Bemidji State University

CS 2750: Introduction to Data Analysis

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: 0
   Lab Hours/Week: 0
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   This course provides an introduction to the basic concepts of data analysis and machine learning models, methods, and techniques pioneered within the fields of Artificial Intelligence and Statistical Modeling. Topics covered can include any/all of the following: statistics for data analysis, knowledge representation, data clustering, categorization and regression methods, decision trees, perceptions, and neural networks. Some student facility with mathematics and Excel is assumed. Prerequisite(s): CS 1309, or Instructor permission.

B. COURSE EFFECTIVE DATES: 08/20/2022 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Statistical concepts for Data Analysis
   2. Computer Programming concepts and practice
   3. Machine learning models

D. LEARNING OUTCOMES (General)
   1. demonstrate competence in the basic statistics underlying Data Science concepts
   2. use basic data analysis models and data visualization techniques
   3. acquire basic programming skills in a beginner-friendly language (e.g. Python) to build software solutions using pre-existing data analysis libraries
   4. choose the best model(s) to use to extract desired results from a given dataset
   5. acquire hands-on experience building effective statistical data analysis models to derive actionable results from a given dataset

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted