

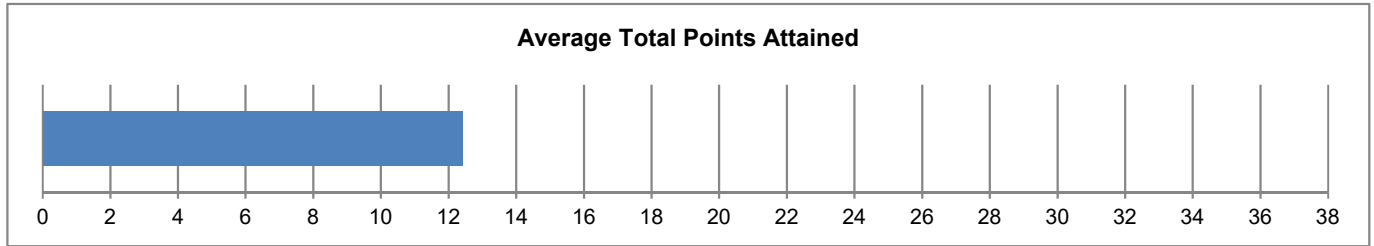
Sam Houston State University

**CAT Institutional Report**

July 2019 - 1227 - Engineering Technology

**CAT Overview: Descriptive Statistics for CAT Total Score**  
**Sam Houston State University: July 2019 - 1227 - Engineering Technology**

	N	Min.	Max.	Mean	Std. Dev
<b>CAT Total Score</b>	44	6.00	21.00	12.42	3.64



**CAT Demographics: Descriptive Statistics for Sample**

		Freq.	Freq. %
Gender	Male	39	92.9%
	Female	3	7.1%
Class Standing	Freshman	0	0.0%
	Sophomore	0	0.0%
	Junior	11	25.0%
	Senior	33	75.0%
Class	Undergraduate	41	100.0%
	Graduate	0	0.0%
Age	≤ 20 years	4	9.5%
	21-25 years	33	78.6%
	≥ 26 years	5	11.9%

		Freq.	Freq. %
Race**	White	29	65.9%
	Black or African American	6	13.6%
	American Indian or Alaska Native	0	0.0%
	Asian	3	6.8%
	Native Hawaiian or Other Pacific Islander	0	0.0%
	Other Race	6	13.6%

\*\*The cumulative percent may exceed 100% as students are allowed to select more than one category.

		Freq.	Freq. %
Proficiency with the English Language*	Excellent	29	65.9%
	Very Good	12	27.3%
	Good	2	4.5%
	Fair	1	2.3%
	Poor	0	0.0%

\* Self-rated

		Freq.	Freq. %
Spanish/Hispanic/Latino Ethnicity	11	25.0%	
Considered English primary language?	38	86.4%	

**CAT Breakdown: Frequency of Points Awarded for Each Question**  
**Sam Houston State University: July 2019 - 1227 - Engineering Technology**

	Skill Assessed by CAT Question	Points Awarded	Freq.	Freq. %
<b>Q1</b>	Summarize the pattern of results in a graph without making inappropriate inferences.	0	24	54.5%
		1	20	45.5%
<b>Q2</b>	Evaluate how strongly correlational-type data supports a hypothesis.	0	23	52.3%
		1	18	40.9%
		2	2	4.5%
		3	1	2.3%
<b>Q3</b>	Provide alternative explanations for a pattern of results that has many possible causes.	0	30	68.2%
		1	8	18.2%
		2	2	4.5%
		3	4	9.1%
<b>Q4</b>	Identify additional information needed to evaluate a hypothesis.	0	23	52.3%
		1	16	36.4%
		2	5	11.4%
		3	0	0.0%
		4	0	0.0%
<b>Q5</b>	Evaluate whether spurious information strongly supports a hypothesis.	0	12	27.3%
		1	32	72.7%
<b>Q6</b>	Provide alternative explanations for spurious associations.	0	8	18.2%
		1	15	34.1%
		2	18	40.9%
		3	3	6.8%
<b>Q7</b>	Identify additional information needed to evaluate a hypothesis.	0	30	68.2%
		1	12	27.3%
		2	2	4.5%
<b>Q8</b>	Determine whether an invited inference is supported by specific information.	0	20	45.5%
		1	24	54.5%
<b>Q9</b>	Provide relevant alternative interpretations for a specific set of results.	0	23	52.3%
		1	20	45.5%
		2	1	2.3%
<b>Q10</b>	Separate relevant from irrelevant information when solving a real-world problem.	0	0	0.0%
		1	2	4.5%
		2	12	27.3%
		3	14	31.8%
		4	16	36.4%
<b>Q11</b>	Use and apply relevant information to evaluate a problem.	0	16	36.4%
		1	27	61.4%
		2	1	2.3%
<b>Q12</b>	Use basic mathematical skills to help solve a real-world problem.	0	13	29.5%
		1	31	70.5%
<b>Q13</b>	Identify suitable solutions for a real-world problem using relevant information.	0	24	54.5%
		1	15	34.1%
		2	3	6.8%
		3	2	4.5%
<b>Q14</b>	Identify and explain the best solution for a real-world problem using relevant information.	0	24	54.5%
		1	7	15.9%
		2	0	0.0%
		3	6	13.6%
		4	7	15.9%
		5	0	0.0%
<b>Q15</b>	Explain how changes in a real-world problem situation might affect the solution.	0	27	61.4%
		1	10	22.7%
		2	6	13.6%
		3	1	2.3%

## Institutional/Departmental Profile

Sam Houston State University: July 2019 - 1227 - Engineering Technology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution/Department	
						Mean	Avg. % of Attainable Points
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.45	45%
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.58	19%
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.55	18%
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.59	15%
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.73	73%
		X	X	Q6	Provide alternative explanations for spurious associations.	1.36	45%
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.36	18%
X				Q8	Determine whether an invited inference is supported by specific information.	0.55	55%
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.50	25%
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.00	75%
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.66	33%
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.70	70%
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	0.61	20%
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.20	24%
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.57	19%
CAT Total Score						12.42	33%

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.

## Upper Division CAT Means Comparison Report

Sam Houston State University: July 2019 - 1227 - Engineering Technology

Evaluate and Interpret Info	Problem Solving	Creative Thinking	Effective Comm.		Skill Assessed by CAT Question	Institution	National		
						Mean	Mean	Probability of difference <sup>a</sup>	Effect Size <sup>b</sup>
X				Q1	Summarize the pattern of results in a graph without making inappropriate inferences.	0.45	0.67	**	-.43
X			X	Q2	Evaluate how strongly correlational-type data supports a hypothesis.	0.58	1.21	***	-.79
		X	X	Q3	Provide alternative explanations for a pattern of results that has many possible causes.	0.55	1.35	***	-.86
	X	X	X	Q4	Identify additional information needed to evaluate a hypothesis.	0.59	1.41	***	-.90
X				Q5	Evaluate whether spurious information strongly supports a hypothesis.	0.73	0.73		
		X	X	Q6	Provide alternative explanations for spurious associations.	1.36	1.56		
	X	X	X	Q7	Identify additional information needed to evaluate a hypothesis.	0.36	0.82	***	-.79
X				Q8	Determine whether an invited inference is supported by specific information.	0.55	0.68		
		X	X	Q9	Provide relevant alternative interpretations for a specific set of results.	0.50	0.93	***	-.70
X	X			Q10	Separate relevant from irrelevant information when solving a real-world problem.	3.00	3.14		
X	X		X	Q11	Use and apply relevant information to evaluate a problem.	0.66	1.11	***	-.73
	X			Q12	Use basic mathematical skills to help solve a real-world problem.	0.70	0.82		
X	X			Q13	Identify suitable solutions for a real-world problem using relevant information.	0.61	1.18	***	-.68
X	X		X	Q14	Identify and explain the best solution for a real-world problem using relevant information.	1.20	2.29	***	-.64
	X	X	X	Q15	Explain how changes in a real-world problem situation might affect the solution.	0.57	1.15	***	-.73
CAT Total Score						12.42	19.04	***	-1.49

<sup>a</sup>. \* p<.05 \*\*p<.01 \*\*\*p<.001 (2 –tailed) Does not Account for entering ACT/SAT.

<sup>b</sup>. Mean difference divided by pooled group standard deviation.  
(0.1 - 0.3 = small effect; 0.3 - 0.5 = moderate effect; >0.5 = large effect)

The map of skills covered by each question above is a suggested theoretical guide for interpreting results.