

CETYS University System

College of Engineering

Comparison of the performance of CETYS Engineering Students against the National Mean

Academic Program	Period of Analysis: 2008-2012				With of the Interval
	Mean of %(TS+TSS)	Standard Deviation of % (TS+TSS)	Lower Limit (95%)	Upper Limit (95%)	
Industrial Engineering CETYS University	57	9	46.0	68.9	11.5
Industrial Engineering National	51	5	44.6	57.5	6.4
Mechanical Engineering CETYS University	52	9	41.7	62.9	10.6
Mechanical Engineering National	54	5	47.9	59.7	5.9
Mechatronics Engineering CETYS University	22	7	14.0	30.3	8.1
Mechatronics Engineering National	47	1	46.1	48.4	1.2
Computer Science CETYS University	68	10	56.4	80.5	12.1
Computer Science National	62	5	55.9	67.2	5.6
Cybernetics Engineering CETYS University	42	5	36.2	47.4	5.6
Cybernetics Engineering National	49	4	44.4	53.8	4.7
Mean of CETYS College of Engineering	47	5	41.7	53.0	5.6
Engineering National Mean	52	3	48.9	55.4	3.3

The quantities (TS+TSS) and % (TS+TSS) represents, respectively, the headcount and percentage of students that on a giving year received a testimony from CENEVAL of Satisfactory Performance (TS: Testimonio de Desempeño Satisfactorio) or Outstanding Performance (TSS: Testimonio de Desempeño Sobresaliente.) in the EGEL assigned.

As can be seen in the above table there is, with the exception of Mechatronics Engineering, an overlapping of the 95% confidence intervals for the variable %(TS+TSS) between CETYS College of Engineering Programs and the National Mean of the equivalent Engineering Program. The same occurs at the most aggregate level: CETYS College of Engineering and CENEVAL's Mean for Engineering (National Mean for Engineering Programs). So in the Test of Hypothesis:

$$H_0: (\mu_{\text{CETYS}} - \mu_{\text{NATIONAL}}) = 0$$

$$H_a: (\mu_{\text{CETYS}} - \mu_{\text{NATIONAL}}) \neq 0$$

There is no evidence to reject the null hypothesis (H_0) in every case with the exception of Mechatronics. That case represents a major area for improvement.

CETYS University System
College of Social Sciences and Humanities
Comparison of the performance of CETYS Engineering Students against the National Mean

	Period of Analysis: 2008-2012				With of the Interval
	Mean of %(TS+TSS)	Standard Deviation of % (TS+TSS)	Lower Limit (95%)	Upper Limit (95%)	
Law CETYS University	39	15	26.5	52.2	12.9
Law National	38	6	32.3	43.3	5.5
Psychology CETYS University	61	15	47.3	74.4	13.6
Psychology National	55	4	51.7	58.1	3.2
Mean of CETYS College of Social Sciences and humanities	53	14	40	65	12.5
Social Sciences and humanities National Mean	44	5	39	48	4.6

The quantities (TS+TSS) and % (TS+TSS) represents, respectively, the headcount and percentage of students that on a giving year received a testimony from CENEVAL of Satisfactory Performance (TS: Testimonio de Desempeño Satisfactorio) or Outstanding Performance (TSS: Testimonio de Desempeño Sobresaliente.) in the EGEL assigned.

As can be seen in the above table there is, an overlapping of the 95% confidence intervals for the variable %(TS+TSS) between CETYS College of Social Sciences and Humanities Programs and the National Mean of the equivalent Social Scienes and Humanities Program. The same occurs at the most aggregate level: CETYS College of Social Sciences and Humanities and CENEVAL's Mean for Social sciences and Humanities (National Mean for Social Sciences and Humanities Programs). So in the Test of Hypothesis:

$$H_0: (\mu_{\text{CETYS}} - \mu_{\text{NATIONAL}}) = 0$$

$$H_a: (\mu_{\text{CETYS}} - \mu_{\text{NATIONAL}}) \neq 0$$

There is no evidence to reject the null hypothesis (H_0) in every case.

CETYS University System
College of Business Administration
Comparison of the performance of CETYS Engineering Students against the National Mean

Horizonte de análisis: 2008-2012					
	Media del %(TS+TSS)	Desviación Est. del % (TS+TSS)	LIM INF(95%)	LIM SUP(95%)	Ancho del Intervalo
LAE Sistema CETYS	60.68	4.99	54.49	66.88	6.20
LAE Nacional	51.08	3.79	46.38	55.78	4.70
LAM Sistema CETYS	51.36	9.12	40.04	62.69	11.33
LAM Nacional	54.01	4.34	48.62	59.39	5.38
LNI Sistema CETYS	48.93	10.74	35.59	62.27	13.34
LNI Nacional	56.33	6.06	48.81	63.85	7.52

Comparando los respectivos intervalos de confianza del 95% de coeficiente de confiabilidad para los tres programas comunes a los tres campus, se puede concluir que no existe evidencia suficiente para rechazar la hipótesis nula (H_0). Es decir no existe diferencia significativa entre la media la media del Sistema CETYS y la media nacional en ninguno de los tres programas analizados (LAE, LAM y LNI).

$$H_0: (\mu_{\text{Sistema CETYS}} - \mu_{\text{Nacional}}) = 0$$

$$H_a: (\mu_{\text{Sistema CETYS}} - \mu_{\text{Nacional}}) \neq 0$$

$$\alpha = 5\%$$

Para cada programa ambos intervalos de confianza están empalmados (Overlaped). Sin embargo la dispersión exhibida en los resultados para LAM y LNI indican que hay margen para la mejora.