



**KANNUR UNIVERSITY**  
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**(Abstract)**

FYUG Physics Programme - Typographical error in the Fourth Semester Syllabus- rectified & Implemented w. e. f .2024 Admission- Orders issued.

**ACADEMIC C SECTION**

ACAD C/ACAD C3/2948/2025

Dated: 27.01.2026

Read:-1. UO No ACAD/FYSC - 111/ 17591/2024 dated 04/09/2024  
2. U.O No. ACAD/ACAD C3/2948/2025 dated 17/06/2025  
3.U.O No. ACAD/ACAD C3/2948/2025 (1) dated 17/06/2025  
4.Email dated 21/01/2026 from the Chairperson, Board of Studies in Physics (UG)  
5. Orders of the Registrar in the file of even number dated /01/2026

**ORDER**

1. As per paper read (1) above, Scheme and Syllabus (all semesters) of FYUG Physics Programme had been approved and implemented w. e. f 2024 admission.
2. As per paper read (2) above, the Scheme & Syllabus of 1st, 2nd & 3rd semesters of the FYUG Physics Programme was modified and implemented w. e. f 2025 admission, by incorporating three minor courses.
3. As per paper read (3) above, the Scheme & Syllabus of 3rd , 5th & 7th semesters were modified and Implemented w. e. f .2024 Admission.
4. On verifying the **FYUG Physics Fourth Semester Syllabus**, it was noticed that in the **detailed syllabus** of the course **KU4SECPHY101: Fundamentals of Data Analytics**, the **ESE : CCA mark distribution** has been given as **45 : 30** instead of **50 : 25**. It was also observed that in the **Assessment Rubrics**, the **ESE and CCA marks for the practical component have been interchanged**. These discrepancies were brought to the attention of the Chairperson, Board of Studies in Physics (UG) for correcting the same as per the Regulations of the FYUG Programme.
5. As per paper read (4) above, the Chairperson, Board of Studies in Physics (UG) has submitted the typographical error corrected syllabus for approval.
6. The Registrar has approved the typographical error correction made in the approved Syllabus and permitted to issue orders in this regard
7. Orders are issued accordingly.
8. Error rectified syllabus of the Fourth semester FYUG Physics Programme in the affiliated colleges of Kannur University w. e. f 2024 admission is appended with this U.O. and uploaded on the University website ([www.kannuruniversity.ac.in](http://www.kannuruniversity.ac.in)).



Sd/-

**Jisha K P**

**Assistant Registrar II**

For REGISTRAR

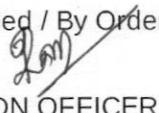
To:

1. Controller of Examinations (through PA to CE).
2. Principals of all Affiliated Colleges.
3. The Chairperson, BoS ,Physics (UG)

Copy To: 1. PA to CE (to circulate among the sections concerned under Examination Branch)

2. PS to VC/PA to R
3. JR II (Exam)
4. DR/AR (Academic)
5. Web manager (to upload in the website)
6. Computer Programmer
7. SF/DF/FC

Forwarded / By Order

  
SECTION OFFICER



- In 3-credit courses with 2-credit theory and 1-credit practical components, out of the total 5 modules of the syllabus, 4 modules are for theory and the fifth module is for practical.
- Continuous Evaluation includes assignments, seminars, periodic written examinations, or other measures as proposed in the syllabus and approved by the university.

## Practical exams

- The end-semester practical examination and viva-voce, and the evaluation of practical records shall be conducted by the course in-charge and an internal examiner appointed by the Department Council. Duration of ESE may be 2 to 2.5 Hrs.
- There shall be a Continuous Evaluation of practical courses conducted by the Course- In-Charge.
- The process of continuous evaluation of practical courses shall be completed before 10 days from the commencement of the end-semester examination.
- Those who passed in continuous evaluation alone will be permitted to appear for the end-semester examination and viva-voce.

## Mark Distribution for Discipline Specific Courses and Foundation Courses

Course Credit	Credit		Mark		L		P		Total marks
	L	P	L	P	CCA (30%)	ESE (70%)	CCA (40%)	ESE (60%)	
4	4	0	100	0	30	70	0	0	100
	3	1	75	25	25	50	10	15	100
3	L	P	L	P	CCA (30%)	ESE (70%)	CCA (60%)	ESE (40%)	Total marks
	3	0	75	0	25	50	0	0	75
	2	1	50	25	15	35	10	15	75

L – Lecture/Theory , P – Practical/Practicum components, CCA – Continuous Comprehensive Assessment, ESE – End Semester Evaluation



## KU4SECPHY101:Fundamentals of Data analytics

Semester	Course Type	Course Level	Course Code	Credits	Total Hours
IV	SEC	100	KU4SECPHY101	3	60

Learning Approach (Hours/ Week)		Marks Distribution			Duration of ESE (Hours)
Lecture+ Tutorial	Practical	CE	ESE	Total	
2	2	25	50	75	

### Course description:

*This course provides a comprehensive introduction to statistical concepts and methods. This also introduces data handling modules of Python. Practical applications and problem-solving are emphasized through real-world examples and exercises.*

**Course Prerequisite:** Higher secondary level Mathematics/ statistics

### Course Outcomes:

CO No.	Expected Outcome	Learning Domains
1	Understand and apply knowledge about data.	U,A
2	Analyse and use different data analysis tools and software	An , A
3	Understand different data sampling methods and use graph plotting.	U, A
4	Apply different software tools for data analysis.	A



\*Remember (R), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C)

### Mapping of Course Outcomes to PSOs

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7
CO 1	3	3	3	3	1	1	1
CO 2	3	3	2	2	1	0	1
CO 3	3	3	3	3	0	1	0
CO 4	3	3	3	2	2	0	0

\*Correlation level 0-None, 1-Slight, 2-Medium, 3-High

## COURSE CONTENTS

### Contents for Classroom Transaction:

M O D U L E	U N I T	DESCRIPTION	HOURS
1	<b>Sampling and data</b>		
	1	Definition of statistics, probability and key terms	2
	2	Data, sampling, and variation in data and sampling	2
	3	Frequency, Frequency tables, and levels of measurement	2
	4	Stemplot, Line graphs and Bar graph, histogram, Frequency polygon and time series graph.	2
	<b>Sections 1.1,1.2,1.3, 2.1, 2.2 of Book 1</b>		
2	<b>Data file formats</b>		
	1	Introducing different data file formats: csv, xls, tab, dat formats.	2
	2	Jupyter Notebooks using Anaconda and Google Colab: introduction	2



	3	Familiarisation with Google Colab 1, Familiarization with Anaconda 2	2
	4	Reading data files in Jupyter Notebooks	2
	<b>Book 1</b>		
3	<b>Using Pandas for Data Analysis</b>		<b>8</b>
	1	Data Analysis Using Pandas: Series and dataframe, creating data frame from an excel spreadsheet - creating data frame from .csv files.	2
	2	Creating data frame from a python dictionary - creating data frame from python list of tuples - viewing data frame using loc() and iloc().	2
	3	Operations on data frames series object - creating series from a data frame - creating data frame from series - creating series from numpy array.	2
	4	Converting series into numpy array - creating series from a dictionary- accessing elements of a series, Joining data frames - how to join when there is no common column - concatenation of tables - where() method - groupby() method, aggregate functions on data frames.	2
	<b>Chapters 12,13 (SQL &amp; Regular expressions not required) of Book 1</b>		
4	<b>Data Visualization using Seaborn</b>		<b>6</b>
	1	Loading datasets in Seaborn, Distribution plot Count plot, box plot, scatter plot, joint plot. Line Plot, displaying scatter plot with regression	3
	3	Creating subplots 1, Heat map - cat plot 2, Violin plot - pair plot. 2	3
	<b>Chapter 15 of Book 1</b>		
5	<b>Practical Module</b>		<b>30</b>
	<i>Directions:</i>		
	Practical related with data analysis and manipulations		



**Essential Readings:**

1. Introductory Statistics, Barbara Illowsky, De Anza College, Susan Dean-De Anza College, OpenStax, 2018.
2. Machine Learning in Data Science using Python, Dr. R. Nageswara Rao, Dreamtech press, 2022

**Suggested Readings:**

1. Statistics 4th Edition -David Freedman, Robert Pisani, Roger Purves, W. W. Norton& Company, 2007.

**Assessment Rubrics:**

Evaluation Type		Marks	Evaluation Type		Marks	Total
Lecture		50	Practical		25	
a)	ESE	35	a)	ESE	15	
b)	CCA	15	b)	CCA	10	
	i   *Test Paper	8		i   Punctuality	5	
	ii   **Book-Article review/ Assignment	2		ii   Skill	5	
	iii   Seminar/ Viva-Voce	5		iii   Record	5	
						75

\*Best out of two test papers

\*\* or any other activities like quiz, open book exam, group activity

