

**Office of Academic
Planning and Assessment**

A Report of the Critical Thinking Assessment Test (CAT)

2015-2016

Description of the Critical Thinking Assessment Test (CAT)

The CAT is a nationally normed, short-answer essay test designed to assess critical thinking and problem solving skills. The CAT was developed at Tennessee Tech University, with support of the National Science Foundation. The CAT is administered each academic year to approximately 500 students in upper division courses (3000- and 4000-level). Over a three-year period, each academic college at SHSU will participate in the CAT and submit tests for scoring. The student data presented within this report reflect student performance regarding the Texas Higher Education Coordinating Board's Core Learning Objective of Critical Thinking (THECB, 2016). The THECB (2016) defines Critical Thinking as "creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information."

Methodology

A total of 227 students in upper division courses in the College of Humanities and Social Sciences (114) and in the College of Science (109) took the CAT in Spring 2016. A total of 593 students were scheduled to take this test, but 159 of those students were part of a lower division critical thinking course. The data from those students will be part of a different report and are not included as part of this analysis. The remaining students either chose not to participate, or scheduling was not finalized with the course instructor.

The tests were scored by faculty and staff volunteers during a two-day scoring session in July 2016. Facilitators trained by the Center for Assessment and Improvement of Learning at Tennessee Tech University lead the scoring sessions to ensure norming and validity. The scored tests were mailed back to the Center for Assessment and Improvement of Learning for analysis. The following is a listing of the colleges and departments that participated in the CAT for 2015-2016:

1. College of Humanities and Social Sciences
 - a. Department of English
 - b. Department of Sociology
 - c. Department of Political Science
 - d. Department of Psychology and Philosophy
 - e. Department of History
 - f. Department of Communication Studies
2. College of Sciences
 - a. Department of Agricultural Sciences and Engineering Technology
 - b. Department of Mathematics and Statistics
 - c. Department of Physics
 - d. Department of Chemistry
 - e. Department of Biological Sciences
 - f. Department of Geography and Geology

Results

Readers are directed to Table 1 for a breakdown of these results.

Table 1

Descriptive Statistics for Student Scores on Critical Thinking and Assessment Test (CAT) in the College of Humanities and Social Sciences and the College of Science for 2015-2016

College/Department	<i>n</i>	Min.	Max.	<i>M</i>	<i>SD</i>
Overall	223	3	30	15.84	6.12
College of Humanities and Social Sciences	114	3	30	14.75	6.21
English	26	6	30	17.51	5.95
Sociology	20	4	28	13.30	6.62
Political Science	8	4	27	14.63	8.55
Psychology and Philosophy	14	8	27	18.00	5.87
History	7	7	16	11.86	3.53
Communication Studies	39	3	24	13.03	5.23
College of Sciences	109	5	30	16.98	5.83
Ag Sciences & Engineering Technology	31	5	24	14.32	4.77
Mathematics & Statistics	12	6	29	16.44	7.32
Physics	12	12	28	19.92	6.64
Chemistry	16	7	30	19.94	6.10
Biological Sciences	29	10	25	16.66	4.68
Geography & Geology	9	11	27	18.74	5.57

References

Texas Higher Education Coordinating Board. (2016). Elements of the Texas Core Curriculum.
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