

Proposed Academic Year	2021/ 2022	Last Reviewed Academic Year	2020/2021
Course Code	INTE420	Course Title	Big Data
Credit hours	3	Level of study	Undergraduate- year 3
College / Centre	COBA	Department	MIFS
Co-requisites	None	Pre-requisites	INTE 405

#### 1. COURSE OUTLINE

The course is designed to provide the students with concepts of big data. The students will be introduced to the importance of big data in the modern business, and how to analyze big data. The students will also get hands-on practice with big data sets.

#### 2. AIMS

The aim of this course "Big Data" is to familiarize the students with concepts and technologies used in storing, manipulating, and analyzing big data. the students will be introduced with different tools such as Hadoop, apache pig, NoSQL using big data sets.

# 3. LEARNING OUTCOMES, TEACHING, LEARNING ,ASSESSMENT METHODS , and Graduate Attributes Mapping

Attributes mapping				
Learning Outcomes (Definitive) Upon successful completion of this course, students will be able to:	Teaching and Learning methods (Indicative)	Assessment (Indicative)	Graduate Attributes Mapping	
1 Describe Big Data and the implication and benefits of big data to the Business	e.g, lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation.	e.g., tests, assignments, individual or group project, participation	Knowledge of a discipline. Commitment to national development and Omani ethical values. Innovative spirit. Global insight.	
2 Describe and identify the current challenges to big data	e.g, lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings,	e.g., tests, assignments, individual or group project, participation	Knowledge of a discipline.	



	individual or group work, presentation.		Commitment to national development and Omani ethical values. Innovative spirit. Global insight.
3 analyze and manage big data tools such as Hadoop, NoSql MapReduce, pig	e.g, lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation.	e.g., tests, assignments, individual or group project, participation	Knowledge of a discipline. Commitment to national development and Omani ethical values. Innovative spirit. Global insight.
<b>4</b> Used different analytical tools on big data set to extract information.	e.g, lectures, online videos tutorials and seminars, online group discussions using LMS, independent readings, individual or group work, presentation.	e.g., tests, assignments, individual or group project, participation	Knowledge of a discipline. Commitment to national development and Omani ethical values. Innovative spirit. Global insight.

### 4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Final	30
MID	30
Assessment –Project	30
Participation	10
TOTAL	100%

## 5. ACHIEVING A PASS

Students will achieve 3 credit hours for this course by achieving a minimum overall score of 50% *NB \*Ensure that ALL learning outcomes are taken into account* 



6. COURSE CONTENT (Indicative)	
LECTURE TOPIC	TIME (HOURS)
Introduction to the course	2
Concept of big data and characteristics of big data	6
Emergence of big data	4
Current Challenges of the big data	4
Implication of the big data to the business	4
Big Data Analytics: using Hadoop	6
Hadoop Distributed File System	6
Map Reduce	6
Hadoop Eco System (Apache pig, Hive Shell, Hbase, and BIGSQL)	6
Data Analytics with R (introduction)	8
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	
TOTAL COURSE HOURS	45

# 7. RECOMMENDED READING

Core text/s:

# Course Descriptor INTE420 Big Data



Sedkaoui, S. (2018). *Data Analytics and Big Data*. UK: ISTE. White, T. (2012). *Hadoop: The Definitive Guide*. USA: O'REILLY.

# **Library + online resources:**

[Library + online resources: ASU library ASU online resources (ProQuest and e-library) and Sultan Qaboos University Library.