

### Cumbre de divulgación de Avalúo



Facultad de Administración de Empresas Informes de CPCs Jueves, 31 de enero de 2019

Statistics / Quantitative Techniques

Preparado por: Dra. Rosario de los A. Ortiz Rodríguez

# Common Professional Component (CPC), Learning Outcome and Competency

- CPC: Statistics / Quantitative Techniques
- Learning Outcome:
  - 1. Students in introductory-level Statistics courses shall apply fundamental descriptive statistics concepts in basic business situations. (ESTA 3001)
  - Apply basic statistical inference: confidence intervals and hypothesis testing for up to two population scenarios, and understand the concepts in more complex situations: ANOVA, linear regression, contingency tables. (ESTA 3002)

#### Common Professional Component (CPC), Learning Outcome and Competency

- CPC: Statistics / Quantitative Techniques
- Competency:
  - Describe, explain, or apply descriptive statistics such as mean, median and standard deviation and basic charts for qualitative and quantitative data (Ex.: pie charts, bar charts, histograms, scatter plots and box plots) (ESTA 3001)
  - 2. Interpret the results of statistical methodology, understand the usefulness of making decisions based on data, and understand basic computer outputs for statistical analysis. (ESTA 3002)

#### Measurement Instrument and Course



- Measurement Instrument: Course-embedded exercise, Standardized Institutional Test (SIT) Grad. Candidates
- Courses: ESTA 3001 and ESTA 3002.

#### Results





#### Results



Statistics / Quantitative Techniques (ESTA 3002) **Competency: Interpret the results of statistical** methodology, understand the usefulness of making 70 % OR HIGHER decisions based on data, and understand basic computer outputs for statistical analysis. 90% 81% 80% 75% 70% **PERCENTAGE OF STUDENTS SCORING** 60% 53% 50% 40% 40% 30% 20% 10% 0% Spring 2014 Spring 2015 Spring 2016 Spring 2017 Spring 2018 ——Actual Performance Level Acceptable Performance Level

#### Results







- As a consequence of previous assessment results, the format of the courses, ESTA 3001 and ESTA 3002, change from 3 contact-hours per week for lecturing purposes to 2 contact-hours for lecturing and 2 contact-hours for Laboratory (4 contact-hours per week), this changed is due to a new curricular revision taking place.
- This new courses format started on Fall 2015 and spite of that was too early to determine the expected results, a significant students' improvement was observed (of 62% Fall 2014 to 73% Fall 2015 to 87% Spring 2016) attained the expected performance level in ESTA 3001. In ESTA 3002 a significant students' improvement was observed (of 53% Spring 2015 to 75% Spring 2016)
- Due to the new format was implemented the Spring 2016 semester in ESTA 3002 and because is going to take time for the students under the new format take the Standardized Institutional Test (SIT), no major action was taken at that point. This decision will be revisited after the three year monitoring period before taking any major action. Meanwhile different teaching approaches will be used, if needed, to assure students attain the competency.

#### Conclusion



- There is an improvement in performance due to the incorporation of a Lab as part of the requirements of the course. (ESTA 3001)
- In Standardized Institutional Test (SIT) the results show the following:70% acceptable performance level is not being achieved, which could be related to the fact that the change in format (4 contact-hours per week) for ESTA 3001 and ESTA 3002.



## Preguntas

Nombre: Dra. Rosario de los A. Ortiz Rodríguez Correo electrónico: rosario.ortiz@upr.edu Coordinador(a) del área de Estadísticas

