UNIVERSIDAD DE GUADALAJARA

CENTRO UNIVERSITARIO DE CIENCIAS ECONÓMICO ADMINISTRATIVAS

MASTER OF BUSINESS ADMINISTRATION

1.- NAME OF THE SUBJECT	QUANTITATIVE METHODS FOR ECONOMICS AND ADMINISTRATIVE SCIENCES
2.- KEY OF MATTER	DO795
3.- PREREQUISITES	None
4.- SERIALIZATION	None
5.- TRAINING AREA	Mandatory Basic Common
6.- DEPARTMENT	Quantitative Methods
7.- ACADEMY	Statistics
8.- TYPE OF COURSE	Classroom
9.- TYPE OF SUBJECT	Course

10.- WORKLOAD

HBCA	HAI	TOTAL
48		48 Hrs.

11.- CREDITS	
12.- EDUCATION LEVEL	Graduate / Masters

13.- PRESENTATION

This course is intended to provide the tools to analyze and interpret data in order to transform them into information.
In any research situations arise where the tools for data analysis results offer valuable solutions.

14.- TRAINING STUDENT PROFILE

Students will identify, apply and use the basics of quantitative analysis techniques with the ultimate aim of obtaining information for decision-making.

15.- PROGRAM OBJECTIVES

General Objectives
At the end of the course students will be able to apply the tools of descriptive statistics and inferential; identify, process and analyze data; and build databases, which are used for the description and making business decisions; further strengthen research projects whose results can be validated scientifically.
Specific Objectives

1. The student knows the types of data and graphing them. calculate and compare different measures of central tendency and dispersion in statistical problems applied to economics and business. Who is able to explain the different theories of probability and apply their theorems to the solution of typical problems.
2. Students will distinguish between the meaning of discrete and continuous random variable, and also solve problems involving probability distribution and density functions.
3. The student will explain and solve problems involving the concepts of expectation and moments.
4. Students will explain the differences between the distributions of common discrete probability in the statistical analysis, and solve problems involving such distributions.
5. Students will explain the differences between the distributions of common continuous probability in the statistical analysis, and solve problems involving these distributions, especially the case of the normal distribution.
6. The student will explain the importance of the statistical analysis of a population from samples.
7. The students will be able to apply different techniques point estimate of population parameters.
8. The students will be able to apply different techniques interval estimation of population parameters.
9. Students will be able to test statistical hypothesis of population parameters.
10. The student will explain the importance of analysis of variance and solve practical exercises, applied to the field of economics and social research.
11. To apply the most common techniques used in the statistical analysis of non-normal data.

12. The student applied correlation analysis to specific economic and social problems.

16.- THEMATIC CONTENT

1. Descriptive statistics
1.1 Introduction to Statistics
1.2 The statistics and their applications in business
1.3 Presentation of data.
1.4 Frequency distributions and graphs.
1.5 Crosstabs
1.6 Measures of concentration, dispersion and shape.
2. Introduction to Probability
2.1 Rules Probabilidad.-
2.1.1. Addition rule for mutually exclusive events.
2.1.2. Addition rule for events that are not mutually exclusive (partially overlapping).
2.2 Independent Events
2.2.1. Marginal probability.
2.2.2. Joint probability.
2.2.3. Conditional probability
2.3. Dependent events
2.3.1. Marginal probability.
2.3.2. Joint probability.
2.3.3. Conditional probability
3. Probability Distributions
3.1. The expected value of a random variable.
3.2. Permutations and combinations.
3.3. Binomial Distribution
3.4. Poisson distribution
3.5. Normal Distribution
4. Estimation and sampling
4.1 Introduction to sampling.
4.2. Random sampling.
4.3. Sampling distributions
4.4. Point estimation and interval
4.4. determining the sample size
5. Decision-making
5.1. Hypothesis testing
5.2. The Chi-square statistic
5.3. ANOVA
6. Analysis of simple and multiple regression
6.1Estimación by the regression line
6.2 The least squares methods
6.3. Correlation analysis
6.4. Inferences about population parameters.

17.- REFERENCES

COMPULSORY LITERATURE:

Anderson, D. Sweeney, D., & Williams, T. (2008). Statistics for Management and Economics (10a. Edition ed.). Mexico: Cengage Learning.

BIBLIOGRAPHY REFERENCE:

Levin, J., & Levin, W. (1999). Fundamentals of Statistics in Social Research (2a. Edition ed.). Mexico: Alfaomega.

Levin, R., & Rubin, D. (2010). Statistics for Management and Economics (7a. Edition ed.). Mexico: Prentice Hall

18.- PROFESSIONAL APPLICATION

Students can apply to for-profit organizations and nonprofit basic concepts of statistics and sampling for analysis of them and their environment.

19.- PROFESSORS TEACHING MATTER

Dra. Angélica Beatriz Contreras Cueva

20.- TEACHER PROFILE

Master's or doctorate, preferably in administrative and extensive knowledge in the fundamentals of statistical theory and its application to computer aided economic areas.

21.- TEACHING LEARNING PROCESS

Method: Analytical, synthetic,
Techniques: Individual,
Activities: Exposure master
Educational resources: Blackboard, PC
Software: Excel, SPSS

22.- EXTRACURRICULAR ACTIVITIES

Which involves obtaining primary and secondary data as well as handling and analysis.

23.- FORMULATION, APPROVAL AND VALIDATION

Lecturers, Academic Board

24.- EVALUATION OF LEARNING

Midterms: 20%
20% class participation (homework presentation and class participation).
Solution of practical exercises 20% (practices during the course the teacher will be assigned)
Final project: 40% The final work consists in carrying out a project in which the course tools are developed.

25.- CURRICULAR EVALUATION

Lecturers, Academic Board (annual review).

26.- CURRICULUM MAP

27.- PARTICIPANTS AND DATE OF PROCESSING PROGRAM

Dra. Angélica Beatriz Contreras Cueva

2015