Course Title: Data Science Fundamentals			
Course code:	**No. of credits:** 2	**L-T-P: 20-10-0**	**Learning hours: 30**
			L: Lectures; **T:** Tutorials; **P:** Practicals

Pre-requisite course code and title (if any): None
Department: Natural and Applied Sciences

Course coordinator:	**Course instructor:**
Contact details:	
Course type: Core	**Course offered in:** Semester 1

Course Description

The course introduces the multidisciplinary nature of data science and develops a conceptual understanding on what constitutes data science. The course gives premise of not only the composites of *data analysis with data processing methods and domain expertise*, cultivates data science but also deals with data transformation leading to understandable and actionable knowledge for informed decision making. The course develops an understanding to overcome data complexity and the limitations of classical statistics through data science. It develops a wider understanding on how data science is different from statistics, machine learning, computer science, data analytics despite all of them being interrelated. The course introduces the students on how Data Science develops the ability to overcome data complexity and the limitations of classical statistics and machine learning techniques where a data scientist deals simultaneously with heterogeneous data sources coping with non-independencies, non-normalities, and hypothesis on variable's distributions. The students get a complete understanding of Data Sciences broader scope and arena and its associated elements.

Course objectives

- To develop broader lens of data science and its fundamentals.
- To understand how data science is different from several data based conventional disciplines.
- To understand the basic components of Data Science what essentials cultivate a data scientist with introductory functions of data science and data scientists