



# UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A ++' GRADE UNIVERSITY)  
Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

Academic Section

Email: [academicsectionju14@gmail.com](mailto:academicsectionju14@gmail.com)

## NOTIFICATION (25/Sep/Adp./25)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the revised Syllabi and Courses of Studies of the subject of **Statistics (Skill Enhancement Course)** of Semester I, II and III for **Four Year Under Graduate Programme (FYUGP)** as per **NEP-2020 (as given in the annexure)** for the **Regular Candidates** for the examinations to be held in the years as per the details given below:-

Subject	Semester	Existing Course Code	New Course Code	For the examinations to be held in the year	Change of %
Statistics	Semester-I	USESTT-103 (Skill Enhancement Course)	USESTT-111 (Skill Enhancement Course)	Dec. 2026, 2027 and 2028	100%
	Semester-I	USESTT-203 (Skill Enhancement Course)	USESTT-211 (Skill Enhancement Course)	May 2027, 2028 and 2029	100%
	Semester-III	USESTT-304 (Skill Enhancement Course)	USESTT-311 (Skill Enhancement Course)	Dec. 2027, 2028 and 2029	100%

The Syllabi of the courses is also available on the University website:  
[www.jammuuniversity.ac.in](http://www.jammuuniversity.ac.in).

Sd/-  
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/25/ 9586-98

Dated: 10/9/25

Copy for information and necessary action to:

1. Dean, Faculty of Mathematical Science
2. Convener, Board of Studies in **Statistics**
3. All members of the Board of Studies
4. Sr. P.A. to the Controller of Examinations
5. Director, Centre for IT Enabled services and Management, University of Jammu for information and for uploading on University Website.
6. C.A. to the Controller of Examinations
7. Director, Computer Centre, University of Jammu.
8. Joint Registrar/Deputy Registrar/Asst. Registrar (Conf./Exam UG/Exam. Non Prof.)

*Abuoca*  
10/9/25  
Joint Registrar (Academic)

9/10/25



*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*

**Semester-I**

(Examination to be held in Dec. 2026, 2027 and 2028 (2027))

**Skill Enhancement (SEC)**

**Course Code: USESTT-111**

**Course Title: COMPUTATIONAL  
STATISTICS USING EXCEL**

**Credits: 1+2**

**Max. Marks: 75**

**Duration of examination : 3 hours**

Mid-Term (Theory) :25

End-Term (Practical):50

**SCHEME OF EXAMINATION**

<b>THEORY</b>	<b>Syllabus to be covered in the examination</b>	<b>Time allotted</b>	<b>% Weightage (Marks)</b>
<p><b>Mid-Term Test</b>  <b>Pattern: Section-A:</b> 4 short answer type questions of (<math>2\frac{1}{2}</math> marks each) covering all three units with atleast one question from each unit. The students have to attempt all the 4 questions.  <b>Section-B:</b> 6 questions with two questions selected from each unit. Each question shall be of 5 marks. The students have to attempt 3 questions selecting only one question from each unit.</p>	Up to 50%	1 hour	25
<p><b>Internal End Term Practical:</b> Practical Performance + viva voce            Three practical problem-based questions one from each unit shall be asked, student will attempt any two of 20 marks each.</p>	Up to 100%	$1\frac{1}{2}$ hours	50= 40 Practical Performance 10 viva-voce
<b>Total</b>			<b>75</b>



*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*

*Semester-I*

(Examination to be held in ~~2022~~ Dec. 2026, 2027 and 2028 )

*Skill Enhancement (SEC)*

**Course Code: USESTT-111**

**Course Title: COMPUTATIONAL  
STATISTICS USING EXCEL**

**Credits: 1+2**

**Duration of examination : 3 hours**

**Max. Marks: 75**

Mid-Term (Theory) :25

End-Term (Practical):50

**Course Outcomes:**

The objective of the course is to express the students to the real-life skill for statistical computing analysis and graphical interpretation using software skill. Hands on training on the following problem can be done on any one of the statistical software/excel to enhance data analysis skill.

**UNIT-I**

Introduction to Computers: Historical evolution of Computers. Generations of Computers. Classification of Computers, Applications of Computers, Computer Memory: Primary and Secondary Memory, Hardware: CPU, I/O Devices.

Word Processing: Creating and Saving a Document, Editing the Text: Printing, Saving and Importing Documents. Basics of Excel: Data Entry, Built in Functions in Excel.

**UNIT-II**

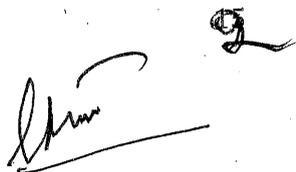
Diagrammatic /Graphical Representation of data by Line diagram, Bar Diagram, Histograms, Frequency Polygon, Pie Chart, Ogive and Box Plot. Measures of Central Tendency, Partition Values.

**UNIT-III**

Measures of Dispersion, Skewness, Kurtosis, Bivariate Data: Scatter Diagram, Correlation, Covariance, Regression.

**Books Recommended:**

- Beverly, J. D. (1998). Statistics with Microsoft Excel 2008. Prentice Hall Press, US
- Brend Held (2007), Microsoft Excel Functions and Formulas. Wordware Publishing. Inc.
- D. Remenyi, G. Onofre. J. English (2011), An introduction Statistics Using Microsoft Excel. Academic Publishing Limited.
- Dan, R., George, O. and Joseph, E. (2011). An Introduction to Statistics using Microsoft Excel. 2<sup>nd</sup> ed., Academic Conferences Limited.
- David, S., David, S. and Kathryn, A. S. (2016). Statistics for Manager Using Microsoft Excel 8th Ed., Pearson.
- Gupta V., Bhatia S.S, Thakur P.S., Sharma V. (2018). Computer Fundamentals and IT Tools. Kalyani Publishers
- Gupta, S.C. and Kapoor, V.K. (2020). Fundamentals of Mathematical Statistics, 12<sup>th</sup> Ed., Sultan Chand and Sons.
- Rajaraman, V. (2014). Fundamentals of Computers, 6<sup>th</sup> Ed. PHI.
- Stephanie, G. (2014). Excel Statistics: Step by Step. CreateSpace Independent Pub.



*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*

*Semester ~~IV~~ VI*

May 2027, 2028 and 2029

*(Examination to be held in*

*Skill Enhancement Course*

**Course Code: USESTT-211**

**Course Title: DATA ANALYSIS USING R**

**Credits: 1+2**

**Max. Marks: 75**

**Duration of examination : 3 hours**

Mid-Term (Theory) :25

End-Term (Practical):50

**Course Outcomes:**

After completing this course, a student will have: Basic Knowledge of R programming with some basic notions for developing their own simple programs and visualizing graphics in R. Ability to perform data analysis for both univariate and multivariate data sets using R.

**UNIT I**

Introduction to R Programming and R Studio, Installing R, R as a calculator. Creating a data set, Understanding a data set, Data structure: Vectors, Matrices, Arrays, Data Frames, Factors and Lists

**UNIT II**

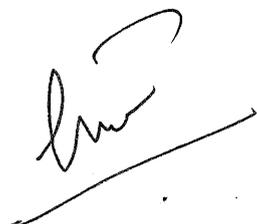
Data inputs: Entering data from the keyboard, Importing Data, creating new variables, recoding variable, renaming variables, plot a graph viz. histograms (equal class intervals and unequal class intervals), box plot, stem-leaf, frequency polygon, pie chart/3D pie chart, plot () function and line plot, ogives with graphical summaries of data

**UNIT III**

Random number generation and sampling procedures, Measures of Central Tendency, Measures of Dispersion, Skewness, Kurtosis, Correlation, Covariance, Regression, Test of Normality, Rank correlation, Measures of Association.

**Suggested Readings:**

- Crawley, M.J. (2013). The R Book, 2nd ed., John Wiley.
- Davies, T. M. (2016). The Book of R: A First Course in Programming and Statistics, No Starch Press, San Francisco.
- Field, A., Miles, J. and Field, Z. (2012). Discovering Statistics using R, Sage, Los Angeles.
- Kabacoff, R.I. (2015). R in Action: Data Analysis and Graphics in R, 2nd ed., Manning Publications.
- Matloff, N. (2011). The Art of R Programming, No Starch Press, Inc. Eckhouse,



26

3

*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*  
*Semester-II*

(Examination to be held in ~~May 2027, 2028 and 2029~~ ~~2027~~)  
*Skill Enhancement Course*

**Course Code: USESTT-211**

**Course Title: DATA ANALYSIS USING R**

**Credits: 1+2**

**Max. Marks: 75**

**Duration of examination : 3 hours**

Mid-Term (Theory) : 25

End-Term (Practical) :50

**SCHEME OF EXAMINATION**

<b>THEORY</b>	<b>Syllabus to be covered in the examination</b>	<b>Time allotted</b>	<b>% Weightage (Marks)</b>
<p><b>Mid-Term Test</b> <b>Pattern: Section-A:</b> 4 short answer type questions of (<math>2\frac{1}{2}</math> marks each) covering all three units with atleast one question from each unit. The students have to attempt all the 4 questions. <b>Section-B:</b> 6 questions with two questions selected from each unit. Each question shall be of 5 marks. The students have to attempt 3 questions selecting only one question from each unit.</p>	Up to 50%	1 hour	25
<p><b>Internal End Term Practical:</b> Practical Performance + viva voce Three practical problem-based questions one from each unit shall be asked, student will attempt any two of 20 marks each.</p>	Up to 100%	$1\frac{1}{2}$ hours	50= 40 Practical Performance 10 viva-voce
<b>Total</b>			<b>75</b>

*[Handwritten Signature]*

4

*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*

*Semester-III*

(Examination to be held in ~~Dec~~ Dec. 2027, 2028 and 2029 )

*Skill Enhancement Course*

**Course Code: USESTT-311**

**Course Title: ADVANCE ANALYTICS IN R  
FOR DATA SCIENCE**

**Credits: 1+2**

**Max. Marks: 75**

**Duration of examination : 3 hours**

Mid-Term (Theory) :25

End-Term (Practical):50

**Course prerequisites:** To study this course, a student must have basic knowledge of computers.

**Course Outcomes:**

After completing this course, a student will have: Basic Knowledge of R programming with some basic notions for developing their own simple programs and visualizing graphics in R. Ability to perform data analysis using R.

**UNIT-I**

Programing in R: functions in R, syntax for R, control statements: while and for statements, nested loops, break and continue etc.

**UNIT-II**

Random number generation and sampling procedures. Fitting of polynomials and exponential curves. Application Problems based on fitting of suitable distribution like binomial passion, normal etc., Normal probability plot, ggplot.

**UNIT-III**

Inferential Statistics- Parametric test: Test for Normality, t-test for single mean, t-test for difference between means, paired t-test, Chi-square for goodness of fit, F-test, Analysis of Variance (One- way & Two-way ANOVA), Wilcoxon signed rank test, Mann Whitney U test, Kolmogorov-Smirnov Test for normality,

**SUGGESTED READING:**

1. Braun W J, Murdoch D J (2007): A First Course in Statistical Programming with R. Cambridge University Press. New York.
2. Gardener, M (2012) Beginning R: The Statistical Programming Language, Wiley Publications.
3. Crawley, M.J. (2017). The R Book, John Wiley & Sons. Eckhouse.
4. Davies, T. M. (2016). The Book of R: A First Course in Programming and Statistics, No Starch Press, San Francisco.
5. Field, A., Miles, J. and Field, Z. (2012). Discovering Statistics using R, Sage, Los Angeles.
6. Kabacoff, R.I. (2015). R in Action: Data Analysis and Graphics in R, 2nd ed., Manning Publications.
7. Matloff, N. (2011). The Art of R Programming, No Starch Press, Inc. Eckhouse.





*Syllabus of Statistics at FYUP under CBCS as per NEP-2020*

*Semester-III*

(Examination to be held in Dec. 2027, 2028 and 2029)

*Skill Enhancement Course*

**Course Code: USESTT-311**

**Course Title: ADVANCE ANALYTICS  
IN R FOR DATA SCIENCE**

**Credits: 1+2**

**Duration of examination : 3 hours**

**Max. Marks: 75**

Mid-Term (Theory) :25

End-Term (Practical):50

**SCHEME OF EXAMINATION**

<b>THEORY</b>	<b>Syllabus to be covered in the examination</b>	<b>Time allotted</b>	<b>%Weightage (Marks)</b>
<b>Mid-Term Test</b> <b>Pattern: Section-A:</b> 4 short answer type questions of ( $2\frac{1}{2}$ marks each) covering all three units with atleast one question from each unit. The students have to attempt all the 4 questions. <b>Section-B:</b> 6 questions with two questions selected from each unit. Each question shall be of 5 marks. The students have to attempt 3 questions selecting only one question from each unit.	Up to 50%	1 hour	25
<b>Internal End Term Practical:</b> Practical Performance + viva voce Three practical problem-based questions one from each unit shall be asked, student will attempt any two of 20 marks each.	Up to 100%	$1\frac{1}{2}$ hours	50= 40 Practical Performance 10 viva-voce
<b>Total</b>			<b>75</b>

 6