

COURSE GUIDE

Course / Section	IT365 Data Analytics 1	Credit Units	3
Term Offered	First Semester 2021-2022	Total Hours	90
Instructor	Jasmine A. Tulin		
Pre-Requisite/s	CSIT 122		
Co-Requisite/s	None		
Course Description			
This course provides students with the fundamental concepts and tools needed to understand the emerging role of business analytics in organizations and shows students how to apply basic business analytics tools in a spreadsheet environment and statistical computing and graphics software. How to use and interpret analytic models and results for making better business decision. Students use a computer software package for data analysis.			
Course Learning Outcomes			
CLO1: Explain the importance of the course in relation to the goals and objectives of the program, the college and the university CLO2: Demonstrate knowledge on different data models. CLO3: Design a data model with visualization using Microsoft Excel/ R CLO4: Implement analytical models using software tools R , WEKA and Microsoft Excel Analysis ToolPak CLO5: Create their own data models			
Topics / Modules and Intended Learning Outcomes			
<u>Topic 1: Introduction on Data Analytics</u> LO1: Recognize the importance of data analytics to decision making LO2: Determine the types of data LO3: Differentiate analytic methods categories LO4: Create a study using one data variable and being able to describe the collected data <u>Topic 2: Data Visualization</u> LO1: Develop graphs using excel LO2. Develop a dashboard from a given big data <u>Topic 3: Measures of Locations and Variability</u> LO1: Solve problems using measures of location LO2: Solve problems using measures of variability LO3: Perform Excel Functions <u>Topic 4: Measures of Association Between Two Variables</u> LO1: Describe different types of relationship between two variables using Scatter plot diagram LO2: Use appropriate model for distribution LO3: Gather data with two variables and able to identify the relationship between variables LO4: Interpret relationship between to variables <u>Topic 5: Simple Linear Regression Model</u> LO1: Construct a simple linear regression model using excel and R studio LO2: Compute the coefficients of the regression model <u>Topic 6: Multiple Linear Regression Model</u> LO1. Describe and identify dependent and independent variables LO2. Examine independent variables though inference and regression LO3: Use R and Excel in computing regression LO4: Develop a Multiple Regression Model <u>Topic 7: Classification Method</u> LO1: Create a decision tree LO2: Analyze Confusion matrix LO3: Create an association rule			

Approach	√	Distance Blended		Distance		Online	/	Online Blended
Technical Requirements	<ul style="list-style-type: none">Hardware: PC / laptop, and/or Smartphone capable of text, call, email, PDF readerSoftware: Microsoft Excel, R Studio, WekaMaterials, etc: Wifi connection at home							
Communication Means	<ul style="list-style-type: none">MS Teams chat, emailLearning Management System: Moodle							
Reminders	<ul style="list-style-type: none">It is expected that students have the maturity and discipline to do self-directed learning and that the Instructor facilitates the learning through consultation and/or elaboration of topics.The learning activities will be uploaded in both the Moodle and MSTeams channel.Submission of output/s is every end of the week preferably Friday and should be submitted through the Moodle/MS Teams channel.The student must have the capability to do video conferencing for online class consultation/discussions.Written summative exams like midterm and final shall be done in CIT University if ECQ will be lifted already.The student can contact their instructor online during their class hour time.							
PLAN OF LEARNING								
Week	Specific Dates	Teaching / Learning Activities	Output / Formative Assessment			Assessment Tools		
1	August 23 - 27	Class Orientation Topic 1: Introduction on Data Analytics Laboratory: Case Study Presentation	Download class materials for the next two weeks. Join class group (MS Teams, Moodle) Library Work Case Study presentation			Rubric Case Study		
2	August 31 – September 3	Topic 2: Data Visualization Laboratory: Create a dashboard given a big data	Assignment Dashboard			Rubric on Dashboard		
3	September 6 - 10	Topic 3: Measures of Locations and Variability Laboratory: Excel Activity in measures of locations and variability	Assignment Quiz			Functions evaluations		
4	September 13 - 17	Topic 4: Measures of Association Between Two Variables Case Study: Measures of association between to variables using Excel, R Studio	Case Study			Functions evaluations Rubric on Relationship between two variables		
5	September 20 - 22	Continuation of Topic 4						
Midterm Requirement – September 13(Written Exam), September 24(Practical Exam)								
6	September 27 – October 1	Topic 5: Simple Linear Regression Model Laboratory: Perform Linear Regression using Excel, R Studio and Weka	Assignment			Functions evaluations		

7	October 4 - 8	Topic 6: Multiple Linear Regression Model Laboratory: Excel Activity in measures of association between to variables using Excel	Assignment Quiz Proposal on their Project for Multiple Regression	Functions evaluations Rubric on Linear Regression
8	October 11 - 15	Topic 7: Classification Method Laboratory: Perform Naïve Bayes, Association using Weka	Models	Functions evaluations
9	October 18 - 20	Project Presentation		
Final Exam – October 22				

GRADING SYSTEM

- A. Midterm Grade

Formative Assessment (All Exercises and Case Study) - 70%

Summative Assessment (Midterm Examination) - 30%
- B. Tentative Final Grade

Formative Assessment (All Exercises and Case Study) - 70%

Summative Assessment (Final Examination) - 30%
- C. Final Grade

Midterm Grade - 50%

Tentative Final Grade - 50%

Faculty In-charge:

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