



# Online Summer Training/ Internship/ Refresher/STC Programme on Data Analysis using R, Excel, Python, SPSS and AI Tools Modern Learning, Research & Development

**Certification Course from June 15 June- 20 July, 2026**

*Organized by*

Department of Health Research-Multidisciplinary Research Unit  
**Uttar Pradesh University of Medical Sciences, Saifai, Etawah, UP**

(As per UP Government Act No 15 of 2016 to provide for establishment of a Medical Sciences University)

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## Science Tech Institute, Lucknow, UP, India

(Run by: MKSES Lucknow)

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**About Uttar Pradesh University of Medical Sciences:** The Uttar Pradesh University of Medical Sciences, is a medical college, hospital, and medical research institution in Saifai, Etawah, U.P., India., running with full-fledged Medical College, Dental College (postgraduate), Paramedical College, Nursing College, Pharmacy College, Multi-Specialty 850 bedded hospital, 150 bedded trauma and burn center and 500 bedded Super Specialty hospital. The Medical University is transforming in order to support clinical research and offer better patient care.

**About Department of Health Research-Multidisciplinary Research Unit:** Established under aegis of DHR, MoHFW, Govt. of India at Uttar Pradesh University of Medical Sciences, Saifai, Etawah (206130). The Unit is to perform cutting-edge research in the field of health sciences, with a special emphasis on patient care in non-communicable diseases, and provide a central instrumentation facility and research environment for faculties and SR/JR PG students to choose and carry out their top research priorities on their own premises.

**Science-Tech Institute (Run By: MKS Educational Society Lucknow)**

The Science-Tech is one of the premier Institutes of Lucknow dedicated to organize various academic activities like Conferences, FDP, seminars, workshops and Training programme and Certificates Course in collaboration with many National & International organizations and Institute have own Publications House and Journals to be publish various fields of books, Research papers and Magazine. The Institute is run by Manraj Kuwar Singh Educational Society, Lucknow. The Society is working for the development of deprived socio-economic students by providing them quality education.

## About the Summer Training/ Internship /Refresher/STC/Orientation Programme

Training is the process of learning a skill and it enables the trainee to attain the skills that are needed for a job. “Summer training” is a very common term among students pursuing degrees. Summer training is very important for bridging the gap between the industry and the academic curriculum.

Training helps you know about the implementation techniques of concept learnt in classes. Learning and implementation are two completely different things. Learning comes from reading about a concept while implementation is putting whatever you have learnt to practical use.

The main objective of conducting an orientation programme is to transform a teacher into a learning and creative teacher. It is possible only when the ASCs identify the relevant contents and methodology. The UGC/MCI has provided broad guidelines for the themes to be covered in orientation programmes. Programmes(OP) and Refresher Courses (RC) for the overall development of the teachers and profession. It mentions several reasons for Understanding Educational Culture, Networking, etc. which motivate the teachers to attend the programmes, and on the other side, it lists out the benefits been given to parts of the society i.e. students, teachers, and the educational institution.

### . Objective

The course will explain the fundamental concepts of advance statistical data Analysis techniques. It will be delivered through video lectures and reading materials.

### Methodology

The methodology of the course will comprise of:

- Online lecture
- Participatory discussion
- Demonstrations
- Problem solving (exercises and data analysis in each sessions).
- Assignment

### Duration & Time

**5 weeks (35 Days) Programmed Date: 15 June - 20 July, 2026, Time: 7:00 PM to 8:00 PM. (Saturday & Sunday will be closed in every week)**

### Nature of Participants

**Summer Training/Internship :** The Students of MBBS & MD, BDS & MDS, MPT & BPT B. Pharm. & M.Pharm, B. Tech & M. Tech. , BCA & MCA, BBA & MBA, B.Sc.& M. Sc., B. Com. & M. Com. LLB & LLM,., B.Ed. & M.Ed. , BA & MA and (and UG& PG of any steam, and Research Scholars.

**Refresher/STC/Orientation/FDP Programme:** Faculties and Residents from Medical, Science, Engineering, Arts, Humanities, Social Science, Agriculture, Law, Commerce, Pharmacy, Fine Arts, Education/Special Education Etc.

Topics Covered of AI Tools Date: June 15-20, 2026 Time: 7PM -8 PM	Topics Covered of Excel Date: June 22-26, 2026 Time: 7PM -8 PM	Topics Covered of R Date: June 29-30 2026 Date: July 1-4, 2026 Time: 7PM -8 PM	Topics covered of SPSS Date: July 6-11, 2026 Time: 7PM -8 PM	Topics cover of Python Date: July 13-19, 2026 Time: 7PM -8 PM
<b>Module 1: Introduction to Artificial Intelligence</b> <ul style="list-style-type: none"> <li>What is Artificial Intelligence</li> <li>What is Generative AI</li> <li>Applications of AI in education and research</li> <li>Ethical use of AI</li> </ul>	<b>Introduction to .Microsoft Excel</b> <ol style="list-style-type: none"> <li>Why Excel is important for Data Analysis?</li> <li>Companies that are hiring Excel experts</li> <li>How to open Excel Workbook/Worksheet</li> <li>Introduction to the Excel Interface</li> <li>Save &amp; Location of Excel file</li> <li>Applying Fonts, Borders, Background &amp; text colors</li> <li>Find &amp; Replace</li> </ol>	Introduction of R Installation of R and R studio R as a calculator Data Structure: Vectors, Matrices, Arrays, Data Frames, Factors & lists.	<b>Descriptive Statistics</b> <b>Graphical representation of Data</b> <b>Testing of Normality</b> <b>Testing of Homogeneity</b> <b>Case Studies with Hands on SPSS</b>	<ul style="list-style-type: none"> <li>Introduction to Python</li> <li>Installing Python,</li> <li>Installing &amp; loading libraries</li> </ul>
<b>Module 2: Prompt Engineering</b> <ul style="list-style-type: none"> <li>What is Prompt Engineering</li> <li>Writing effective prompts</li> <li>Improving AI responses using better prompts</li> </ul>	<b>(Basic Statistical Functions in Microsoft Excel)</b> <ol style="list-style-type: none"> <li>Sum (Wrong &amp; Right way)</li> <li>Average</li> <li>Median and Mode</li> <li>Maximum and Minimum</li> <li>Year, Month, Day, Today, Now</li> <li>AND, OR</li> <li>IF functionality</li> <li>If with AND</li> </ol>	Data input: Entering data from the Keyboard Importing data from Excel, SPSS,SAS, STATA Creating new variable Recoding variables Renaming variables Missing values Sorting data	<b>Parametric Tests</b> <b>One sample t-test</b> <b>Independent t-test</b> <b>Paired t-test</b> <b>ANOVA</b> <b>Repeated measures ANOVA</b> <b>Case Studies with Hands on SPSS</b>	<ul style="list-style-type: none"> <li>Basics of Python</li> <li>Using libraries Num Py, Matplot Lib, Pandas</li> <li>Test of Normality</li> <li>Creating Graphs</li> </ul>
<b>Module 3: AI Tools for Research and documentation</b> <ul style="list-style-type: none"> <li>ChatGPT</li> <li>Gemini</li> <li>Perplexity AI</li> <li>Grok</li> <li>Multi</li> <li>Manus AI</li> </ul> Application of Tools: <ul style="list-style-type: none"> <li>Research Assistance, Idea Generation</li> <li>Assignment and Rep</li> </ul>	<b>Advance Microsoft Excel</b> <ol style="list-style-type: none"> <li>Count</li> <li>Counta</li> <li>Countblank</li> <li>CountIf &amp; Countifs</li> <li>SumIf &amp; Sumlfs</li> <li>Averagelf &amp; Averagelfs</li> <li>Vlookup</li> </ol>	Descriptive Statistics using R Graphical representation in R	<b>Non Parametric Tests</b> <b>Mann Whitney U-test</b> <b>Wilcoxon Rank Signed test</b> <b>Kruskal Wallis Test</b> <b>Friedman ANOVA</b> <b>Chi square test</b> <b>Case Studies with Hands on SPSS</b>	Data Types in Python <ul style="list-style-type: none"> <li>List, Tuple, Dictionary, and Set in Python</li> <li>Python if else (Conditional statements)</li> <li>Loops in Python (while and for)</li> </ul>
<b>Module 4: AI for Presentation &amp; Data Analysis</b> <ul style="list-style-type: none"> <li>NotebookLM</li> <li>Gamma</li> <li>Copilot</li> <li>Julius AI</li> </ul> Application of Tools: <ul style="list-style-type: none"> <li>Automated research paper summaries</li> <li>Notes, PDFs into Presentation</li> <li>Extracting insights from datasets</li> </ul>	<ol style="list-style-type: none"> <li>Conditional Formatting – (Highlight Cell Rule)</li> <li>Top/Bottom Rule</li> <li>Introduction to Pivot table</li> <li>How to insert the Pivot table</li> <li>Pivot table interface</li> <li>Basic data analysis using Pivot Table</li> </ol>	T-test Paired t-test Analysis of Variance (ANOVA)	<b>Bivariate Regression Analysis</b> <b>Logistic Regression Analysis</b> <b>Multinomial Logistic Regression Analysis</b> <b>Case Studies with Hands on SPSS</b>	User Input in Python <ul style="list-style-type: none"> <li>Functions in Python</li> <li>Mutable object as default function argument</li> <li>Python Function Call: Call-by-Value or Call-by-Reference?</li> </ul>
<b>Module 5: AI tools for resume building and job preparation</b> <ul style="list-style-type: none"> <li>Kickresume</li> <li>Interview Warmup</li> </ul> Application of Tools <ul style="list-style-type: none"> <li>Creating ATS-friendly CVs</li> <li>Writing AI-generated cover letters</li> <li>Targeted nterview preparation</li> </ul>	<b>Graph in Microsoft Excel</b> <ol style="list-style-type: none"> <li>How to create graphs</li> <li>Column &amp; Bar Chart</li> <li>Line graph</li> </ol>	<b>Statistical Inference : Non Parametric Tests</b> The Wilcoxon Signed Rank Test Mann Whitney U-Test Kruskal-Wallis Test Chi-square Test	<b>Exploratory Factor Analysis</b> <b>Interpretation of Exploratory Factor Analysis</b> <b>Case Studies with Hands on SPSS</b>	Python Syntax
<b>Module 6: AI Tools for Professional Design &amp; Visual Content</b> <ul style="list-style-type: none"> <li>Canva</li> <li>Nano Banana (Gemini)</li> <li>Kittl</li> </ul> Application of Tools <ul style="list-style-type: none"> <li>Posters</li> <li>Presentations</li> <li>Social media graphics</li> <li>Academic visual content</li> </ul>		Simple Linear Regression Multiple Linear Regression	<b>Cluster Analysis</b> <b>Interpretation of Cluster Analysis</b> <b>Case Studies with Hands on SPSS</b>	Variables & Data Types
		Logistic Regression Poisson Regression	<b>Discriminant Analysis</b> <b>Interpretation of Discriminant Analysis</b> <b>Case Studies with Hands on SPSS</b>	Operators

## Highlights of the Training/Orientation Program -

1. **Registered participants will get certificates mentioned with Credit Hour & Score.**
2. Study material in the form of ppt and video recording of all sessions will be provided to all registered participants.
3. **Training/Refresher/STC/FDP Program** by Subject Experts from and other reputed Institute & Universities
4. **Training/Refresher/STC/FDP Program** will be on the Zoom meeting platform.

For further queries, please mail us at:

[sciencetech487@gmail.com](mailto:sciencetech487@gmail.com)

## REGISTRATION & PAYMENT DETAILS

### Details of Registration Fees:

1. For Indian Participants : **INR 600/- (Non-Refundable)**
2. For Foreigner : **USD(\$ 10/- (Non-Refundable)**

**For registration & payment please click on the given link:**

[https://sciencetechinstitute.com/upums-saifai\\_online-internship-summer-training-orientation-programme/](https://sciencetechinstitute.com/upums-saifai_online-internship-summer-training-orientation-programme/)

After successful registration , the participants will receive a confirmation via email. Please keep checking the spam folder of the email as the bulk email sent may end up in the spam folder. An official group has been made for communication with the participants on "Whatsapp." The link to join the official group will be provided in the confirmation mail.

## About the Trainer



**Dr. Anup Kumar** is, Associate Professor, Department of Biostatistics, & Health Informatics, SGPGIMS, Lucknow has completed his Ph.D. from Banaras Hindu University, Varanasi in the field of Mathematical Modeling of Human Fertility in 2012. Currently his area of interested is Stochastic Modelling, Big Data Analysis, Text Mining and Biostatistics. He has published more than 20 research articles in reputed international and national journal. He has delivery more than 25 talks on applied statistics at various national level workshop. Working software for data analysis are R & SPSS.



**Dr. Borsha Neog** obtained her B.Sc. from Jagganath Barooah College, Jorhat, Assam. She has completed his M.Sc. & MPhil in Statistics from Dibrugarh University, Dibrugarh. Currently she is serving as an Assistant Professor, department of Agricultural statistics, Assam Agricultural University, Jorhat. She has participated many national and international level workshops & conferences as well as presented her research work in national & nternational conferences. She has invited as a resource person in national level workshop. Her research interests focus on forecasting, machine learning and time series analysis.



**Mr. Saurabh Agarwal** is a graduate and post graduate engineer from IIT Kanpur and IIT Delhi. At present he is associated with HBTU, Kanpur. He is consultant to IBM and UNESCO for Business Analytics. He has expertise in Data Mining, Data Analysis, Business Analytics, Structural Equation Modelling, Multivariate Analysis and works on platforms like R, SPSS, AMOS, Modeler, IBM Watson Analytics.



**Dr. M. Ramakrishnan** Assistant Professor, P.G and Research Department of Mathematics, Ramakrishna Mission Vivekananda College, Mylapore, Chennai. Dr. M. Ramakrishnan has done his Ph.D in Mathematics-Statistics from the University of Madras. He has twenty six years of teaching Experience in Mathematics. His specializations are Mathematical Statistics, Ordinary Differential Equations. His Research area is Survival Analysis. He has expertise in handling Softwares SPSS, STATA, R Programming, WINBUGS, EXCEL and SCILAB. He has published Research Papers in National and International Journals and Presented Papers in many National and International Conferences in the field of Survival Analysis throughout India. He has conducted several R courses in all over India.



**Dr. S. K. Yadav** is currently working as Associate Professor at Department of Statistics, Baba saheb Bhimrao Ambedkar University (A Central University), Lucknow. He did his M.Sc. and Ph.D. from Department of Statistics, University of Lucknow. He has teaching and research experience of more than 10 years in the field of Statistics. He has published more than 100 research papers in various national and international journals. He has delivered many invited talks in the National and International Conferences. His areas of research include Sampling theory, Regression Analysis and Operations Research.



**Dr. Ranjit Kumar Paul** is Senior Scientist at IASRI, New Delhi. He has published many research paper in national and international journals. He has published two books. He received the Young Scientist Award in Social Science for the biennium 2015-16 by National Academy of Agricultural Sciences (NAAS), he Received ICAR Lal Bahadur Shastri Outstanding Young Scientist Award in Social Sciences for 2016.



**Dr. Gayatri Vishwakarma** is an experienced Biostatistician having 14+ years of post-PhD work experience in academics and research. Dr. Gayatri is currently working with ISIC as Head-Biostatistics. She worked as Biostatistician with Department of Research at Rajiv Gandhi Cancer Institute, New Delhi. She worked as Visiting Scientist at University of Texas Health Science Center, Tyler TX, USA. She also worked as Monitoring & Evaluation Specialist in Woodward Charitable Foundation, Ethiopia.



**Dr. Shambhavi Mishra** is working as an Assistant Professor in the Department of Statistics, University of Lucknow, since February 2016. After completing her Master's in Statistics from Lucknow University in 2011, she worked as a Statistical Fellow in SGPGI's Department of Biostatistics & Health Informatics. She has also worked as a Biostatistician and Data Analyst for the Bill & Melinda Gates-funded Community Empowerment Lab based in Lucknow Her specialization encompasses Biostatistical Modelling, Epidemiology & Survival analysis, Survey Sampling, Multivariate Analysis, Analysis of Variance, and Design of Experiments and data analysis using SPSS, R, STATA and Python. She has 35 research publications in high impact factor journals such as The Lancet Global Health, American Journal of Clinical Nutrition, Environmental and Molecular Mutagenesis to name a few. She has given many invited lectures and paper presentations at national and international conferences.



**Dr. Amit Kumar** did his Doctor of Philosophy (Ph. D) from All India Institute of Medical Science, India. Currently he is serving as an Associate Professor and Head of Department of Laboratory Medicine Rajendra Institute of Medical Sciences, Ranchi, Jharkhand, India. He has participated many National and International level workshops & conferences as well as presented his research work in National & International conferences. He has invited as a resource person in National level workshop. His research interests focus on forecasting, Regression analysis

## Chief Patron



**Prof.(Dr.) Ajai Singh**  
Honourable Vice Chancellor,  
U P University of Medical  
Sciences, Saifai, Etawah, U. P

## Co- Patrons



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**Mrs. Shweta Singh**  
Chairman  
Governing Body  
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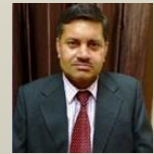
## Program Advisor



**Prof. (Dr.) C. K. Dixit**  
Director  
IET  
DSMR University  
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**Dr. Sanjay Kumar**  
Nodal Officer,  
MRU & Professor,  
Department of Pathology,  
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**Dr. Rajendra Kumar Tripathi**  
Director  
Faculty of Engineering and  
Technology at Khwaja  
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## Convener



**Prof.(Dr.) Sushil Kumar Shukla**  
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## Organizing Secretary



**Dr. P.K. Jain**  
Professor & Head  
Department of Community Medicine  
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## Course Coordinator



**Dr. S.K. Singh**  
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