# IT 5413 SOFTWARE DESIGN AND DEVELOPMENT

# **Module 8: Intro to Data Analytics**

## Overview and learning outcomes

Data science is the study of data to extract meaningful insights for business. It is a multidisciplinary approach that combines principles and practices from the fields of mathematics, statistics, artificial intelligence, and computer engineering to analyze large amounts of data. This analysis helps data scientists to ask and answer questions like what happened, why it happened, what will happen, and what can be done with the results.

In this module, we will look at What is Data Science and What are the general uses of it.

COURSE OBJECTIVES

This module contributes to the following course objectives:

1. Learn basic ideas of Data Science
2. Read an example of a Data Science project

MODULE OBJECTIVES

Upon the completion of this module, you will be able to:

## Explain what is data science

## Discuss the general uses of data science

## Discuss common techniques we use in data science

## ASSIGNED READINGS

1. What is data science? (Located In D2l In The Module)
2. 25 Data science applications and examples (Located In D2l In The Module)
3. 15 Data science techniques to know and use (Located In D2l In The Module)
4. Machine Learning with Python. Link: <https://www.youtube.com/watch?v=7eh4d6sabA0>
5. AI with Python. Link: <https://www.w3schools.com/python/python_ml_getting_started.asp>

## RECOMMENDED READINGS

1. Numpy tutorial. Link: <https://www.w3schools.com/python/numpy/default.asp>
2. Data Science with Python. Link: <https://realpython.com/tutorials/data-science/>

## ACTIVITIES AND ASSESSMENTS

1. Module 8 Discussion
2. Assignment 8 (Located In D2l In The Module)