Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors, 2016 Fall

University of Guam
Academic and Student Affairs
Office of Academic Assessment and Institutional Research
Critical Thinking Skills Assessment - Graduating Seniors

<table>
<thead>
<tr>
<th>Skill/Attribute</th>
<th>2014 Fall</th>
<th>2015 Spring</th>
<th>2015 Fall</th>
<th>2016 Spring</th>
<th>2016 Fall</th>
<th>Five-Semester Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>153</td>
<td>251</td>
<td>153</td>
<td>275</td>
<td>172</td>
<td>200.80</td>
</tr>
</tbody>
</table>

**OVERALL SCORE**
- 2014 Fall: 69
- 2015 Spring: 71
- 2015 Fall: 71
- 2016 Spring: 71
- 2016 Fall: 71
- Five-Semester Average: 70.80

**Analysis**
- 2014 Fall: 70
- 2015 Spring: 70
- 2015 Fall: 75
- 2016 Spring: 70
- 2016 Fall: 71
- Five-Semester Average: 70.9

**Deduction**
- 2014 Fall: 69
- 2015 Spring: 69
- 2015 Fall: 69
- 2016 Spring: 69
- 2016 Fall: 69
- Five-Semester Average: 70.8

**Evaluation**
- 2014 Fall: 71
- 2015 Spring: 71
- 2015 Fall: 67
- 2016 Spring: 67
- 2016 Fall: 69
- Five-Semester Average: 70.8

**Explanation**
- 2014 Fall: 74
- 2015 Spring: 74
- 2015 Fall: 68
- 2016 Spring: 68
- 2016 Fall: 70
- Five-Semester Average: 70.8

**Induction**
- 2014 Fall: 74
- 2015 Spring: 77
- 2015 Fall: 77
- 2016 Spring: 74
- 2016 Fall: 75
- Five-Semester Average: 70.8

**Inference**
- 2014 Fall: 72
- 2015 Spring: 75
- 2015 Fall: 72
- 2016 Spring: 75
- 2016 Fall: 73
- Five-Semester Average: 70.8

**Interpretation**
- 2014 Fall: 74
- 2015 Spring: 74
- 2015 Fall: 74
- 2016 Spring: 74
- 2016 Fall: 74
- Five-Semester Average: 70.8

Aggregate sample of CCTST Four Year College Students, average percentile score: 29 32 30 31 30 30

Critical Thinking Skills Assessment - Graduating Seniors

**MEAN Scores**

<table>
<thead>
<tr>
<th>Skill/Attribute</th>
<th>2014 Fall</th>
<th>2015 Spring</th>
<th>2015 Fall</th>
<th>2016 Spring</th>
<th>2016 Fall</th>
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<td>153</td>
<td>251</td>
<td>153</td>
<td>275</td>
<td>172</td>
<td>200.80</td>
</tr>
</tbody>
</table>

**OVERALL SCORE**
- 2014 Fall: 70.4
- 2015 Spring: 71.4
- 2015 Fall: 70.8
- 2016 Spring: 70.9
- 2016 Fall: 70.8
- Five-Semester Average: 70.8

**Analysis**
- 2014 Fall: 71.9
- 2015 Spring: 73.2
- 2015 Fall: 73.0
- 2016 Spring: 73.0
- 2016 Fall: 72.9
- Five-Semester Average: 72.8

**Deduction**
- 2014 Fall: 69.8
- 2015 Spring: 70.8
- 2015 Fall: 70.2
- 2016 Spring: 70.7
- 2016 Fall: 70.6
- Five-Semester Average: 70.4

**Evaluation**
- 2014 Fall: 69.9
- 2015 Spring: 70.2
- 2015 Fall: 69.4
- 2016 Spring: 69.8
- 2016 Fall: 69.8
- Five-Semester Average: 69.8

**Explanation**
- 2014 Fall: 71.0
- 2015 Spring: 71.1
- 2015 Fall: 71.1
- 2016 Spring: 71.1
- 2016 Fall: 70.8
- Five-Semester Average: 71.0

**Induction**
- 2014 Fall: 75.3
- 2015 Spring: 76.1
- 2015 Fall: 75.7
- 2016 Spring: 75.3
- 2016 Fall: 75.1
- Five-Semester Average: 75.0

**Inference**
- 2014 Fall: 72.9
- 2015 Spring: 74.5
- 2015 Fall: 73.4
- 2016 Spring: 73.6
- 2016 Fall: 73.1
- Five-Semester Average: 73.0

**Interpretation**
- 2014 Fall: 75.8
- 2015 Spring: 76.7
- 2015 Fall: 77.2
- 2016 Spring: 76.4
- 2016 Fall: 76.4
- Five-Semester Average: 76.5

Aggregate sample of CCTST Four Year College Students, average percentile score: 29 32 30 31 30 30
OVERALL
The Reasoning Skills Overall score describes overall strength in using reasoning to form reflective judgments about what to believe or what to do. High Overall scores are attained by test takers who excel in the sustained, focused and integrated application of core thinking skills measured on this test, including analysis, interpretation, inference, evaluation, explanation, induction and deduction. The Overall score predicts the capacity for success in educational or workplace settings which demand reasoned decision making and thoughtful problem solving.

INDUCTION
Decision making in contexts of uncertainty relies on inductive reasoning. We use inductive reasoning skills when we draw inferences about what we think is probably true based on analogies, case studies, prior experience, statistical analyses, simulations, hypotheticals, and patterns recognized in familiar objects, events, experiences and behaviors. As long as there is the possibility, however remote, that a highly probable conclusion might be mistaken even though the evidence at hand is unchanged, the reasoning is inductive. Although it does not yield certainty, inductive reasoning can provide a confident basis for sold belief in our conclusions and a reasonable basis for action.

EXPLANATION
Explanatory reasoning skills, when exercised prior to making a final decision about what to believe or what to do, enable us to describe the evidence, reasons, methods, assumptions, standards or rationale for those decisions, opinions, beliefs and conclusions. Strong explanatory skills enable people to discover, to test and to articulate the reasons for beliefs, events, actions and decisions.

INTERPRETATION
Interpretative skills are used to determine the precise meaning and significance of a message or signal, whether it is a gesture, sign, set of data, written or spoken words, diagram, icon, chart or graph. Correct interpretation depends on understanding the message in its context and in terms of who sent it, and for what purpose. Interpretation includes clarifying what something or someone means, grouping or categorizing information, and determining the significance of a message.

INFERENCE
Inference skills enable us to draw conclusions from reasons and evidence. We use inference when we offer thoughtful suggestions and hypotheses. Inference skills indicate the necessary or the very probable consequences of a given set of facts and conditions. Conclusions, hypotheses, recommendations or decisions that are based on faulty analyses, misinformation, bad data or biased evaluations can turn out to be mistaken, even if they have been reached using excellent inference skills.

EVALUATION
Evaluative reasoning skills enable us to assess the credibility of sources of information and the claims they make. And, we use these skills to determine the strength or weakness of arguments. Applying evaluation skills we can judge the quality of analyses, interpretations, explanations, inferences, options, opinions, beliefs, ideas, proposals, and decisions. Strong evaluation skills can support high quality evaluation by providing the evidence, reasons, methods, criteria, or assumptions behind the claims made and the conclusions reached.

ANALYSIS
Analytical reasoning skills enable people to identify assumptions, reasons and claims, and to examine how they interact in the formation of arguments. We use analysis to gather information from charts, graphs, diagrams, spoken language and documents. People with strong analytical skills attend to patterns and to details. They identify the elements of a situation and determine how those parts interact. Strong interpretation skills can support high quality analysis by providing insights into the significance of what a person is saying or what something means.

DEDUCTION
Decision making in precisely defined contexts where rules, operating conditions, core beliefs, values, policies, principles, procedures and terminology completely determine the outcome depends on strong deductive reasoning skills. Deductive reasoning moves with exacting precision from the assumed truth of a set of beliefs to a conclusion which cannot be false if those beliefs are true. Deductive validity is rigorously logical and clear-cut. Deductive validity leaves no room for uncertainty, unless one alters the meanings of words or the grammar of the language.
California Critical Thinking Skills Test (CCTST). The CCTST measures the reasoning skills human beings use in the process of reflectively deciding what to believe or what to do.

<table>
<thead>
<tr>
<th>Skill/Attribute Name</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERALL</td>
<td>172</td>
<td>70.8</td>
<td>71</td>
<td>6.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Analysis</td>
<td>172</td>
<td>72.9</td>
<td>70</td>
<td>7.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Interpretation</td>
<td>172</td>
<td>76.3</td>
<td>74</td>
<td>8.3</td>
<td>0.6</td>
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<tr>
<td>Inference</td>
<td>172</td>
<td>73.1</td>
<td>72</td>
<td>6.5</td>
<td>0.5</td>
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<tr>
<td>Evaluation</td>
<td>172</td>
<td>69.8</td>
<td>71</td>
<td>7.4</td>
<td>0.6</td>
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<tr>
<td>Explanation</td>
<td>172</td>
<td>70.7</td>
<td>68</td>
<td>8.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Induction</td>
<td>172</td>
<td>75.1</td>
<td>74</td>
<td>6.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Deduction</td>
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<td>69</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Skill/Attribute Name</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Quartile 1</th>
<th>Quartile 3</th>
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<tbody>
<tr>
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<td>92</td>
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<tr>
<td>Analysis</td>
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<tr>
<td>Interpretation</td>
<td>61</td>
<td>100</td>
<td>68</td>
<td>81</td>
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<tr>
<td>Inference</td>
<td>55</td>
<td>92</td>
<td>69</td>
<td>78</td>
</tr>
<tr>
<td>Evaluation</td>
<td>55</td>
<td>88</td>
<td>63</td>
<td>75</td>
</tr>
<tr>
<td>Explanation</td>
<td>55</td>
<td>100</td>
<td>63</td>
<td>74</td>
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<tr>
<td>Induction</td>
<td>58</td>
<td>97</td>
<td>71</td>
<td>79</td>
</tr>
<tr>
<td>Deduction</td>
<td>56</td>
<td>90</td>
<td>66</td>
<td>74</td>
</tr>
</tbody>
</table>

Based on the distribution of the overall score percentiles for the test takers in this group, as compared to an aggregate sample of CCTST Four Year College Students, the average percentile score of this group of test takers is 30.
The descriptive information reported below indicates strengths and weaknesses in specific areas. These results are useful for understanding group characteristics, for comparing and contrasting similar groups on specific attributes or skills, and for guiding the development of more targeted educational or training programs.
Analytical reasoning skills enable people to identify assumptions, reasons and claims, and to examine how they interact in the formation of arguments. We use analysis to gather information from charts, graphs, diagrams, spoken language and documents. People with strong analytical skills attend to patterns and to details. They identify the elements of a situation and determine how those parts interact. Strong interpretation skills can support high quality analysis by providing insights into the significance of what a person is saying or what something means.
### Descriptive Information: Interpretation

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>SE Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Quartile 1</th>
<th>Quartile 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>172</td>
<td>76.3</td>
<td>74.0</td>
<td>8.3</td>
<td>0.6</td>
<td>61</td>
<td>100</td>
<td>68.0</td>
<td>81.0</td>
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Evaluative reasoning skills enable us to assess the credibility of sources of information and the claims they make. And, we use these skills to determine the strength or weakness of arguments. Applying evaluation skills we can judge the quality of analyses, interpretations, explanations, inferences, options, opinions, beliefs, ideas, proposals, and decisions. Strong explanation skills can support high quality evaluation by providing the evidence, reasons, methods, criteria, or assumptions behind the claims made and the conclusions reached.
### Descriptive Information: Explanation

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>SE Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Quartile 1</th>
<th>Quartile 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>172</td>
<td>70.7</td>
<td>68.0</td>
<td>8.8</td>
<td>0.7</td>
<td>55</td>
<td>100</td>
<td>63.0</td>
<td>74.0</td>
</tr>
</tbody>
</table>

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Descriptive Information: Deduction

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>SE Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Quartile 1</th>
<th>Quartile 3</th>
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<tbody>
<tr>
<td>172</td>
<td>70.6</td>
<td>69.0</td>
<td>6.7</td>
<td>0.5</td>
<td>56</td>
<td>90</td>
<td>66.0</td>
<td>74.0</td>
</tr>
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</table>

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Critical Thinking Skills Test Overall Results - CLASS
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Percentile Results - CLASS
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST Overall and Percentile Avg Results by College
Critical Thinking Skills Test Overall Results - CNAS
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Percentile Results - CNAS
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST Overall and Percentile Avg Results by College
### Critical Thinking Skills Test Overall Results - SBPA
Graduating Seniors 2016 Fall

<table>
<thead>
<tr>
<th>Program</th>
<th>Average (n)</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>73.9</td>
</tr>
<tr>
<td>Business Administration</td>
<td>70.3</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>68.7</td>
</tr>
<tr>
<td>Public Administration</td>
<td>65.5</td>
</tr>
<tr>
<td>SBPA</td>
<td>70.6</td>
</tr>
<tr>
<td>UOG</td>
<td>70.8</td>
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</tbody>
</table>

Source: California Critical Thinking Skills Test Results

### Critical Thinking Skills Test Percentile Results - SBPA
Graduating Seniors 2016 Fall

<table>
<thead>
<tr>
<th>Program</th>
<th>Percentile</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>41.6</td>
</tr>
<tr>
<td>Business Administration</td>
<td>27.2</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>20.3</td>
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<tr>
<td>Public Administration</td>
<td>8.75</td>
</tr>
<tr>
<td>SBPA</td>
<td>28.4</td>
</tr>
<tr>
<td>UOG</td>
<td>29.9</td>
</tr>
</tbody>
</table>

Source: California Critical Thinking Skills Test Results

16FA CCTST Overall and Percentile Avg Results by College
Critical Thinking Skills Test Overall Results - SNHS
Graduating Seniors 2016 Fall

HEALTH SCIENCE Average (n=9) 69
SOCIAL WORK Average (n=2) 63.5
SNHS Average (n=11) 68
UOG Average (n=172) 70.8

Critical Thinking Skills Test Percentile Results - SNHS
Graduating Seniors 2016 Fall

HEALTH SCIENCE Average (n=9) 25.1
SOCIAL WORK Average (n=2) 6
SNHS Average (n=11) 21.6
UOG Average (n=172) 29.9

Source: California Critical Thinking Skills Test Results
16FA CCTST Overall and Percentile Avg Results by College
Critical Thinking Skills Test Overall Results - SOE
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Percentile Results - SOE
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST Overall and Percentile Avg Results by College
Critical Thinking Skills Test Overall Results - by College
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Percentile Results - by College
Graduating Seniors 2016 Fall

*Unduplicated Headcount

Source: California Critical Thinking Skills Test Results
Critical Thinking Skills Test Results - Anthropology
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

Critical Thinking Skills Test Overall Score and Percentile - Anthropology
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Communication Studies
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Communication Studies
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - English
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - English
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Fine Arts/Art
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Fine Arts/Art
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Fine Arts/Theater
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Fine Arts/Theater Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Political Science
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Political Science
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Psychology
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Psychology
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Sociology
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Sociology
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CLASS) Results
Critical Thinking Skills Test Results - Biology
Graduating Seniors 2016 Fall

BIOLOGY Average (n=6)
CNAS Average (n=17)
UOG Average (n=172)

Critical Thinking Skills Test Overall Score and Percentile - Biology
Graduating Seniors 2016 Fall

BIOLOGY Average (n=6)
CNAS Average (n=17)
UOG Average (n=172)

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Chemistry
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Chemistry
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Computer Information Systems
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Computer Information Systems
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Consumer and Family Science
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Consumer and Family Science
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results 16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Mathematics
Graduating Seniors 2016 Fall

- MATHEMATICS Average (n=4)
- CNAS Average (n=17)
- UOG Average (n=172)

Critical Thinking Skills Test Overall Score and Percentile - Mathematics
Graduating Seniors 2016 Fall

- OVERALL
- Percentile

Source: Califonia Critical Thinking Skills Test Results

16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Tropical Agriculture Applied
Graduating Seniors 2016 Fall

<table>
<thead>
<tr>
<th>Component</th>
<th>Tropical Agriculture Applied (n=1)</th>
<th>CNAS Average (n=17)</th>
<th>UOG Average (n=172)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERALL</td>
<td>66</td>
<td>74</td>
<td>74.7</td>
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<tr>
<td>Analysis</td>
<td>65</td>
<td>72.9</td>
<td>70.8</td>
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<tr>
<td>Interpretation</td>
<td>68</td>
<td>76.4</td>
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<tr>
<td>Inference</td>
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<td>73.1</td>
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<td>Evaluation</td>
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<td>Explanation</td>
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<td>69.8</td>
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<tr>
<td>Induction</td>
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<td>77.1</td>
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<tr>
<td>Deduction</td>
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<td>74.7</td>
<td>70.6</td>
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Critical Thinking Skills Test Overall Score and Percentile -
Tropical Agriculture Applied
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results 16FA CCTST SR (CNAS) Results
Critical Thinking Skills Test Results - Accounting
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Accounting
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SBPA) Results
Critical Thinking Skills Test Results - Business Administration
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Business Administration
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (SBPA) Results
Critical Thinking Skills Test Results - Criminal Justice
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Criminal Justice
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SBPA) Results
Critical Thinking Skills Test Results - Public Administration
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Public Administration
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
Critical Thinking Skills Test Results - Health Science
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Health Science
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (SNHS) Results
Critical Thinking Skills Test Results - Social Work
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Social Work
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SNHS) Results
Critical Thinking Skills Test Results - Elementary Education
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile -
Elementary Education
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SOE) Results
Critical Thinking Skills Test Results - General Science SEED
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - General Science SEED
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SOE) Results
Critical Thinking Skills Test Results - Secondary Education
Graduating Seniors 2016 Fall

OVERALL Analysis Interpretation Inference Evaluation Explanation Induction Deduction

Critical Thinking Skills Test Overall Score and Percentile - Secondary Education
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results

16FA CCTST SR (SOE) Results
Critical Thinking Skills Test Results - Special Education
Graduating Seniors 2016 Fall

Critical Thinking Skills Test Overall Score and Percentile - Special Education
Graduating Seniors 2016 Fall

Source: California Critical Thinking Skills Test Results
16FA CCTST SR (SOE) Results
ANALYSIS. Analytical reasoning skills enable people to identify assumptions, reasons and claims, and to examine how they interact in the formation of arguments. We use analysis to gather information from charts, graphs, diagrams, spoken language and documents. People with strong analytical skills attend to patterns and to details. They identify the elements of a situation and determine how those parts interact. Strong interpretation skills can support high quality analysis by providing insights into the significance of what a person is saying or what something means.

INTERPRETATION. Interpretative skills are used to determine the precise meaning and significance of a message or signal, whether it is a gesture, sign, set of data, written or spoken words, diagram, icon, chart or graph. Correct interpretation depends on understanding the message in its context and in terms of who sent it, and for what purpose. Interpretation includes clarifying what something or someone means, grouping or categorizing information, and determining the significance of a message.

INFERENCE. Inference skills enable us to draw conclusions from reasons and evidence. We use inference when we offer thoughtful suggestions and hypotheses. Inference skills indicate the necessary or the very probable consequences of a given set of facts and conditions. Conclusions, hypotheses, recommendations or decisions that are based on faulty analyses, misinformation, bad data or biased evaluations can turn out to be mistaken, even if they have been reached using excellent inference skills.

EVALUATION. Evaluative reasoning skills enable us to assess the credibility of sources of information and the claims they make. And, we use these skills to determine the strength or weakness of arguments. Applying evaluation skills we can judge the quality of analyses, interpretations, explanations, inferences, options, opinions, beliefs, ideas, proposals, and decisions. Strong explanation skills can support high quality evaluation by providing the evidence, reasons, methods, criteria, or assumptions behind the claims made and the conclusions reached.

EXPLANATION. Explanatory reasoning skills, when exercised prior to making a final decision about what to believe or what to do, enable us to describe the evidence, reasons, methods, assumptions, standards or rationale for those decisions, opinions, beliefs and conclusions. Strong explanatory skills enable people to discover, to test and to articulate the reasons for beliefs, events, actions and decisions.

DEDUCTION. Decision making in precisely defined contexts where rules, operating conditions, core beliefs, values, policies, principles, procedures and terminology completely determine the outcome depends on strong deductive reasoning skills. Deductive reasoning moves with exacting precision from the assumed truth of a set of beliefs to a conclusion which cannot be false if those beliefs are true. Deductive validity is rigorously logical and clear-cut. Deductive validity leaves no room for uncertainty, unless one alters the meanings of words or the grammar of the language.

INDUCTION. Decision making in contexts of uncertainty relies on inductive reasoning. We use inductive reasoning skills when we draw inferences about what we think must probably be true based on analogies, case studies, prior experience, statistical analyses, simulations, hypotheticals, and familiar circumstances and patterns of behavior. As long as there is the possibility, however remote, that a highly probable conclusion might be mistaken, the reasoning is inductive. Although it does not yield certainty, inductive reasoning can provide a solid basis for confidence in our conclusions.

OVERALL. The Reasoning Skills Overall score describes overall strength in using reasoning to form reflective judgments about what to believe or what to do. High Overall scores are attained by test takers who excel in the sustained, focused and integrated application of core thinking skills measured on this test, including analysis, interpretation, inference, evaluation, explanation, induction and deduction. The Overall score predicts the capacity for success in educational or workplace settings which demand reasoned decision making and thoughtful problem solving.

PERCENTILE. A note of interpretation: A score that falls in the 60th percentile indicates that out of one hundred test takers, roughly 40 would earn a higher score and 60 a lower score. A percentile score is not an indication of the percent correct, but of relative ranking. Percentile approximations are suggested for advisory purposes only.
Dear «FIRST» «LAST»,

Hafa Adai and congratulations on your upcoming graduation this semester! We need your assistance! In 2008, the University established the following expected student learning outcomes for all its students who receive a degree from the University of Guam:

- Mastery of critical thinking and problem solving
- Mastery of quantitative analysis
- Effective oral and written communication
- Understanding and appreciation of culturally diverse people, ideas and values in a democratic context
- Responsible use of knowledge, natural resources, and technology
- An appreciation of the arts and sciences
- An interest in personal development and lifelong learning

As an administrative requirement for your bachelor’s degree and to comply with accreditation requirements, this semester we are measuring critical thinking skills of graduating seniors using the Internet-based California Critical Thinking Skills Test (“CCTST”). The results from this 45-minute multiple-choice test will provide the University with information directly from students to help us improve our curriculum and student success with the mastery of critical thinking skills.

Lab 1078 in the Computer Center on campus has been reserved on the following dates for you to choose from to stop in and take the test:

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Time</th>
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<tbody>
<tr>
<td>August 08-12, 2016</td>
<td>Monday-Friday, 8am-7pm</td>
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<tr>
<td>August 13, 2016</td>
<td>Saturday, 9am-3pm</td>
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<tr>
<td>August 15-19, 2016</td>
<td>Monday-Friday, 8am-7pm</td>
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<tr>
<td>August 20, 2016</td>
<td>Saturday, 9am-3pm</td>
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<tr>
<td>August 22-26, 2016</td>
<td>Monday-Friday, 8am-7pm</td>
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<tr>
<td>August 27, 2016</td>
<td>Saturday, 9am-3pm</td>
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<tr>
<td>August 29-September 02, 2016</td>
<td>Monday-Friday, 8am-7pm</td>
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<tr>
<td>September 03, 2016</td>
<td>Saturday, 9am-3pm</td>
</tr>
<tr>
<td>September 06-09, 2016</td>
<td>Tuesday-Friday, 8am-7pm</td>
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Come to the Computer Center on one of these dates and expect to stay for 50 minutes to take the test. Using the Internet, we will have you log into the test then you will be asked a series of multiple choice questions within a 45 minute time allotment. For control purposes, a photo ID is required.

Individual results will be confidential and will not be publicly reported, although you will receive a printout of your results at the end of the test so that you will know how you scored. The results of this test will not be used to influence or impact any grade for any of the classes you are taking. Taking this test is an administrative requirement for graduation but we do ask that you extend your best effort and attention when taking this test.

More information about the CCSTS is available at www.insightassessment.com

If you have any questions about this study or our interest in using the results, please e-mail me at deborah@uguam.uog.edu or call 735-2585.

Thank you very much for participating in this study.

Biba UOG!

Deborah Leon Guerrero
Director for Academic Assessment and Institutional Research
University of Guam