

Course Code: 0613-125(Stat-125) Course Title: Programming With C
Marks:100 Credits: 03 Number of Class: 39-42
(LAB)

Rationale:

This Course intends to develop programming skills in the students, using a popular structured programming language 'C'.

Objectives:

Objective of this course is to-

- Familiarize the students with basic concepts of computer programming and developer tools.
- Present the syntax and semantics of the “C” language as well as data types offered by the language
- Allow the students to write their own programs using standard language infrastructure regardless of the hardware or software platform

Solve following problem by using C language

- Determine correlation coefficients, strength, direction and significance level and then interpret the results in an appropriate way.
- Estimate the regression coefficients from the practical data and then fit a linear model to a bivariate data set via software
- Evaluate coefficient of determination (R^2), ANOVA table, F- test and T- test.

Explore the basic ideas of analysis of attributes, Measures of association and construction of contingency table.

Learning Outcomes:

After completing this course, a student will able to-

CLO1	Gain insight programming language
CLO2	General discuss flow chart of C-programming
CLO3	Solve different statistical and mathematical problems using C-Programming

PLOs CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
CLO1	3			1				
CLO2	3		1			2		

CLO3	1	3	3		1		2	
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Course Content, Teaching and Assessment Strategy

CLOs	Course Content	Teaching Strategy	Assessment Strategy	No. of Lec.
CLO1	Programming: Meaning, Algorithms, Flow Charting, list of Different Programming Languages, FORTRAN, C, C++, Mat lab, etc.	Interactive Class, Open Discussion, Participatory Q/A Session, Online resources and Practical	Assignments, Class Tests, Presentation, Attendance and Final Examination.	6
CLO2 CLO3	Programming in C: Introduction, Importance of C, Sample C Programs, Basic Structure of C Programs, Programming Style, Compilation and Execution of C Program. Sequential Structure. Character Set, Data Types, Classes of Data, Arithmetic Operations, Expressions, Assignment Statements, Input and Output. Selective Structure. Relational Operations, Logical Operations, Conditional Statements. Repetitive Structure. Functions, Arrays, Pointers, Structure.			15
CLO2 CLO3	Applications of C program for Statistical Computation. Different problem in bivariate statistics can be solved by using C.			18

Mapping of Course Learning Outcomes (CLOs) with the Teaching – Learning & Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Classroom Discussion	Lab Performance
CLO2	Problem-solving activities.	Lab Performance, Report, Summative Measure (Final Exam.)
CLO3	Problem-solving activities.	Lab Performance, Report, Summative Measure (Final Exam.)

Text Book

1. Byron S. Gottfried, (2018). Theory and Problems of Programming with C. 4th Ed.

Reference Book

1. Rajaraman, V. (2014): *Fundamentals of Computers*, Prentice –Wall. 6th Edition.