



**St. Joseph's Degree College
Sunkesula Road, Kurnool**

**Value Added course
On**

**“Programming in R”
Academic Year 2022-23**

Faculty Attended:

Mrs. P. Sai Srujana

Mr. A Viswanatha Rao

Mrs. P. Armila Devi

Mrs. N.Rajini Kiranmai



St. Joseph's Degree College
Sunkesula Road, Kurnool-518004, AP

29-05-2023,
Kurnool.

To
The Chairman,
Internal Quality Assurance Cell,
St. Joseph's Degree College,
Kurnool.

Respected Sir/Madam,

Sub: Request for permission to conduct **Value Added Course** for IV semester **B.Sc** students on "**R Language**"- Req reg

This is a proposal to conduct a **Value Added Course** for IV Semester students of B.Sc on "**R Language**" which is one of the most commonly used programming languages in Data Mining and Data Analysis.

R is a programming language for statistical computing and graphics and is used among data miners, bioinformaticians and statisticians for data analysis and developing statistical software.

So, I request you to consider the proposal and permit us to conduct this **Value Added Course** to the **B.Sc** students of our College for **30 to 32 Hours**.

Course Coordinators :

1. P. Sai Srujana
2. A., Viswanatha Rao

With Regards,
S.Latha Rani,
HOD,
Department of Computer Science,

COURSE OUTLINE

Instructors : A Viswanatha Rao, P Sai Srujana

Class Section : II BSc (IV SEMESTER) –Maths Groups

Class Time : 3.00 PM to 5.30 PM

Duration : 30 hours

E-Mail : sjccomputers@gmail.com

Starting Day: June 2nd 2023

End Day: June 17th 2023

College website: www.sjcknl.edu.co.in

Course Description:

R programming language is a useful tool for data scientists, analysts, and statisticians. R's ability to handle complex analyses such as machine learning, financial modeling, and more makes it a valuable asset for a wide range of data-related tasks.

This introduction to R course covers the basics of this open source language, including vectors, factors, lists, and data frames. Students will gain useful coding skills and will be ready to start their own data analysis in R.

Course Objectives:

- ✓ The basics of statistical computing and data analysis
- ✓ Using R for analytical programming
- ✓ Implementing R Data types
- ✓ R loop functions and debugging tools
- ✓ Data visualization in R
- ✓ Writing custom R functions

Student Learning Outcomes:

Upon completion of this course, the student will be able to apply technical knowledge and perform specific technical skills, including:

- ✓ Develop an R script and execute it
- ✓ Install, load and deploy the required packages, and build new packages for sharing and reusability
- ✓ Extract data from different sources using API and use it for data analysis
- ✓ Visualize and summarize the data

SYLLABUS

Programming in R

Module 1: Introduction to Data Science - Duration: 2 hrs

Objective: To understand the importance of Data Science in real world

Module 2: Introduction to R programming – Duration: 18 hrs

This module starts with the basics of R programming like data types and functions.

- ❖ Variables in R
- ❖ Scalars
- ❖ Vectors
- ❖ Matrices
- ❖ Arrays
- ❖ List
- ❖ Factors
- ❖ Data frames
- ❖ Branching & Looping Statements in R
- ❖ Functions

Module 3: Data Manipulation in R - Duration: 6 hrs

This module starts with reading data from external files, a sample of a dirty data set and perform Data Cleaning on it, resulting in a data set, which is ready for any analysis. Thus, using and exploring the popular functions required to clean data in R.

- ❖ Getting data into R from Excel, CSV(Comma separated values)
- ❖ Data sorting
- ❖ Find and remove duplicate records
- ❖ Cleaning data
- ❖ Slicing of Data
- ❖ Merging of Data

Module 4 : Data Visualization - Duration: 4 hrs

In this module, you will learn that visualization of the data where data can be represented in different forms of pictures and graphs.

- ❖ Box plot
- ❖ Histogram
- ❖ Pie graph
- ❖ Line chart
- ❖ Scatter plot
- ❖ Exporting Graphs

SCHEME OF VALUATION AND PATTERN OF QUESTION PAPER

ONLINE EXAMINATION				
Time: 30 mins		Max. Marks: 25		Min. Marks to pass :10
S. No	Type of the Questions	No. of Questions	Marks per Question	Total Marks
1	Multiple Choice Questions	25	1	25

Course Registration Details of participants

Google Drive Link :

<https://drive.google.com/file/d/1wpbVRwIubcuAqF0r71dbJrlfbyuWA2Y4/view?usp=sharing>

Attendance sheets of participants

Google Drive Link:

<https://drive.google.com/file/d/1u9Q-FHjCwOumrVVUlbrtkPbeCxJyBa01/view?usp=sharing>

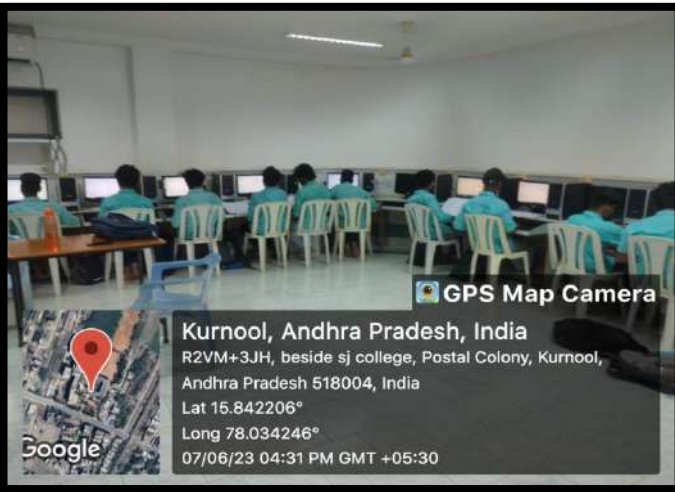
Target Participants:

- Students of II B.Sc (IV Semester)-Maths Groups
- Total No. of Participants : **123**

Test Scores and Results

Name of the Student	Email address	Grade/25.00
Shaik Abdulla	inthyazd@gmail.com	22.00
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Name of the Student	Email address	Grade/25.00
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K.Suresh	kammarisuresh.123456@gmail.com	8.00
S Suhana Mehtab	suhanamehta607@gmail.com	6.00



GPS Map Camera

Kurnool, Andhra Pradesh, India
R2VM+3JH, beside sj college, Postal Colony, Kurnool,
Andhra Pradesh 518004, India
Lat 15.842206°
Long 78.034246°
07/06/23 04:31 PM GMT +05:30



GPS Map Camera

Kurnool, Andhra Pradesh, India
44/19-2, Nehru Nagar, Postal Colony, Kurnool, Andhra
Pradesh 518004, India
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Long 78.03423°
14/06/23 04:23 PM GMT +05:30



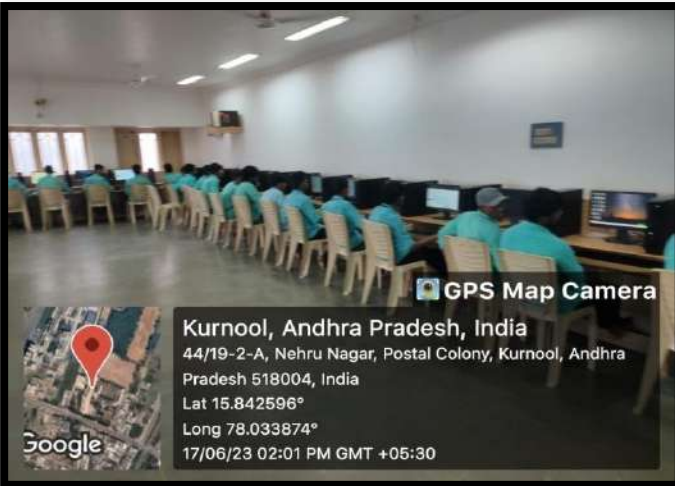
GPS Map Camera

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44/19-2, Nehru Nagar, Postal Colony, Kurnool, Andhra
Pradesh 518004, India
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Long 78.034236°
14/06/23 04:22 PM GMT +05:30



GPS Map Camera

Kurnool, Andhra Pradesh, India
44/19-2-A, Nehru Nagar, Postal Colony, Kurnool, Andhra
Pradesh 518004, India
Lat 15.842595°
Long 78.033846°
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GPS Map Camera

Kurnool, Andhra Pradesh, India
44/19-2-A, Nehru Nagar, Postal Colony, Kurnool, Andhra
Pradesh 518004, India
Lat 15.842596°
Long 78.033874°
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GPS Map Camera

Kurnool, Andhra Pradesh, India
44/19-2-A, Nehru Nagar, Postal Colony, Kurnool, Andhra
Pradesh 518004, India
Lat 15.842589°
Long 78.033872°
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Sample Certificate



Students Feedback

<https://forms.gle/766QJEgpnDD9RrS67>

Please evaluate honestly *

	Excellent	Very Good	Good	Poor	Very Poor
The course content was:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of class time was:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The instructor's contribution to the course was:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instructor's use of examples and illustrations was:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Answers to student questions were:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of extra help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feedback Report

