EE3209: DATA MANAGEMENT TECHNIQUES

Effective Term
Semester A 2022/23

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
- Provide students with basic concepts of SAS programming.
- Provide student with SAS programming techniques for accessing data and manipulating data.
- Provide students with 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.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Explain key concepts in SAS programming techniques	1, 2, 3, 4, 5	3 hrs/wk
2	Program Assignments	Practice some 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