This course provides knowledge of the data sources, tools, and techniques used in the exploration and analysis of big data such as: text and stream mining, social media and big data, Hadoop, NoSQL, fundamentals of big data programming, cloud-based solutions, and visualization of big data using Tableau and GIS software. The course will utilize business case studies for students to understand big data solutions in the business environmenJ Ṫh◌̀Ọ§Õ"čẖÀⱥẇilÀ̀ !‰ zF |NDáAf aq aJ& q Ò˜ ìĺ Learning Objectives:

A-1   Develop a thorough knowledge of the varied and constantly evolving sources of big data in today's business environment

A-2   Develop an appreciation for the 3 V's of big data – volume, variety, and velocity – and how big data fundamentally differs from traditional data sources used in the business environment

A-3   Understand the fundamental differences between the infrastructure supporting big data analytics and relational database models supporting traditional data warehouse approaches to storing and accessing data

A-4   Understand the software and platforms that support big data analytics including the Hadoop/MapReduce framework, NoSQL, Hive, Pig, and Spark

Develop an applied working knowledge of data visualization as a tool to explore and draw insights from large data sets

Learning Objectives: The student will:

B-1 Develop an appreciation for the role of visual means as an alternative to traditional reporting to communicate information to decision makers

B-2 Develop and apply a deep working knowledge of the fundamental skills of using visual means such as charts, graphs, and maps to present information effectively

B-3

D-4   Master the ability to use visual representations of information to influence the decisions of non-analytic business decision-makers