



SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
ACCREDITED WITH "A" GRADE BY NAAC
APPROVED BY AICTE**



SCHOOL OF BIO AND CHEMICAL ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

Organizes value added course

on

"R Programming"

DATE: 05-04-2021 to 22-04-2021 (15 working Days)

TIME: 3.00 PM TO 5.00 PM

RESOURCE PERSONS

**DR. ALEX ANAND,
ASSOCIATE PROFESSOR,
DEPARTMENT OF BIOINFORMATICS AND
DATA SCIENCE,
SATHYABAMA INSTITUTE OF SCIENCE
AND TECHNOLOGY.**

**DR. RAMESH KUMAR,
ASSOCIATE PROFESSOR,
HEAD, DEPARTMENT OF BIOTECHNOLOGY,
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY**

***ELIGIBLE STUDENTS- B.TECH
BIOTECHNOLOGY AND M. TECH
BIOTECHNOLOGY***

VENUE: DEPARTMENT OF BIOTECHNOLOGY

Attendance is mandatory for all classes

**ORGANIZER
DR. MASILAMANI SELVAM
ASSISTANT PROFESSOR
DEPARTMENT OF BIOTECHNOLOGY**

FOR REGISTRATION CONTACT: Dr. PRAKASH P - 9840522688



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"R Programming"

OBJECTIVES

- This course objective is to provide a practical introduction to the R programming language.
- Explore and understand how to use the R documentation.

COURSE CONTENT

TOTAL: 30 HRS

Module 1: The R Statistical Programming Language, The RStudio Integrated development environment (IDE)	6 Hrs
Module 2: Data importation methods, Basic R Data Types	6 Hrs
Module 3: Data processing and manipulation techniques.	6 Hrs
Module 4: External add-in packages for R, Summary statistic functions	6 Hrs
Module 5: Data visualizations using ggplot, Error types.	6 Hrs

OUTCOMES

By the end of this course, Students be able to:

- Download and install R and RStudio
- Navigate and optimize the R integrated development environment (IDE) RStudio
- Install and load add-in packages
- Import external data into R for data processing and statistical analysis



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DATE	TIME	TOPIC	HANDLED BY
05-04-2021	3.00 TO 5.00 PM	INTRODUCTION TO R PROGRAMMING	DR. ALEX ANAND
06-04-2021	3.00 TO 5.00 PM	R – STATISTICAL PROGRAMMING LANGUAGE	DR. ALEX ANAND
07-04-2021	3.00 TO 5.00 PM	IDE	DR. ALEX ANAND
08-04-2021	3.00 TO 5.00 PM	DIFFERENT WAYS OF IMPORTING DATA INTO R	DR. ALEX ANAND
09-04-2021	3.00 TO 5.00 PM	VECTORS,LIST AND MATRICS	DR. ALEX ANAND
12-04-2021	3.00 TO 5.00 PM	ARRAYS,FACTORS,DATA FRAMES	DR. ALEX ANAND
13-04-2021	3.00 TO 5.00 PM	INTRODUCTION TO R DATA PROCESSING	DR. ALEX ANAND
15-04-2021	3.00 TO 5.00 PM	MERGE() FUNCTION IN R	DR. ALEX ANAND
16-04-2021	3.00 TO 5.00 PM	ARRAYS,FACTORS,DATA FRAMES	DR. ALEX ANAND
17-04-2021	3.00 TO 5.00 PM	MAIN DATA MANIPULATION FUNCTIONS	DR. RAMESHKUMAR
18-04-2021	3.00 TO 5.00 PM	FILTERING AND ORDERING ROWS,	DR. RAMESHKUMAR
19-04-2021	3.00 TO 5.00 PM	RENAMING AND ADDING COLUMNS	DR. RAMESHKUMAR
20-04-2021	3.00 TO 5.00 PM	DATA VISUALIZATIONS – INTRODUCTION	DR. RAMESHKUMAR
21-04-2021	3.00 TO 5.00 PM	GGPLOT2 ERROR BARS	DR. RAMESHKUMAR
22-04-2021	3.00 TO 5.00 PM	ADD ERROR BARS	DR. RAMESHKUMAR



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CERTIFICATE OF PARTICIPATION

*This is to certify that, Mr./Ms./Mrs. **Avinash G P**, a Mtech Biotechnology Student of Sathyabama Institute of Science and Technology, has successfully completed value added course on **R PROGRAMMING** organized by the Department of Biotechnology, Sathyabama Institute of Science and Technology from 05/04/2021 to 22/04/2021*

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