LSPR Communication & Business Institute

Subject Syllabus

Subject Code	**:**	PRDC09
Subject Title	**:**	Business Intelligence: Big Data & Analysis
Subject Specification	**:**	For students in Public Relations & Digital Communication Major

Subject Overview **:** This course discusses the phenomenon of Big Data which aims to provide insight to students so they can make use of it data as one of the considerations in the communication process. In this course, we will discuss the Big Data phenomenon associated with the industrial revolution 4.0, Big Data consensus, the nature and characteristics of data, stages and approaches in data processing such as data mining to artificial intelligence methods. Apart from that, in this course students are taught to be able to analyze phenomena which occurs on social media using online social networks and also Text Mining. This lecture also aims to enrich Student insight into the process of designing Public Relations methods based on data to make them more effective, efficient and appropriate.

Course Objectives **:**

1. Students will gain a comprehensive understanding of the Big Data phenomenon within the context of the Fourth Industrial Revolution, including its significance, challenges, and opportunities.
2. Students will examine the consensus surrounding Big Data, including its definition, scope, and implications for various industries, including public relations.
3. Students will learn about the nature and characteristics of data, including its types, sources, and formats, to develop a foundational understanding of data analysis
4. Students will learn how to analyze phenomena occurring on social media platforms using online social networks and text mining techniques, enabling them to understand and interpret social media trends and conversations effectively.

Course Method **:** interactive lectures, problem-solving discussions, case small group discussions, class presentation.

Learning Outcome (Competence) **:**

- Knowledge : Understanding of the significance and implications of Big Data in various industries, including its relevance to communication processes and public relations.

- Skill : Ability to analyze social media phenomena using online social networks and text mining techniques.
- Attitude : Able to recognition of ethical considerations in handling and analyzing data, including privacy, confidentiality, and data security.

Course content :

Week	Topic
1	Introduction to Big Data and Analytics
2	Data – Characteristics and Ecosystem
3	Data Mining – Knowledge Discovery from Database
4	Introduction – Artificial Intelligence
5	Social Media Analytics & Digital Data Gathering
6	Text Mining and Natural Language Processing
7	Materials Review Mid Exam
8	**Mid Term Examination**
9	Big Data Phenomenon in Public Relations
10	Public Relations & Data Analysis
11	Degree of Centrality for Social Network Analysis
12	Betweeness Centrality for Social Network Analysis
13	Closeness Centrality for Social Network Analysis I
14	Closeness Centrality for Social Network Analysis II
15	Playground Final Examination
16	**Final Examination**

Grading System :

In the Letter Grade System, the quantitative grades mean:

Grade	Symbol	Conversion Value
90 – 100	A	4.0
85 – 89.99	A-	3.7
80 – 84.99	B+	3.3
75 – 79.99	B	3.0
70 – 74.99	B-	2.7
65 – 69.99	C+	2.3
60 – 64.99	C	2.0
50 – 59.99	C-	1.7
40 – 49.99	D	1.0
< 40	E	0

Course Evaluation :

As a general rule, students are evaluated based on the following criteria:

Final Examinations	35%
Mid-term Examinations	25%
Coursework & Assignments	30%
Attendance	10%
TOTAL	100%

Lecturers, however, have the option of requiring midterm and final papers in lieu of midterm and final examinations. They may likewise change the percentage (weight) for each of the abovementioned items.

Scheme of Work :

Session	Title/Topic	Area Discussion	Activities
1	Introduction to Big Data and Analytics	a. Brief info on the subject b. Characteristics of Big Data c. Importance and Applications d. Challenges and Opportunities	1. Lecturer's presentation 2. Question and answer
2	Data – Characteristics and Ecosystem	a Definition of Data b Characteristics of Data c Data Ecosystem d Importance of data e Applications of data	1. Lecturer's presentation 2. Question and answer
3	Data Mining – Knowledge Discovery from Databases	a Introduction to Data Mining b Definition of Data Mining c Data Mining Process d Data Mining Techniques e Applications of Data Mining	1. Lecturer's presentation 2. Class discussion 3. Question and answer
4	Introduction to Artificial Intelligence	a. Definition of Artificial Intelligence b. Brief History of Artificial Intelligence c. Types of Artificial Intelligence d. Applications of Artificial Intelligence	1. Lecturer's presentation 2. Case Study 3. Assignment
5	Social Media Analytics & Digital Data	a. Definition of Social Media Analytics	1. Lecturer's presentation

	Gathering	b. Overview of digital data gathering methods c. Social Media Listening and Monitoring d. Social Media Analytics Techniques e. Applications of Social Media Analytics	2. Class discussion 3. Question and answer 4. Case Study
6	Text Mining and Natural Language Processing	a. Definition of Text Mining b. Text Preprocessing c. Feature Extraction d. Text Classification and Sentiment Analysis e. Named Entity Recognition (NER) f. Text Summarization and Topic Modeling g. Applications of Text Mining and NLP	1. Lecturer's presentation 2. Class discussion 3. Question and answer 4. Case Study
7	Materials Review Mid Exam		1. Lecturer's presentation 2. Class Discussion 3. Question and answer 4. Practice
8	**Mid Term Test**		
9	Big Data Phenomenon in Public Relations	a Importance of Big Data in Public Relations b Applications of Big Data in Public Relations c Challenges and Opportunities	1. Lecturer's presentation 2. Class discussion 3. Question and answer
10	Public Relations & Data Analysis	a The Role of Data Analysis in Public Relations b Types of Data Analysis in Public Relations c Data Sources for Public Relations d Key Performance Indicators (KPIs) for PR e Data Visualization Techniques	1. Lecturer's presentation 2. Class discussion 3. Question and answer 4. Case Study
11	Degree of Centrality for Social Network Analysis	a. Definition and Conceptual Framework b. Degree Centrality c. Applications of Degree Centrality d. Real-world Examples and Case Studies	1. Lecturer's presentation 2. Class discussion 3. Question and answer 4. Study Case

12	Betweeness Centrality for Social Network Analysis	a. Definition and Conceptual Framework b. Calculation of Betweenness Centrality c. Interpretation and Significance d. Applications of Betweenness Centrality	1. Lecturer's presentation 2. Class discussion
13	Closeness Centrality for Social Network Analysis I	a. Definition and Conceptual Framework b. Calculation of Closeness Centrality c. Interpretation and Significance	1. Lecturer's presentation 2. Class discussion 3. Question and answer
14	Closeness Centrality for Social Network Analysis II	a. Applications of Closeness Centrality b. Case Study	2. Lecturer's presentation 3. Class discussion 4. Assignment 5. Case Study
15	Playground Final Examination		1. Lecturer's presentation 2. Class discussion 3. Practice
16	**Final Examination**		

Midterm Paper Guideline **:** Written Examination

Final Paper Guideline **:** Group Project or Group Presentation

References **:**

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