

EE3209: DATA MANAGEMENT TECHNIQUES

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Data Management Techniques

Subject Code

EE - Electrical Engineering

Course Number

3209

Academic Unit

Electrical Engineering (EE)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

CS2311 Computer Programming

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

Students will gain knowledge about basic concepts of SAS programming, SAS programming techniques for accessing data and manipulating data, technique for preparing report in various sectors, such as engineering and government sector.

Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the concepts of software tools in data management	x	x	
2	Use software tools to create dataset	x	x	
3	Describe the techniques of data manipulation by various steps	x	x	
4	Produce data analysis reports	x	x	
5	Use software tools to design a simple program for simplifying data processing by iterative processing	x	x	

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)	
1	Lecture	Students will engage the key concepts in SAS programming techniques.	1, 2, 3, 4, 5	3 hrs/wk
2	Program Assignments	Students will participate some SAS programming techniques.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Tests (min.: 2)	1, 2, 3, 4, 5	30
2	#Assignments (min.: 3)	1, 2, 3, 4, 5	20

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Additional Information for ATs

Remark:

To pass the course, students are required to achieve at least 30% in course work and 30% in the examination.

may include homework, tutorial exercise, project/mini-project, presentation

Assessment Rubrics (AR)

Assessment Task

Examination

Criterion

Achievements in CILOs

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

Coursework

Criterion

Achievements in CILOs

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Introduction to software tools in data management SAS programming. Concepts and component of software tools. Create datasets; Produce simple list reports. Modifying and combining datasets. Create reports. Delivery output of reports in a variety of formats. Simple Structured Query.

Reading List

Compulsory Readings

Title	
1	Lecture notes
2	N. Jyoti Bass , K. Madhavi Lata & Kogent Solutions , Base Sas Programming Black Book, 2007 Ed

Additional Readings

Title	
1	Nil