i> you are now attending?																			
	sameinst	1	Definitely no	2	5	5	2	8	4	5	2	3.1	3.2	-.19	3.3	-.26	3.3	-.21	
		2	Probably no	5	13	23	11	22	10	27	11								
		3	Probably yes	20	50	92	46	85	38	118	47								
		4	Definitely yes	13	33	82	41	106	48	102	40								
		Total		40	100	202	100	221	100	252	100								

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
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	Never	3	5	10	4	8	2	11	3	2.8	3.0	-.18	3.0	-.24	3.1	-.27	
		2	Sometimes	24	41	83	32	100	29	112	27								
		3	Often	13	22	71	27	118	34	137	33								
		4	Very often	19	32	99	38	124	35	155	37								
		Total	59	100	263	100	350	100	415	100									
b. Prepared two or more drafts of a paper or assignment before turning it in	drafts	1	Never	18	31	64	24	101	29	93	22	2.1	2.3	-.19	2.2	-.09	2.3	-.25	
		2	Sometimes	27	46	105	40	135	38	160	39								
		3	Often	6	10	57	22	74	21	101	24								
		4	Very often	8	14	37	14	41	12	60	14								
		Total	59	100	263	100	351	100	414	100									
c. Come to class without completing readings or assignments	unpreparedr  (Reverse-coded version of unprepared created by NSSE.)	1	Very often	2	3	20	8	18	5	20	5	2.9	3.0	-.10	2.9	.03	3.0	-.09	
		2	Often	16	28	27	10	55	16	50	12								
		3	Sometimes	25	43	149	57	225	64	264	63								
		4	Never	15	26	66	25	52	15	82	20								
		Total	58	100	262	100	350	100	416	100									
d. Attended an art exhibit, play or other arts performance (dance, music, etc.)	attendart	1	Never	29	49	109	42	130	37	171	41	1.6	1.8	-.21	1.8	-.25	1.8	-.22	
		2	Sometimes	24	41	108	42	168	48	173	42								
		3	Often	5	8	29	11	32	9	47	11								
		4	Very often	1	2	14	5	18	5	22	5								
		Total	59	100	260	100	348	100	413	100									
e. Asked another student to help you understand course material	CLaskhelp	1	Never	3	5	15	6	38	11	37	9	2.6	2.7	-.07	2.5	.07	2.6	-.03	
		2	Sometimes	25	43	110	42	147	42	164	40								
		3	Often	22	38	84	32	104	30	129	31								
		4	Very often	8	14	52	20	61	17	84	20								
		Total	58	100	261	100	350	100	414	100									
f. Explained course material to one or more students	CLexplain	1	Never	1	2	2	1	5	1	6	1	3.1	3.0	.01	2.9	.23	3.0	.02	
		2	Sometimes	14	24	73	28	116	33	107	26								
		3	Often	25	42	99	38	147	42	167	40								
		4	Very often	19	32	89	34	82	23	133	32								
		Total	59	100	263	100	350	100	413	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>									
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with							
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
g. Prepared for exams by discussing or working through course material with other students	CLstudy	1	Never	7	12	27	10	46	13	64	15	2.6	2.7	-.06	2.5	.14	2.7	-.01			
		2	Sometimes	21	36	87	34	136	39	118	28										
		3	Often	17	29	81	31	107	31	130	31										
		4	Very often	14	24	63	24	59	17	103	25										
		Total	59	100	258	100	348	100	415	100											
h. Worked with other students on course projects or assignments	CLproject	1	Never	1	2	11	4	10	3	22	5	3.0	3.0	.04	2.9	.11	2.9	.10			
		2	Sometimes	13	22	71	27	102	29	116	28										
		3	Often	29	50	96	37	147	42	155	37										
		4	Very often	15	26	84	32	90	26	123	30										
		Total	58	100	262	100	349	100	416	100											
i. Gave a course presentation	present	1	Never	6	10	36	14	68	19	56	13	2.4	2.4	-.02	2.3	.06	2.5	-.14			
		2	Sometimes	32	54	121	46	144	41	163	39										
		3	Often	14	24	73	28	98	28	128	31										
		4	Very often	7	12	33	13	40	11	68	16										
		Total	59	100	263	100	350	100	415	100											
2. During the current school year, about how often have you done the following?																					
a. Combined ideas from different courses when completing assignments	RIintegrate	1	Never	1	2	8	3	11	3	17	4	2.8	3.0	-.19	3.0	-.14	3.0	-.14			
		2	Sometimes	19	32	70	27	91	26	108	26										
		3	Often	27	46	93	36	149	43	159	39										
		4	Very often	12	20	89	34	98	28	127	31										
		Total	59	100	260	100	349	100	411	100											
b. Connected your learning to societal problems or issues	RIsocietal	1	Never	8	14	33	13	47	13	66	16	2.2	2.4	-.26	2.5 *	-.32	2.4 *	-.25			
		2	Sometimes	35	59	118	46	142	41	166	40										
		3	Often	12	20	72	28	102	29	117	28										
		4	Very often	4	7	35	14	58	17	63	15										
		Total	59	100	258	100	349	100	412	100											
c. Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	RIdiverse	1	Never	19	32	69	27	78	22	108	26	1.9	2.1	-.26	2.2 **	-.39	2.2 **	-.33			
		2	Sometimes	30	51	111	43	151	43	166	40										
		3	Often	8	14	56	22	81	23	89	22										
		4	Very often	2	3	21	8	39	11	48	12										
		Total	59	100	257	100	349	100	411	100											

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with						
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	UMD	UMD Peers	Effect size <sup>n</sup>	Competitors	Effect size <sup>n</sup>	National Comparison	Effect size <sup>n</sup>
														Mean	Mean		Mean		Mean	
d. Examined the strengths and weaknesses of your own views on a topic or issue	RIownview	1	Never		3	5	26	10	27	8	40	10	2.5	2.6	-.12	2.6	-.13	2.7	-.18	
		2	Sometimes		28	47	89	34	134	38	135	33								
		3	Often		22	37	100	38	127	36	152	37								
		4	Very often		6	10	45	17	61	17	84	20								
		Total			59	100	260	100	349	100	411	100								
e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	RIperspect	1	Never		1	2	23	9	22	6	26	6	2.7	2.8	-.11	2.7	-.07	2.8	-.18	
		2	Sometimes		27	46	73	28	123	36	122	30								
		3	Often		22	37	105	41	131	38	166	40								
		4	Very often		9	15	57	22	69	20	97	24								
		Total			59	100	258	100	345	100	411	100								
f. Learned something that changed the way you understand an issue or concept	RInewview	1	Never		2	3	10	4	8	2	17	4	2.7	2.8	-.04	2.7	.00	2.9	-.13	
		2	Sometimes		20	34	86	33	136	39	123	30								
		3	Often		28	47	115	44	141	40	174	42								
		4	Very often		9	15	48	19	64	18	96	23								
		Total			59	100	259	100	349	100	410	100								
g. Connected ideas from your courses to your prior experiences and knowledge	RIconnect	1	Never		0	0	4	2	7	2	13	3	3.0	3.1	-.06	3.1	-.15	3.1	-.16	
		2	Sometimes		16	27	56	22	61	18	70	17								
		3	Often		26	44	118	46	159	46	169	41								
		4	Very often		17	29	81	31	120	35	156	38								
		Total			59	100	259	100	347	100	408	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		8	14	51	20	66	19	72	17	2.3	2.4	-.07	2.4	-.07	2.4	-.15	
		2	Sometimes		32	56	105	40	138	40	162	39								
		3	Often		9	16	61	23	94	27	104	25								
		4	Very often		8	14	43	17	50	14	75	18								
		Total			57	100	260	100	348	100	413	100								
b. Worked with a faculty member on activities other than coursework (committees, student groups, etc.)	SFotherwork	1	Never		24	42	106	41	124	36	140	34	2.0	2.0	-.04	2.1	-.11	2.1	-.15	
		2	Sometimes		19	33	77	30	112	32	135	33								
		3	Often		5	9	40	15	66	19	72	18								
		4	Very often		9	16	36	14	46	13	64	16								
		Total			57	100	259	100	348	100	411	100								

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
		UMD Peers												Competitors		National Comparison			
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
c. Discussed course topics, ideas, or concepts with a faculty member outside of class	SFdiscuss	1	Never	10	18	48	19	66	19	72	17	2.3	2.3	-.03	2.3	.02	2.4	-.12	
		2	Sometimes	27	47	112	43	152	44	162	39								
		3	Often	12	21	60	23	91	26	107	26								
		4	Very often	8	14	38	15	39	11	71	17								
		Total	57	100	258	100	348	100	412	100									
d. Discussed your academic performance with a faculty member	SFperform	1	Never	10	18	60	23	87	25	83	20	2.1	2.2	-.01	2.1	.04	2.3	-.15	
		2	Sometimes	32	56	127	49	164	47	183	44								
		3	Often	12	21	43	17	72	21	95	23								
		4	Very often	3	5	28	11	26	7	51	12								
		Total	57	100	258	100	349	100	412	100									
4. During the current school year, how much has your coursework emphasized the following?																			
a. Memorizing course material	memorize	1	Very little	3	5	25	10	25	7	35	8	2.7	2.6	.10	2.6	.10	2.7	.04	
		2	Some	19	33	94	36	133	38	136	33								
		3	Quite a bit	27	47	94	36	133	38	163	39								
		4	Very much	9	16	49	19	58	17	79	19								
		Total	58	100	262	100	349	100	413	100									
b. Applying facts, theories, or methods to practical problems or new situations	HOapply	1	Very little	0	0	11	4	5	1	10	2	3.2	3.3	-.11	3.3	-.10	3.3	-.01	
		2	Some	10	18	26	10	42	12	60	15								
		3	Quite a bit	23	40	90	34	138	40	157	38								
		4	Very much	24	42	135	52	162	47	185	45								
		Total	57	100	262	100	347	100	412	100									
c. Analyzing an idea, experience, or line of reasoning in depth by examining its parts	HOanalyze	1	Very little	2	3	16	6	17	5	21	5	2.9	3.1	-.22	3.1	-.13	3.1	-.12	
		2	Some	15	26	39	15	71	21	84	20								
		3	Quite a bit	25	43	95	37	131	38	159	39								
		4	Very much	16	28	108	42	127	37	147	36								
		Total	58	100	258	100	346	100	411	100									
d. Evaluating a point of view, decision, or information source	HOevaluate	1	Very little	5	9	50	19	46	13	44	11	2.5	2.5	.04	2.5	-.01	2.6	-.06	
		2	Some	26	45	80	31	124	36	151	37								
		3	Quite a bit	18	31	80	31	118	34	147	36								
		4	Very much	9	16	49	19	59	17	70	17								
		Total	58	100	259	100	347	100	412	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>											
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with									
		Variable name <sup>l</sup>		Values <sup>m</sup>		Response options		Count		%		Count		%		Count		%		Count		%	
Item wording or description		Variable name <sup>l</sup>		Values <sup>m</sup>		Response options		Count		%		Count		%		Count		%		Count		%	
e. Forming a new idea or understanding from various pieces of information		HOform		1		Very little		3		5		18		7		31		9		33		8	
				2		Some		17		29		68		26		96		28		106		26	
				3		Quite a bit		28		47		103		39		132		38		151		37	
				4		Very much		11		19		73		28		87		25		121		29	
				Total				59		100		262		100		346		100		411		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		1		2		7		3		7		2		4		1	
				2		Some		7		12		38		15		49		14		63		15	
				3		Quite a bit		35		59		115		44		164		47		187		45	
				4		Very much		16		27		102		39		129		37		159		38	
				Total				59		100		262		100		349		100		413		100	
b. Taught course sessions in an organized way		ETorganize		1		Very little		1		2		7		3		5		1		11		3	
				2		Some		12		20		45		17		53		15		59		14	
				3		Quite a bit		31		53		113		43		169		48		206		50	
				4		Very much		15		25		97		37		122		35		138		33	
				Total				59		100		262		100		349		100		414		100	
c. Used examples or illustrations to explain difficult points		ETexample		1		Very little		1		2		9		3		6		2		9		2	
				2		Some		12		20		30		11		58		17		59		14	
				3		Quite a bit		25		42		106		41		138		40		163		40	
				4		Very much		21		36		116		44		145		42		181		44	
				Total				59		100		261		100		347		100		412		100	
d. Provided feedback on a draft or work in progress		ETdraftfb		1		Very little		7		12		37		14		39		11		50		12	
				2		Some		21		36		91		35		136		39		127		31	
				3		Quite a bit		24		41		79		30		104		30		152		37	
				4		Very much		7		12		55		21		69		20		84		20	
				Total				59		100		262		100		348		100		413		100	
e. Provided prompt and detailed feedback on tests or completed assignments		ETfeedback		1		Very little		2		3		23		9		20		6		25		6	
				2		Some		17		29		64		25		114		33		126		31	
				3		Quite a bit		30		51		111		43		126		36		144		35	
				4		Very much		10		17		63		24		87		25		116		28	
				Total				59		100		261		100		347		100		411		100	

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
										National Comparison		Your seniors compared with							
				UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
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	0	0	16	6	11	3	23	6	3.1	3.1	.02	3.1	.05	3.1	.08	
		2	Sometimes	16	27	51	19	77	22	80	19								
		3	Often	19	32	83	32	131	37	157	38								
		4	Very often	24	41	113	43	131	37	152	37								
		Total	59	100	263	100	350	100	412	100									
b. Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	QRproblem	1	Never	7	12	52	20	60	17	73	18	2.5	2.6	-.08	2.6	-.06	2.6	-.05	
		2	Sometimes	25	43	71	27	107	31	131	32								
		3	Often	14	24	61	23	97	28	102	25								
		4	Very often	12	21	77	30	86	25	106	26								
		Total	58	100	261	100	350	100	412	100									
c. Evaluated what others have concluded from numerical information	QRevaluate	1	Never	2	3	38	14	32	9	57	14	2.7	2.7	.04	2.7	-.04	2.6	.07	
		2	Sometimes	26	45	78	30	107	31	134	33								
		3	Often	17	29	80	30	129	37	122	30								
		4	Very often	13	22	67	25	81	23	99	24								
		Total	58	100	263	100	349	100	412	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  (Recorded version of wrshort created by NSSE. Values are estimated number of papers, reports, etc.)	0	None	4	7	30	12	27	8	42	11	6.9	5.8	.18	6.7	.02	6.2	.10	
		1.5	1-2	19	32	65	25	81	23	104	26								
		4	3-5	9	15	76	30	100	29	104	26								
		8	6-10	13	22	44	17	61	18	70	18								
		13	11-15	7	12	21	8	39	11	32	8								
		18	16-20	3	5	6	2	16	5	11	3								
		23	More than 20	4	7	15	6	23	7	30	8								
		Total	59	100	257	100	347	100	393	100									
b. Between 6 and 10 pages	wrmednum  (Recorded version of wrmed created by NSSE. Values are estimated number of papers, reports, etc.)	0	None	17	29	84	34	108	32	120	31	3.1	2.3	.19	2.3	.23	2.7	.11	
		1.5	1-2	18	31	100	40	132	39	151	39								
		4	3-5	13	22	45	18	62	18	68	18								
		8	6-10	7	12	11	4	25	7	33	9								
		13	11-15	2	3	4	2	5	1	8	2								
		18	16-20	1	2	0	0	3	1	4	1								
		23	More than 20	0	0	5	2	1	0	4	1								
		Total	58	100	249	100	336	100	388	100									



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with						
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	UMD	UMD Peers	Effect size <sup>n</sup>	Competitors	Effect size <sup>n</sup>	National Comparison	Effect size <sup>n</sup>
c. 11 pages or more		wrlongnum	0	None		35	60	150	62	181	55	222	58	1.4	1.1	.13	1.4	.00	1.3	.02
		(Recoded version of wrlong created by NSSE. Values are estimated number of papers, reports, etc.)	1.5	1-2		13	22	63	26	107	33	108	28							
			4	3-5		7	12	20	8	24	7	31	8							
			8	6-10		1	2	5	2	10	3	15	4							
			13	11-15		2	3	2	1	3	1	5	1							
			18	16-20		0	0	0	0	1	0	0	0							
			23	More than 20		0	0	1	0	3	1	2	1							
				Total		58	100	241	100	329	100	383	100							
Estimated number of assigned pages of student writing.		wrpages												66.3	50.7	.26	59.2	.10	58.1	.11
		(Continuous variable, recoded and summed by NSSE from wrshort, wrmed, and wrlong. Values are estimated pages of assigned writing.)																		
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	7	19	7	17	5	30	7	2.6	2.9	-.27	2.8	-.24	2.9	-.25
			2	Sometimes		27	46	86	33	125	36	130	32							
			3	Often		15	25	63	24	105	30	116	28							
			4	Very often		13	22	95	36	104	30	136	33							
				Total		59	100	263	100	351	100	412	100							
b. People from an economic background other than your own		DDeconomic	1	Never		1	2	18	7	13	4	21	5	2.9	3.0	-.11	2.9	-.04	3.0	-.06
			2	Sometimes		19	32	58	22	103	29	109	27							
			3	Often		23	39	86	33	124	35	142	35							
			4	Very often		16	27	99	38	110	31	137	33							
				Total		59	100	261	100	350	100	409	100							
c. People with religious beliefs other than your own		DDreligion	1	Never		1	2	18	7	17	5	24	6	3.0	3.0	-.05	3.1	-.10	3.0	-.02
			2	Sometimes		19	32	64	24	77	22	102	25							
			3	Often		20	34	78	30	127	36	140	34							
			4	Very often		19	32	103	39	130	37	144	35							
				Total		59	100	263	100	351	100	410	100							
d. People with political views other than your own		DDpolitical	1	Never		1	2	23	9	17	5	28	7	3.1	2.9	.22	3.0	.11	2.9	.22
			2	Sometimes		15	25	75	29	85	24	117	29							
			3	Often		21	36	77	29	131	38	137	34							
			4	Very often		22	37	87	33	115	33	125	31							
				Total		59	100	262	100	348	100	407	100							

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>								
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with						
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options		Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
9. During the current school year, about how often have you done the following?																				
a. Identified key information from reading assignments	LSreading	1	Never	4	7	14	5	9	3	6	1	2.8	3.0	-.21	3.1 *	-.32	3.1 **	-.36		
		2	Sometimes	15	25	60	23	74	21	90	22									
		3	Often	29	49	103	40	156	45	181	44									
		4	Very often	11	19	82	32	110	32	135	33									
		Total	59	100	259	100	349	100	412	100										
b. Reviewed your notes after class	LSnotes	1	Never	8	14	18	7	32	9	29	7	2.5	2.8 *	-.33	2.7	-.23	2.8 *	-.33		
		2	Sometimes	26	44	86	33	128	37	141	34									
		3	Often	13	22	84	32	98	28	126	31									
		4	Very often	12	20	71	27	91	26	116	28									
		Total	59	100	259	100	349	100	412	100										
c. Summarized what you learned in class or from course materials	LSsummary	1	Never	8	14	25	10	36	10	38	9	2.6	2.7	-.21	2.7	-.12	2.7	-.18		
		2	Sometimes	22	37	71	28	126	36	135	33									
		3	Often	17	29	106	41	99	29	133	33									
		4	Very often	12	20	56	22	85	25	101	25									
		Total	59	100	258	100	346	100	407	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	3	1	4	1	2	0	5.6	5.6	-.01	5.5	.11	5.6	.01		
		2	1	2	4	2	3	1	8	2										
		3	1	2	7	3	13	4	14	3										
		4	5	8	21	8	40	11	29	7										
		5	20	34	67	26	97	28	118	29										
		6	17	29	94	36	121	35	140	34										
		7	Very much	15	25	66	25	71	20	101	25									
		Total	59	100	262	100	349	100	412	100										
11. Which of the following have you done or do you plan to do before you graduate? <sup>o</sup>																				
a. Participate in an internship, co-op, field experience, student teaching, or clinical placement	intern	Have not decided		7	12	23	9	25	7	36	9	51%	45%	.12	48%	.06	39%	.23		
		Do not plan to do		9	15	59	23	75	21	86	21									
		Plan to do		13	22	62	24	83	24	129	31									
		Done or in progress		30	51	118	45	167	48	162	39									
		Total		59	100	262	100	350	100	413	100									
(Means indicate the percentage who responded "Done or in progress.")																				

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>									
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with							
														UMD Peers		Competitors		National Comparison			
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>			
b. Hold a formal leadership role in a student organization or group	leader		Have not decided	5	8	12	5	30	9	40	10	32%	41%	-.18	43%	-.23	38%	-.12			
	(Means indicate the percentage who responded "Done or in progress.")	Do not plan to do	32	54	135	52	151	43	188	46											
	Plan to do	3	5	7	3	17	5	27	7												
	Done or in progress	19	32	107	41	150	43	157	38												
	Total	59	100	261	100	348	100	412	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	7	12	23	9	27	8	51	12	20%	16%	.12	19%	.02	21%	-.01			
	(Means indicate the percentage who responded "Done or in progress.")	Do not plan to do	40	68	190	73	241	69	245	60											
	Plan to do	0	0	8	3	13	4	30	7												
	Done or in progress	12	20	41	16	68	19	85	21												
	Total	59	100	262	100	349	100	411	100												
d. Participate in a study abroad program	abroad		Have not decided	5	8	23	9	26	7	47	12	10%	8%	.08	13%	-.09	9%	.04			
	(Means indicate the percentage who responded "Done or in progress.")	Do not plan to do	44	75	200	78	261	75	295	73											
	Plan to do	4	7	15	6	16	5	27	7												
	Done or in progress	6	10	20	8	46	13	36	9												
	Total	59	100	258	100	349	100	405	100												
e. Work with a faculty member on a research project	research		Have not decided	14	24	31	12	37	11	53	13	36%	41%	-.12	46%	-.20	41%	-.11			
	(Means indicate the percentage who responded "Done or in progress.")	Do not plan to do	21	36	87	34	106	31	124	30											
	Plan to do	3	5	33	13	46	13	64	16												
	Done or in progress	21	36	107	41	158	46	166	41												
	Total	59	100	258	100	347	100	407	100												
f. Complete a culminating senior experience (capstone course, senior project or thesis, comprehensive exam, portfolio, etc.)	capstone		Have not decided	7	12	16	6	23	7	30	7	27%	56% ▼	***	-0.59	47% ▼	**	-0.41	44% ▼	*	-0.35
	(Means indicate the percentage who responded "Done or in progress.")	Do not plan to do	22	37	48	18	88	25	88	21											
	Plan to do	14	24	51	20	74	21	112	27												
	Done or in progress	16	27	146	56	163	47	180	44												
	Total	59	100	261	100	348	100	410	100												

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

servcourse	1	None	33	56	168	64	215	61	215	53	1.5	1.4	.17	1.4	.12	1.5	-.06
	2	Some	24	41	88	34	125	36	174	43							
	3	Most	1	2	3	1	7	2	18	4							
	4	All	1	2	3	1	3	1	2	0							
	Total		59	100	262	100	350	100	409	100							

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
13. Indicate the quality of your interactions with the following people at your institution.																			
a. Students	QIstudent	1	Poor	1	2	3	1	4	1	4	1	5.7	5.7	.01	5.6	.05	5.7	-.01	
		2	1	2	1	0	5	1	3	1									
		3	1	2	11	4	15	4	16	4									
		4	7	12	24	9	23	7	34	8									
		5	8	14	58	22	90	26	100	24									
		6	26	44	95	36	126	36	133	32									
		7	Excellent	15	25	71	27	88	25	120	29								
		—	Not applicable	0	0	0	0	0	0	2	0								
		Total	59	100	263	100	351	100	412	100									
b. Academic advisors	QIadvisor	1	Poor	4	7	10	4	15	4	15	4	4.9	5.0	-.06	5.2	-.12	5.5 *	-.30	
		2	5	8	16	6	15	4	13	3									
		3	3	5	22	8	35	10	30	7									
		4	8	14	34	13	43	12	44	11									
		5	11	19	54	21	66	19	58	14									
		6	14	24	50	19	67	19	102	25									
		7	Excellent	14	24	64	25	103	29	142	35								
		—	Not applicable	0	0	11	4	6	2	4	1								
		Total	59	100	261	100	350	100	408	100									
c. Faculty	QIfaculty	1	Poor	0	0	2	1	2	1	6	1	5.7	5.7	.05	5.6	.07	5.7	.04	
		2	1	2	9	3	4	1	11	3									
		3	1	2	9	3	14	4	13	3									
		4	6	10	21	8	29	8	29	7									
		5	11	19	54	21	84	24	92	22									
		6	26	44	82	31	126	36	124	30									
		7	Excellent	14	24	83	32	88	25	133	32								
		—	Not applicable	0	0	1	0	1	0	2	0								
		Total	59	100	261	100	348	100	410	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
d. Student services staff (career services, student activities, housing, etc.)	Qlstaff	1	Poor	2	3	12	5	8	2	19	5	4.7	4.6	.04	4.9	-.14	4.9	-.10	
		2		2	3	17	6	15	4	21	5								
		3		9	15	21	8	33	9	23	6								
		4		9	15	48	18	48	14	57	14								
		5		11	19	42	16	75	21	72	18								
		6		16	27	39	15	80	23	84	21								
		7	Excellent	5	8	37	14	45	13	61	15								
		—	Not applicable	5	8	47	18	46	13	71	17								
Total			59	100	263	100	350	100	408	100									
e. Other administrative staff and offices (registrar, financial aid, etc.)	Qladmin	1	Poor	4	7	10	4	7	2	26	6	4.7	4.8	-.10	5.0	-.22	4.9	-.12	
		2		3	5	21	8	14	4	15	4								
		3		6	10	18	7	24	7	29	7								
		4		12	20	42	16	63	18	69	17								
		5		8	14	57	22	73	21	88	21								
		6		17	29	59	23	79	23	101	25								
		7	Excellent	7	12	42	16	53	15	66	16								
		—	Not applicable	2	3	13	5	36	10	17	4								
Total			59	100	262	100	349	100	411	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	0	0	8	3	4	1	11	3	3.3	3.2	.09	3.2	.12	3.2	.15	
		2	Some	10	17	36	14	60	17	61	15								
		3	Quite a bit	23	39	113	43	153	44	190	46								
		4	Very much	26	44	105	40	132	38	148	36								
		Total			59	100	262	100	349	100	410								100
b. Providing support to help students succeed academically	SEacademic	1	Very little	5	8	18	7	17	5	16	4	2.8	2.9	-.12	3.0	-.16	3.0	-.22	
		2	Some	15	25	56	22	75	22	90	22								
		3	Quite a bit	24	41	109	42	155	45	175	43								
		4	Very much	15	25	75	29	98	28	128	31								
		Total			59	100	258	100	345	100	409								100
c. Using learning support services (tutoring services, writing center, etc.)	SElearnsup	1	Very little	2	3	22	8	16	5	25	6	3.0	2.8	.20	3.0	.02	3.0	.04	
		2	Some	14	24	70	27	76	22	89	22								
		3	Quite a bit	24	41	102	39	152	44	173	42								
		4	Very much	18	31	67	26	103	30	123	30								
		Total			58	100	261	100	347	100	410								100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

				Frequency Distributions								Statistical Comparisons <sup>k</sup>					
				UMD		UMD Peers		Competitors		National Comparison		Your seniors compared with					
				UMD		UMD Peers		Competitors		National Comparison		UMD	UMD Peers	Effect size <sup>n</sup>	Competitors	Effect size <sup>n</sup>	National Comparison
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean
d. Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)	SEdiverse	1	Very little	12	20	51	20	64	18	60	15	2.4	2.4	.00	2.4	-.04	2.5
		2	Some	19	32	98	38	124	36	149	36						
		3	Quite a bit	20	34	66	25	104	30	127	31						
		4	Very much	8	14	46	18	57	16	75	18						
		Total		59	100	261	100	349	100	411	100						
e. Providing opportunities to be involved socially	SEsocial	1	Very little	1	2	22	8	19	5	16	4	2.9	2.8	.08	2.9	.04	2.9
		2	Some	17	29	75	29	103	30	122	30						
		3	Quite a bit	27	47	92	35	133	38	167	41						
		4	Very much	13	22	73	28	92	27	104	25						
		Total		58	100	262	100	347	100	409	100						
f. Providing support for your overall well-being (recreation, health care, counseling, etc.)	SEwellness	1	Very little	2	3	30	11	22	6	30	7	2.9	2.8	.03	2.9	-.07	2.8
		2	Some	16	27	58	22	81	23	117	29						
		3	Quite a bit	29	49	98	38	145	42	169	41						
		4	Very much	12	20	75	29	99	29	94	23						
		Total		59	100	261	100	347	100	410	100						
g. Helping you manage your non-academic responsibilities (work, family, etc.)	SEnonacad	1	Very little	16	27	84	32	102	29	138	34	2.1	2.1	.01	2.1	.00	2.0
		2	Some	26	44	105	40	150	43	153	37						
		3	Quite a bit	14	24	42	16	64	18	81	20						
		4	Very much	3	5	29	11	31	9	38	9						
		Total		59	100	260	100	347	100	410	100						
h. Attending campus activities and events (performing arts, athletic events, etc.)	SEactivities	1	Very little	5	8	29	11	28	8	39	10	2.8	2.6	.17	2.9	-.09	2.7
		2	Some	17	29	81	31	86	25	133	32						
		3	Quite a bit	23	39	105	41	139	40	153	37						
		4	Very much	14	24	43	17	94	27	85	21						
		Total		59	100	258	100	347	100	410	100						
i. Attending events that address important social, economic, or political issues	SEevents	1	Very little	8	14	48	18	52	15	64	16	2.5	2.4	.18	2.4	.11	2.4
		2	Some	19	33	106	41	136	39	168	41						
		3	Quite a bit	22	39	73	28	115	33	126	31						
		4	Very much	8	14	34	13	43	12	50	12						
		Total		57	100	261	100	346	100	408	100						

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors<sup>a</sup> in  
Phys Sci, Math, CS

Frequency Distributions												Statistical Comparisons <sup>k</sup>																										
														Your seniors compared with																								
				UMD		UMD Peers		Competitors		National Comparison				UMD		UMD Peers		Competitors		National Comparison																		
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>																		
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  (Recorded version of tmprep created by NSSE. Values are estimated number of hours per week.)	0 3 8 13 18 23 28 33	0 hrs 1-5 hrs 6-10 hrs 11-15 hrs 16-20 hrs 21-25 hrs 26-30 hrs More than 30 hrs	0 4 9 11 15 5 7 8	0 7 15 19 25 8 12 14	0 24 54 46 51 37 16 34	0 9 21 18 19 14 6 13	2 33 51 64 72 45 33 47	1 10 15 18 21 13 10 14	3 48 74 84 80 49 26 49	1 12 18 20 19 12 6 12	18.2	17.0	.13	17.7	.05	16.3	.20																				
			Total	59	100	262	100	347	100	413	100																											
b. Participating in co-curricular activities (organizations, campus publications, student government, fraternity or sorority, intercollegiate or intramural sports, etc.)	tmcocurrhrs  (Recorded version of tmcocurr created by NSSE. Values are estimated number of hours per week.)	0 3 8 13 18 23 28 33	0 hrs 1-5 hrs 6-10 hrs 11-15 hrs 16-20 hrs 21-25 hrs 26-30 hrs More than 30 hrs	21 23 7 2 6 0 0 0	36 39 12 3 10 0 0 0	108 92 31 14 7 5 2 1	42 35 12 5 3 2 1 0	113 144 51 18 10 5 2 4	33 41 15 5 3 1 1 1	163 146 54 25 12 5 0 4	40 36 13 6 3 1 0 1										4.4	4.0	.07	4.5	-.02	4.1	.06											
			Total	59	100	260	100	347	100	409	100																											
c. Working for pay on campus	tmworkonhrs  (Recorded version of tmworkon created by NSSE. Values are estimated number of hours per week.)	0 3 8 13 18 23 28 33	0 hrs 1-5 hrs 6-10 hrs 11-15 hrs 16-20 hrs 21-25 hrs 26-30 hrs More than 30 hrs	30 5 8 9 5 2 0 0	51 8 14 15 8 3 0 0	149 16 43 27 16 7 2 2	57 6 16 10 6 3 1 1	162 27 65 43 37 7 3 1	47 8 19 12 11 2 1 0	231 31 56 43 37 9 2 1	56 8 14 10 9 2 0 1																			5.6	5.0	.09	6.1	-.07	5.1	.07		
			Total	59	100	262	100	345	100	411	100																											

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
d. Working for pay off campus	tmworkoffhrs	0	0 hrs	28	47	147	57	214	62	226	56	8.2	7.1	.11	6.3	.19	8.3	-.01	
	(Recorded version of tmworkoff created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	1	2	16	6	18	5	25	6								
		8	6-10 hrs	8	14	18	7	26	7	26	6								
		13	11-15 hrs	7	12	21	8	17	5	21	5								
		18	16-20 hrs	8	14	22	8	26	7	34	8								
		23	21-25 hrs	3	5	15	6	24	7	20	5								
		28	26-30 hrs	4	7	9	3	8	2	15	4								
		33	More than 30 hrs	0	0	12	5	14	4	40	10								
		Total	59	100	260	100	347	100	407	100									
Estimated number of hours working for pay	tmworkhrs											13.8	12.1	.16	12.3	.15	13.3	.05	
(Continuous variable created by NSSE)																			
e. Doing community service or volunteer work	tmservicehrs	0	0 hrs	36	61	170	66	219	64	260	64	2.3	1.7	.16	1.7	.15	1.9	.10	
	(Recorded version of tmservice created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	18	31	65	25	101	30	113	28								
		8	6-10 hrs	1	2	11	4	12	4	21	5								
		13	11-15 hrs	1	2	6	2	4	1	8	2								
		18	16-20 hrs	2	3	4	2	4	1	2	0								
		23	21-25 hrs	1	2	0	0	0	0	0	0								
		28	26-30 hrs	0	0	0	0	1	0	3	1								
		33	More than 30 hrs	0	0	0	0	1	0	1	0								
		Total	59	100	256	100	342	100	408	100									
f. Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)	tmrelaxhrs	0	0 hrs	1	2	6	2	4	1	13	3	14.2	13.0	.14	13.2	.13	11.6 *	.30	
	(Recorded version of tmrelax created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	11	19	53	20	44	13	102	25								
		8	6-10 hrs	13	22	70	27	115	34	110	27								
		13	11-15 hrs	8	14	51	20	67	20	71	17								
		18	16-20 hrs	13	22	29	11	56	16	54	13								
		23	21-25 hrs	3	5	17	7	26	8	20	5								
		28	26-30 hrs	3	5	10	4	7	2	8	2								
		33	More than 30 hrs	6	10	24	9	24	7	29	7								
		Total	58	100	260	100	343	100	407	100									



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
Item wording or description		Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>
g. Providing care for dependents (children, parents, etc.)		tmcarehrs	0	0 hrs	46	81	216	83	290	85	292	72	2.3	2.7	-.04	2.1	.04	3.7	-.16
		(Recorded version of tmcare created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	6	11	11	4	22	6	44	11							
			8	6-10 hrs	0	0	11	4	10	3	19	5							
			13	11-15 hrs	0	0	5	2	1	0	15	4							
			18	16-20 hrs	3	5	4	2	7	2	8	2							
			23	21-25 hrs	0	0	2	1	1	0	4	1							
			28	26-30 hrs	1	2	1	0	0	0	1	0							
			33	More than 30 hrs	1	2	11	4	12	3	23	6							
			Total		57	100	261	100	343	100	406	100							
h. Commuting to campus (driving, walking, etc.)		tmcommutehrs	0	0 hrs	3	5	23	9	44	13	45	11	4.2	4.3	-.03	3.7	.17	4.2	.02
		(Recorded version of tmcommute created by NSSE. Values are estimated number of hours per week.)	3	1-5 hrs	44	76	171	66	250	72	275	67							
			8	6-10 hrs	8	14	55	21	41	12	70	17							
			13	11-15 hrs	1	2	10	4	10	3	19	5							
			18	16-20 hrs	2	3	1	0	2	1	1	0							
			23	21-25 hrs	0	0	0	0	0	0	0	0							
			28	26-30 hrs	0	0	0	0	0	0	0	0							
			33	More than 30 hrs	0	0	1	0	1	0	2	0							
			Total		58	100	261	100	348	100	412	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	26	56	28	49	23	72	26	2.1	2.1	.00	2.4	-.25	2.2	-.11	
	(Revised for 2014. Comparison data are limited to NSSE 2014 participating institutions.)	2	Some	26	45	80	40	74	35	103	37								
		3	About half	12	21	45	23	55	26	69	25								
		4	Most	4	7	15	8	22	10	25	9								
		5	Almost all	1	2	3	2	12	6	7	3								
		Total		58	100	199	100	212	100	276	100								
	tmreadinghrs											5.4	5.4	.00	7.5 **	-.33	5.7	-.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 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
														UMD Peers		Competitors		National Comparison	
Item wording or description	Variable name <sup>i</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
	tmreadinghrscol	1	0 hrs	0	0	0	0	1	0	2	1								
	(Collapsed version of tmreadinghrs created by NSSE.)	2	More than zero, up to 5 hrs	32	55	121	61	98	47	163	59								
		3	More than 5, up to 10 hrs	22	38	55	28	63	30	66	24								
		4	More than 10, up to 15 hrs	2	3	10	5	20	10	18	7								
		5	More than 15, up to 20 hrs	1	2	9	5	13	6	18	7								
		6	More than 20, up to 25 hrs	1	2	3	2	9	4	5	2								
		7	More than 25 hrs	0	0	1	1	6	3	3	1								
		Total		58	100	199	100	210	100	275	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	3	5	37	14	32	9	50	12	2.8	2.7	.12	2.8	.02	2.7	.05	
	2	Some	21	36	78	30	99	28	121	29									
	3	Quite a bit	21	36	83	32	137	39	132	32									
	4	Very much	14	24	64	24	81	23	110	27									
	Total		59	100	262	100	349	100	413	100									
b. Speaking clearly and effectively	pgspeak	1	Very little	5	8	31	12	38	11	48	12	2.7	2.7	.01	2.7	.00	2.7	-.04	
	2	Some	22	37	84	32	107	31	124	30									
	3	Quite a bit	20	34	92	35	137	39	144	35									
	4	Very much	12	20	55	21	66	19	96	23									
	Total		59	100	262	100	348	100	412	100									
c. Thinking critically and analytically	pgthink	1	Very little	1	2	3	1	8	2	13	3	3.3	3.4	-.20	3.4	-.11	3.3	-.05	
	2	Some	10	17	29	11	45	13	51	12									
	3	Quite a bit	18	31	79	30	102	29	132	32									
	4	Very much	29	50	151	58	193	55	214	52									
	Total		58	100	262	100	348	100	410	100									
d. Analyzing numerical and statistical information	pganalyze	1	Very little	0	0	6	2	10	3	10	2	3.4	3.3	.04	3.4	-.04	3.3	.04	
	2	Some	11	19	40	15	47	14	62	15									
	3	Quite a bit	16	27	79	30	86	25	127	31									
	4	Very much	32	54	136	52	202	59	214	52									
	Total		59	100	261	100	345	100	413	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>							
				UMD		UMD Peers		Competitors		National Comparison		UMD		Your seniors compared with					
		UMD Peers												Competitors		National Comparison			
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%	Mean	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	Mean	Effect size <sup>n</sup>	
e. Acquiring job- or work- related knowledge and skills	pgwork	1	Very little	3	5	29	11	31	9	35	8	2.8	2.8	.00	3.0	-.19	3.0	-.18	
		2	Some	20	34	72	27	72	21	85	21								
		3	Quite a bit	21	36	79	30	115	33	146	35								
		4	Very much	15	25	82	31	131	38	147	36								
		Total	59	100	262	100	349	100	413	100									
f. Working effectively with others	pgothers	1	Very little	4	7	21	8	23	7	21	5	2.8	2.8	-.05	2.9	-.11	2.9	-.17	
		2	Some	20	34	77	30	93	27	114	28								
		3	Quite a bit	21	36	92	35	142	41	152	37								
		4	Very much	14	24	70	27	90	26	122	30								
		Total	59	100	260	100	348	100	409	100									
g. Developing or clarifying a personal code of values and ethics	pgvalues	1	Very little	15	26	56	21	67	19	95	23	2.3	2.4	-.14	2.5	-.21	2.5	-.17	
		2	Some	20	34	91	35	108	31	115	28								
		3	Quite a bit	15	26	63	24	107	31	120	29								
		4	Very much	8	14	52	20	65	19	81	20								
		Total	58	100	262	100	347	100	411	100									
h. Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)	pgdiverse	1	Very little	9	15	56	21	57	16	79	19	2.4	2.4	-.05	2.5	-.11	2.5	-.08	
		2	Some	28	47	86	33	121	35	142	35								
		3	Quite a bit	12	20	68	26	110	32	107	26								
		4	Very much	10	17	52	20	60	17	83	20								
		Total	59	100	262	100	348	100	411	100									
i. Solving complex real- world problems	pgprobsolve	1	Very little	5	8	24	9	29	8	46	11	2.8	2.8	-.06	2.8	-.08	2.8	-.09	
		2	Some	19	32	76	29	94	27	102	25								
		3	Quite a bit	20	34	85	32	129	37	133	32								
		4	Very much	15	25	77	29	96	28	131	32								
		Total	59	100	262	100	348	100	412	100									
j. Being an informed and active citizen	pgcitizen	1	Very little	9	15	63	24	54	16	86	21	2.4	2.4	.03	2.5	-.07	2.4	.01	
		2	Some	27	46	85	33	140	40	154	37								
		3	Quite a bit	14	24	68	26	96	28	105	25								
		4	Very much	9	15	45	17	58	17	68	16								
		Total	59	100	261	100	348	100	413	100									

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

## Frequencies and Statistical Comparisons: Phys Sci, Math, CS

### University of Minnesota Duluth

#### Seniors<sup>a</sup> in Phys Sci, Math, CS

Seniors <sup>a</sup> in Phys Sci, Math, CS				Frequency Distributions								Statistical Comparisons <sup>k</sup>					
				UMD		UMD Peers		Competitors		National Comparison		Your seniors compared with					
												UMD		UMD Peers		Competitors	
Item wording or description	Variable name <sup>l</sup>	Values <sup>m</sup>	Response options	Count	%	Count	%	Count	%	Count	%						
18. How would you evaluate your entire educational experience at this institution?																	
	evalexp	1	Poor	1	2	8	3	11	3	12	3	3.3	3.2	.07	3.3	-.07	3.2
		2	Fair	5	8	34	13	28	8	50	12						
		3	Good	31	53	117	45	153	44	198	48						
		4	Excellent	22	37	102	39	156	45	153	37						
		Total		59	100	261	100	348	100	413	100						
19. If you could start over again, would you go to the <i>same institution</i> you are now attending?																	
	sameinst	1	Definitely no	2	3	19	7	16	5	26	6	3.3	3.1	.12	3.3	-.02	3.1
		2	Probably no	5	8	35	13	29	8	62	15						
		3	Probably yes	28	47	97	37	149	42	180	43						
		4	Definitely yes	24	41	111	42	157	45	148	36						
		Total		59	100	262	100	351	100	416	100						

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	29	71	176	87	166	75	211	83	33	56	230	87	247	70	336	81
		More than one	12	29	26	13	56	25	43	17	26	44	33	13	105	30	80	19
		Total	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	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  (Recoded from MAJfirst)	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	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	100
		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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Undecided, Undeclared	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	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  (Recoded from MAJsecond)	Arts & Humanities	1	8	8	31	9	16	4	9	2	8	4	12	15	14	10	13
		Biological Sci., Agriculture, & Natural Resources	2	17	1	4	4	7	6	14	8	31	4	12	7	7	10	13
		Physical Sci., Mathematics, & Computer Science	5	42	11	42	9	16	22	51	12	46	12	36	31	30	23	29
		Social Sciences	1	8	0	0	5	9	0	0	3	12	9	27	18	17	6	8
		Business	1	8	2	8	13	23	1	2	0	0	2	6	13	13	4	5
		Communications, Media, & Public Relations	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0
		Education	0	0	0	0	0	0	1	2	0	0	1	3	8	8	11	14
		Engineering	1	8	3	12	10	18	8	19	0	0	0	0	4	4	7	9
		Health Professions	1	8	0	0	2	4	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	3	3	2	3
		All Other	0	0	1	4	4	7	1	2	0	0	1	3	4	4	7	9
		Undecided, Undeclared	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
		Total	12	100	26	100	56	100	43	100	26	100	33	100	104	100	80	100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	37	93	178	89	208	94	217	86	0	0	1	0	3	1	2	0
		Sophomore	1	3	16	8	11	5	27	11	1	2	0	0	7	2	4	1
		Junior	2	5	5	2	1	0	6	2	9	15	16	6	46	13	33	8
		Senior	0	0	1	0	0	0	0	0	47	80	243	92	289	83	367	88
		Unclassified	0	0	1	0	1	0	2	1	2	3	3	1	5	1	9	2
		Total	40	100	201	100	221	100	252	100	59	100	263	100	350	100	415	100
22. Thinking about this current academic term, are you a full-time student?	fulltime	No	0	0	7	4	0	0	9	4	4	7	55	21	44	13	68	16
		Yes	40	100	191	96	219	100	242	96	55	93	208	79	306	87	345	84
		Total	40	100	198	100	219	100	251	100	59	100	263	100	350	100	413	100
23a. How many courses are you taking for credit this current academic term?	coursenum	0	0	0	0	0	0	0	0	0	0	0	12	5	5	1	11	3
		1	0	0	0	0	0	0	1	0	0	0	9	3	4	1	6	1
		2	0	0	2	1	1	0	2	1	2	3	22	8	14	4	21	5
		3	6	15	36	18	6	3	20	8	10	17	36	14	38	11	52	13
		4	21	53	79	40	90	41	95	38	19	32	83	32	118	34	125	31
		5	8	20	51	26	87	40	85	34	19	32	52	20	109	31	112	27
		6	3	8	21	11	25	11	30	12	7	12	22	8	36	10	41	10
		7 or more	2	5	10	5	11	5	18	7	2	3	27	10	24	7	41	10
		Total	40	100	199	100	220	100	251	100	59	100	263	100	348	100	409	100
b. Of these, how many are entirely online?	onlinenum	0	38	95	192	96	209	95	228	91	55	93	237	90	313	90	352	86
		1	2	5	8	4	10	5	13	5	4	7	20	8	29	8	42	10
		2	0	0	0	0	1	0	3	1	0	0	4	2	4	1	10	2
		3	0	0	0	0	0	0	2	1	0	0	1	0	1	0	4	1
		4	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
		5	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3	1
		6	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
		7 or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	40	100	201	100	220	100	250	100	59	100	262	100	348	100	411	100
Collapsed recode of courses taken online (Based on responses to coursenum and onlinenum)	onlinecscol	No courses taken online	38	95	190	96	208	95	228	92	55	93	237	90	313	90	350	86
		Some courses taken online	2	5	8	4	11	5	18	7	4	7	24	9	34	10	55	14
		All courses taken online	0	0	0	0	0	0	3	1	0	0	1	0	0	0	1	0
		Total	40	100	198	100	219	100	249	100	59	100	262	100	347	100	406	100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

Phys Sci, Math, CS			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	0	0	4	2	3	1	5	2	0	0	0	0	0	0	3	1
		C	0	0	12	6	8	4	3	1	0	0	7	3	7	2	10	2
		C+	3	8	14	7	6	3	8	3	5	8	23	9	19	5	18	4
		B-	1	3	16	8	13	6	17	7	4	7	35	13	38	11	32	8
		B	9	23	38	19	35	16	47	19	13	22	52	20	70	20	94	23
		B+	5	13	34	17	45	20	34	13	11	19	49	19	53	15	60	14
		A-	11	28	36	18	33	15	46	18	11	19	43	16	57	16	74	18
		A	11	28	47	23	78	35	92	37	15	25	54	21	107	30	123	30
	Total	40	100	201	100	221	100	252	100	59	100	263	100	351	100	414	100	
25. Did you begin college at this institution or elsewhere?	begincol	Started here	35	88	185	92	212	96	224	89	36	62	147	56	238	68	216	53
		Started elsewhere	5	13	17	8	8	4	28	11	22	38	115	44	112	32	195	47
		Total	40	100	202	100	220	100	252	100	58	100	262	100	350	100	411	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	3	4	2	1	0	6	2	1	2	12	5	21	6	26	6
	attend_com	Community or junior college	0	0	19	9	5	2	16	6	19	32	117	44	67	19	138	33
	attend_col	4-year college or university other than this one	6	15	13	6	14	6	23	9	10	17	56	21	81	23	120	29
	attend_none	None	33	83	167	83	195	89	201	81	33	56	111	42	202	58	179	43
	attend_other	Other	0	0	5	2	5	2	6	2	2	3	9	3	14	4	15	4
27. What is the highest level of education you ever expect to complete?	edaspire	Some college but less than a bachelor's degree	0	0	3	1	6	3	7	3	1	2	7	3	4	1	15	4
		Bachelor's degree (B.A., B.S., etc.)	15	38	63	31	83	38	80	32	24	41	83	32	138	40	141	35
		Master's degree (M.A., M.S., etc.)	14	35	79	39	76	35	89	35	17	29	102	39	103	30	139	34
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	11	28	56	28	54	25	75	30	17	29	70	27	103	30	111	27
		Total	40	100	201	100	219	100	251	100	59	100	262	100	348	100	406	100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	5	6	3	2	1	13	5	0	0	9	3	5	1	13	3
		High school diploma or G.E.D.	6	15	28	14	19	9	42	17	6	10	33	13	38	11	58	14
		Attended college, but did not complete degree	3	8	22	11	19	9	38	15	10	17	32	12	31	9	45	11
		Associate's degree (A.A., A.S., etc.)	5	13	19	9	22	10	28	11	7	12	33	13	42	12	48	12
		Bachelor's degree (B.A., B.S., etc.)	16	40	61	30	106	48	71	28	25	42	78	30	129	37	142	35
		Master's degree (M.A., M.S., etc.)	4	10	50	25	40	18	49	20	9	15	54	21	72	21	76	19
		Doctoral or professional degree (Ph.D., J.D., M.D., etc.)	4	10	15	7	11	5	10	4	2	3	23	9	33	9	26	6
		Total	40	100	201	100	219	100	251	100	59	100	262	100	350	100	408	100
First-generation status (No parent holds a bachelor's degree)	firstgen	Not first-generation	24	60	126	63	157	72	130	52	36	61	155	59	234	67	244	60
	(Recoded from parented)	First-generation	16	40	75	37	62	28	121	48	23	39	107	41	116	33	164	40
		Total	40	100	201	100	219	100	251	100	59	100	262	100	350	100	408	100
29. What is your gender identity?  (Revised for 2014; limited to NSSE 2014 institutions)	genderid	Man	26	65	93	65	89	59	104	65	41	69	117	59	128	60	168	61
		Woman	14	35	46	32	59	39	51	32	16	27	78	39	82	38	102	37
		Another gender identity	0	0	0	0	0	0	2	1	1	2	1	1	0	0	0	0
		I prefer not to respond	0	0	4	3	3	2	2	1	1	2	4	2	4	2	5	2
		Total	40	100	143	100	151	100	159	100	59	100	200	100	214	100	275	100
30. Enter your year of birth (e.g., 1994):	agecat	19 or younger	40	100	184	91	207	95	209	83	2	3	1	0	4	1	1	0
	(Recoded from the information entered in birthyear)	20-23	0	0	7	3	10	5	29	12	51	86	179	68	277	80	276	68
		24-29	0	0	5	2	1	0	8	3	2	3	53	20	49	14	83	20
		30-39	0	0	3	1	0	0	4	2	3	5	25	10	14	4	34	8
		40-55	0	0	3	1	1	0	1	0	1	2	4	2	4	1	13	3
		Over 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
		Total	40	100	202	100	219	100	251	100	59	100	262	100	348	100	408	100
31. Are you an international student or foreign national?	internat	No	35	88	186	94	197	91	227	91	57	97	253	97	320	91	373	91
		Yes	5	13	12	6	20	9	23	9	2	3	9	3	30	9	37	9
		Total	40	100	198	100	217	100	250	100	59	100	262	100	350	100	410	100



# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	0	0	0	0	0	0	6	2	0	0	5	2	3	1	3	1
	re_asian	Asian	6	15	25	12	28	13	21	8	2	3	28	11	35	10	38	9
	re_black	Black or African American	1	3	15	7	7	3	15	6	0	0	12	5	9	3	29	7
	re_latino	Hispanic or Latino	0	0	11	5	5	2	28	11	0	0	13	5	5	1	16	4
	re_pacific	Native Hawaiian or Other Pacific Islander	0	0	0	0	1	0	4	2	0	0	3	1	0	0	3	1
	re_white	White	31	78	154	76	176	80	188	75	53	90	204	78	280	80	318	77
	re_other	Other	1	3	6	3	3	1	8	3	0	0	7	3	5	1	13	3
	re_pnr	I prefer not to respond	1	3	9	4	9	4	10	4	5	8	12	5	23	7	19	5
	re_all	American Indian or Alaska Native	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0
	(Recoded from re_amind through re_pnr where each student is represented only once)	Asian	6	15	18	9	24	11	15	6	1	2	25	10	33	9	29	7
33. Are you a member of a social fraternity or sorority?	re_black	Black or African American	1	3	14	7	7	3	10	4	0	0	7	3	5	1	22	5
	re_latino	Hispanic or Latino	0	0	3	1	3	1	21	8	0	0	7	3	3	1	10	2
	re_pnr	Native Hawaiian/Other Pac. Islander	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0
	where each student is represented only once)	White	31	78	138	68	168	76	169	67	52	88	192	73	272	78	300	73
		Other	1	3	3	1	0	0	3	1	0	0	5	2	5	1	8	2
		Multiracial	0	0	17	8	8	4	21	8	1	2	15	6	8	2	21	5
		I prefer not to respond	1	3	9	4	9	4	10	4	5	8	12	5	23	7	19	5
	Total		40	100	202	100	220	100	251	100	59	100	263	100	350	100	411	100
	greek	No	37	93	189	95	205	94	235	94	59	100	250	95	331	95	389	95
		Yes	3	8	11	6	14	6	15	6	0	0	13	5	19	5	22	5
	Total		40	100	200	100	219	100	250	100	59	100	263	100	350	100	411	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)	32	82	144	71	181	82	144	57	2	3	39	15	55	16	55	13
		Fraternity or sorority house	0	0	0	0	1	0	0	0	0	0	0	0	8	2	0	0
		Residence (house, apartment, etc.) within walking distance to the institution	4	10	22	11	17	8	31	12	21	36	98	37	197	56	150	37
		Residence (house, apartment, etc.) farther than walking distance to the institution	3	8	33	16	18	8	68	27	36	61	124	47	88	25	198	48
		None of the above	0	0	3	1	3	1	8	3	0	0	2	1	2	1	7	2
	Total		39	100	202	100	220	100	251	100	59	100	263	100	350	100	410	100
	athlete	No	39	98	196	98	209	95	231	92	58	98	259	98	336	97	393	96
35. Are you a student-athlete on a team sponsored by your institution's athletics department?		Yes	1	3	5	2	10	5	20	8	1	2	4	2	12	3	15	4
	Total		40	100	201	100	219	100	251	100	59	100	263	100	348	100	408	100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

			First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
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	40	100	196	99	214	99	241	97	58	98	250	96	338	97	389	95
		Yes	0	0	1	1	3	1	7	3	1	2	11	4	11	3	20	5
		Total	40	100	197	100	217	100	248	100	59	100	261	100	349	100	409	100
37a. Have you been diagnosed with any disability or impairment?	disability	No	40	100	170	85	199	91	215	86	52	88	226	86	305	88	358	87
		Yes	0	0	20	10	11	5	25	10	4	7	25	10	26	7	39	10
		I prefer not to respond	0	0	11	5	8	4	11	4	3	5	12	5	16	5	13	3
		Total	40	100	201	100	218	100	251	100	59	100	263	100	347	100	410	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	4	17	1	7	2	6	0	0	2	7	5	15	8	17
	dis_mobility	A mobility impairment	0	0	0	0	1	7	1	3	0	0	2	7	0	0	2	4
	dis_learning	A learning disability (e.g., ADHD, dyslexia)	0	0	11	46	6	43	19	61	2	50	13	45	13	39	19	40
	dis_mental	A mental health disorder	0	0	5	21	1	7	6	19	2	50	9	31	10	30	9	19
	dis_other	A disability or impairment not listed above	0	0	2	8	2	14	2	6	0	0	4	14	3	9	8	17
Disability or impairment	disability_all	A sensory impairment	0	0	3	1	1	0	1	0	0	0	2	1	5	1	7	2
	(Recoded from	A mobility impairment	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0
	disability and	A learning disability	0	0	9	4	6	3	14	6	2	3	10	4	9	3	13	3
	dis_sense	A mental health disorder	0	0	4	2	1	0	3	1	2	3	7	3	6	2	5	1
	through	A disability or impairment not listed	0	0	2	1	2	1	1	0	0	0	1	0	2	1	7	2
	dis_other	More than one disability or	0	0	2	1	0	0	5	2	0	0	4	2	4	1	6	1
	where each	impairment	0	0	2	1	0	0	5	2	0	0	4	2	4	1	6	1
	student is	No disability or impairment	40	100	170	85	199	91	215	86	52	88	226	86	305	88	358	87
	represented only once)	Prefer not to respond	0	0	11	5	8	4	11	4	3	5	12	5	16	5	13	3
		Total	40	100	201	100	218	100	251	100	59	100	263	100	347	100	410	100
38. Which of the following best describes your sexual orientation? (Question administered per institution request)	sexorient14	Heterosexual	--	--	101	80	140	89	98	82	--	--	168	84	201	88	195	86
		Gay	--	--	0	0	3	2	0	0	--	--	7	4	5	2	3	1
		Lesbian	--	--	1	1	1	1	1	1	--	--	2	1	1	0	1	0
		Bisexual	--	--	9	7	2	1	0	0	--	--	7	4	5	2	10	4
		Another sexual orientation	--	--	1	1	0	0	4	3	--	--	4	2	0	0	0	0
		Questioning or unsure	--	--	6	5	1	1	1	1	--	--	1	1	2	1	2	1
		I prefer not to respond	--	--	8	6	10	6	15	13	--	--	10	5	14	6	15	7
		Total	--	--	126	100	157	100	119	100	--	--	199	100	228	100	226	100

# NSSE 2014 Major Field Report, Part II: Comparisons to Other Institutions

Respondent Profile: Phys Sci, Math, CS

University of Minnesota Duluth

## Phys Sci, Math, CS

### First-Year Students<sup>a</sup>

### Seniors<sup>a</sup>

Item wording or description	Variable name	Response options	First-Year Students <sup>a</sup>								Seniors <sup>a</sup>							
			UMD		UMD Peers		Competitors		National Comparison		UMD		UMD Peers		Competitors		National Comparison	
			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	15	37	48	34	62	41	52	32	16	27	79	40	85	40	104	37
		Male	26	63	95	66	91	59	109	68	43	73	121	61	130	60	174	63
		Total	41	100	143	100	153	100	161	100	59	100	200	100	215	100	278	100
Institution-reported race or ethnicity	IRrace	American Indian or Alaska Native	2	5	0	0	0	0	0	0	0	0	0	0	3	1	1	0
		Asian	2	5	1	1	11	6	12	7	1	2	3	2	15	5	21	7
		Black or African American	1	2	10	11	3	2	4	2	0	0	8	6	4	1	25	8
		Hispanic or Latino	1	2	4	4	4	2	23	13	0	0	6	4	4	1	15	5
		Native Hawaiian/Other Pac. Islander	0	0	0	0	1	1	1	1	0	0	0	0	0	0	2	1
		White	31	76	66	72	158	79	121	67	56	95	110	80	244	80	221	69
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Foreign or nonresident alien	4	10	6	7	18	9	8	4	1	2	5	4	28	9	7	2
		Two or more races/ethnicities	0	0	4	4	5	3	2	1	0	0	2	1	2	1	10	3
		Unknown	0	0	1	1	0	0	9	5	1	2	4	3	5	2	18	6
		Total	41	100	92	100	200	100	180	100	59	100	138	100	305	100	320	100
Institution-reported class level	IRclass	Freshman/First-Year	41	100	202	100	222	100	254	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	59	100	263	100	352	100	416	100
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	100
Institution-reported first-time first-year (FTFY) status	IRftfy	No	0	0	18	9	14	6	40	16	59	100	246	94	352	100	416	100
		Yes	41	100	184	91	208	94	214	84	0	0	17	6	0	0	0	0
		Total	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	100
Institution-reported enrollment status	IRenrollment	Not full-time	0	0	4	2	0	0	10	4	5	8	42	16	43	12	50	12
		Full-time	41	100	198	98	222	100	244	96	54	92	221	84	309	88	366	88
		Total	41	100	202	100	222	100	254	100	59	100	263	100	352	100	416	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. An effect size of .2 is generally considered small, .5 medium, and .8 large.
- 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. An effect size of .2 is generally considered small, .5 medium, and .8 large.
- 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.