



**Dr. Ram Manohar Lohia Institute of Medical Sciences**  
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Ref.No: 329 /Dean/RMLIMS/2018

Date: 10.10.2018

To,

1. HOD, Anaesthesiology
2. HOD Cardiology
3. HOD, CTVS
4. HOD Pathology
5. HOD Radiotherapy
6. HOD Radiodiagnosis
7. HOD Microbiology
8. HOD Neurology
9. HOD Neurosurgery
10. HOD Urology,
11. HOD Surgical Gastroenterology
12. HOD Surgical Oncology

Sub: Regarding lectures of "Research Methodology and Biostatistics course" for academic session 2018-19 PG(MD/DM/MCh & PhD Students admitted at RMLIMS in 2018.

Dear Sir/Madam,

With reference to the letter no. 302/DC/14 dated 18.07.2014 of Dean, KGMU, like previous years, the Research cell, RMLIMS is conducting "Research Methodology & Biostatistics Workshop" for the first year PG (MD/DM/MCh & PhD Students admitted in 2018.

**DURATION:** Duration of the classes will be from **12 October-04 November 2018**, co-ordinated by *Dr. Akash Agarwal, Associate Professor Surgical Oncology & Dr. Shantanu Sapru, Assistant Professor Radiotherapy* followed by *Dr. Savita Srivastava, Senior Research Officer.*

\*Please note that it is mandatory for students admitted in 2018 in various MD/DM/MCh, and PhD courses to attend the workshop and **CLEAR THE EXAMINATION TO BE HELD ON 10.11.2018** after the workshop for obtaining clearance to submit Thesis Proforma.

So, kindly inform the students of your department to attend the classes and make necessary arrangements to spare them for the lectures as per the attached schedule.

**VENUE:** Conference Hall, 1st Floor, of Administrative block.

The schedule of the lectures is attached with this letter.

(Prof. Mukul Misra)  
Dean

Copy to for information & necessary action:

1. P.S. to Director, Dr. RMLIMS, Lucknow.
2. Dr. Akash Agarwal, Associate Professor, Dr. RMLIMS, Lucknow.
3. Dr. Shantanu Sapru, Assistant Professor, Dr. RMLIMS, Lucknow.
4. Dr. Savita Srivastava, Senior Research Officer, Dr. RMLIMS, Lucknow.
5. Computer Programmer, Dr. RMLIMS, Lucknow for uploading the information in Student corner of the institute website and procurement of necessary audio-visual support during workshop.
6. Notice Board

(Prof. Mukul Misra)  
Dean

**Course & Schedule for the Research Methodology & Biostatistics Course, RMLIMS, 2017**

S. No	Day	Date	Time	Speaker	Topic
1.	Fri	12 Oct 2018	16.00-18.00	Drs. Akash & Shantanu	Introduction – I (Critical thinking, Scientific methodology, Cognitive biases, Logical fallacies, Hill criteria)
2.	Sat	13 Oct 2018	15.00-17.00	Drs. Akash & Shantanu	Introduction – II
3.	Sun	14 Oct 2018	10.00-13.00	Drs. Akash & Shantanu	Data: Types, Describing data – I
4.	Mon	15 Oct 2018	16.00-18.00	Drs. Akash & Shantanu	Data: Describing data – II
5.	Tues	16 Oct 2018	16.00-18.00	Drs. Akash & Shantanu	Observational & Epidemiological study designs (Case control studies, Cohort studies, Odds Ratio, Relative Risk, Attributable Risk) – I
6.	Wed	17 Oct 2018	16.00-18.00	Drs. Akash & Shantanu	Observational & Epidemiological study designs – II
7.	Thurs	18 Oct 2018	16.00-18.00	Dr. Shantanu Sapru	Probability, Bayes theorem
8.	Fri	19 Oct 2018	16.00-18.00	Dr. Shantanu Sapru	Diagnostics and measurements, Sensitivity, Specificity, PPV, NPV, Likelihood Ratio, ROC curves
9.	Sat	20 Oct 2018	15.00-17.00	Drs. Shantanu & Nilotpal	Errors, Bias, Reliability, Precision, Validity, Accuracy, Cronbach's $\alpha$ , $\kappa$ (kappa) statistic, Cochran Q, Inter- & intra-observer differences – I
10.	Sun	21 Oct 2018	10.00-13.00	Drs. Shantanu & Nilotpal	Errors, Bias etc – II
11.	Mon	22 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Data distribution – Binomial, Poisson, Gaussian (Normal), chi square distribution, t-distribution, z-distribution; Samples & Sampling methods; Measures of central tendency – Mean, Median, Mode, Range, Std. deviation, Std. error, Std. error of mean, Confidence Intervals, Central Limit Theorem (CLT) – Part I
12.	Tues	23 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Data distribution – Part 2
13.	Wed	24 Oct 2018	16.00-18.00	Drs. Shantanu & Nilotpal	Statistical inference, p-value, parametric v/s non parametric testing, null hypothesis, C.I.
14.	Thurs	25 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	t-tests, ANOVA, Mann-Whitney U-test, Wilcoxon's test, Contingency tables, $\chi^2$ test, Fisher's exact test, Kendall's $\tau$ – Part I
15.	Fri	26 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Part 2 of above
16.	Sat	27 Oct 2018	15.00-17.00	Drs. Nilotpal, Akash & Shantanu	Effect size, Sample size calculation for a few basic study designs, NNT
17.	Sun	28 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Correlation, Regression, Spearman's & Pearson's coefficients, Linear & Logistic Regression, Cox Regression, Mann-Whitney U-test, Wilcoxon's tests, Hazard Ratio, Forest Plot – Part I
18.	Mon	29 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Part II of above
19.	Tues	30 Oct 2018	16.00-18.00	Dr. Nilotpal Chowdhury	Time-to-Event (TTE) or Survival analysis focusing on Kaplan-Meier analysis & the Cumulative incidence method, Comparing TTE/Survival methods – Log rank test & Gray's test; Hazard Ratio, Forest Plot
20.	Wed	31 Oct 2018	16.00-18.00	Drs. Nilotpal, Akash & Shantanu	<b>Revision &amp; Discussion</b>
21.	Thurs	01 Nov 2018	16.00-18.00	Dr. Arun Chaturvedi	Correlation, Regression, Spearman's & Pearson's coefficients, Linear & Logistic Regression, Cox Regression, Mann-Whitney U-test, Wilcoxon's tests
22.	Fri	02 Nov 2018	16.00-18.00	Dr. Arun Chaturvedi	Time-to-Event (TTE) or Survival analysis focusing on Kaplan-Meier analysis & the Cumulative incidence method, Comparing TTE/Survival methods – Log rank test & Gray's test; Hazard Ratio, Forest Plot
23.	Sat	03 Nov 2018	15.00-17.00	Dr. Shantanu Sapru	Systematic v/s Narrative reviews, Meta-analysis
24.	Sun	04 Nov 2018	10.00-13.00	Drs. Akash & Shantanu	<b>Revision &amp; Discussion</b>
25.	Sat	10 Nov 2018	15.00-16.00	Drs. Akash & Shantanu	<b>EXAMINATION</b>