DEPARTMENT OF COMMUNITY MEDICINE
HAMDARD INSTITUTE OF MEDICAL SCIENCES & RESEARCH, NEW DELHI
ELECTIVES

Name of Block	Block 1	
Name of Elective	1. Nutrition Basics	
Location of hospital lab or research facility	Medical college	
Name of internal preceptor(s)	Supervisor	Dr. Richa Gautam
	Co Supervisor	Dr. Md Rashid
	Co Supervisor	Dr. Shyambhavee
	Facilitator	Dr. Asma Aftab
Name of external preceptor (if any)	N/A	
Learning objectives of the elective	1. To understand basics of nutrition 2. To understand the global and national burden of malnourishment 3. To Conduct Nutritional Assessment 4. To identify Nutritional deficiencies 5. To understand impact of climate change on nutrition. 6. To plan a diet as per physiological need	
Number of students that can be accommodated in this elective	5	
Prerequisites for the elective	-	
Learning resources for students	1. Nutritional Requirements for Indians; ICMR NIN. 2. Indian food composition tables, NIN. 3. Maxy Textbook of Public Health Nutrition. 4. Textbook of Nutrition and Dietetics Kumud Khanna	
List of activities in which the student will participate	1. Discussion on reports of global and national burden of malnutrition. 2. To Conduct Nutritional Assessment 3. To identify Nutritional deficiencies 4. To demonstrate diet of different physiological needs of individuals	
Portfolio entries required	Workbook entry. Diet Demonstration.	
Log book entry required	Yes	
Assessment	Project file	

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Logbook For Elective

ELECTIVES

Nutrition Basics

Name of the student: _____

Admission year: _____

Roll No: _____

2. Name of ELECTIVE : Academic Research and Manuscript writing

Name of Elective:	**Academic Research and Manuscript writing**
Name of Supervisor:	Dr Azhar Uddin, Statistician Cum Assistant Professor
Name of Co-Supervisor:	(1) Dr Richa Gautam, Assistant Professor (2) Dr Mohd. Rashid, Assistant Professor
Department:	Department of Community Medicine
Duration:	15 days
Intake:	05 Students

About the Elective

The Department of Community Medicine is providing an opportunity for MBBS students to master their academic research skills and help them prepare the manuscript for subsequent submission to academic journals. Learn step-by-step from idea to paper, with no jargon, just real-world skills. Led by skilled and experienced mentors, this course will be a great help if learners are interested

in turning thoughts into papers and standing out in the academic and research community.

ELECTIVES

Objectives:

This course will provide the opportunity for MBBS student to

- To provide hands-on training for medical researchers on statistical software tools relevant to healthcare research.
- To apply statistical software for analyzing real-world datasets in areas such as epidemiology, clinical trials, and public health.
- To develop guidelines and workflows for integrating statistical software into routine medical research processes.
- To evaluate the role of some basic and advanced statistical techniques in improving the quality of medical research outcomes.

Expected Outcomes

By the end of the course, the MBBS student is expected to be skilled in

- Enhanced capacity among researchers to utilize statistical software for robust medical research.

- High-quality research outputs that inform evidence-based decision-making in healthcare.
- Establishment of a knowledge base and resources that can be utilized by the medical research community.
- Increased interdisciplinary collaboration between statisticians, medical researchers, and healthcare providers.

Assessment Guidelines

- Assessment will align with the general assessment pattern document of CBME.
- Students should maintain and submit a logbook with all academic and nonacademic activities, along with their stories and reflections about each event.
- Students will be assessed during and at the end of each elective posting.
- Feedback, comments, and/or grades about the student's performance by the faculty mentor will be documented with the help of a checklist, including both professional and academic attributes.
- 75% attendance is mandatory for each block of electives.

TEACHING LEARNING METHODS

1. The following strategy is used for organizing teaching learning activities:
2. Interactive Lectures are used for teaching the basic principles of statistical data analysis.
3. Tutorials and hands on activities
4. Seminars presentations of case studies
5. Self-directed learning
6. Problem solving in Epidemiology and Biostatistics using computers provides opportunity for skill development for the students

Theoretical understanding Attainment log

Competency and Statement	Date completed	Grade (M or E)	Signature of Faculty
Introduction of Medical Research and its benefits in healthcare			
Different types of use of Epidemiology Study design in Medical Research			
Ethics of use of Medical Data in Research			
Introduction of different types of data used in Medical Research			

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Introduction of Statistical methods in Medical Research			

ELECTIVES

Summative assessment (Criteria for grading)

Exceeds Expectations	Meets Expectations	Below Expectations
The student is able to correctly describe / identify / demonstrate **at least 80 percent** of the what was taught with supporting reasons.	The student is able to correctly describe / identify / demonstrate **60 percent** what was taught with reasons.	The student is able to correctly describe / identify / demonstrate less than 60 percent of what was taught

Practical application Attainment log

Competency and Statement	Date completed	Grade (M or E)	Signature of Faculty
Introduction of Statistical software (Excel, SPSS and R)			
Data Analysis using statistical software			
Data presentation in Manuscript			
Data interpretation in Manuscript			
Practical Exercises			

Summative assessment (Criteria for grading)

Exceeds Expectations	Meets Expectations	Below Expectations
The student is able to correctly demonstrate **80 percent** of the what was taught with supporting reasons.	The student is able to correctly demonstrate **60 percent** what was taught with reasons.	The student is able to correctly demonstrate less than 60 percent of what was taught

Research projects in which you have participated and level of Participation (to be verified by the project investigator):

Projects	Level of Participation	Investigator	Summary

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3. Electives Module: Medical research: Data collection, research writing and ethical use of Artificial Intelligence

Name of Elective:	**Medical Research Writing**
Name of Supervisor:	Dr Yasir Alvi, Associate Professor
Name of Co-Supervisor:	(1) Dr Kartikey Yadav, Assistant Professor (2) Dr Mohd Rashid, Assistant Professor
Department:	Department of Community Medicine
Duration:	15 days

About the Elective

The Department of Community Medicine is providing an opportunity for MBBS students to master their academic research skills and help them prepare the manuscript for subsequent submission to academic journals. Learn step-by-step from idea to paper, with no jargon, just real-world skills. Led by skilled and experienced mentors, this course will be a great help if learners are interested in turning thoughts into papers and standing out in the academic and research community.

Objectives:

This course will provide the opportunity for MBBS student to

- Understand Research Fundamentals
- Master Manuscript Structure
- Enhance Writing Proficiency
- Ethical use of Artificial Intelligence
- Navigate Citation and Referencing
- Learning publication ethics
- Learning about journals and submission procedures.

Expected outcomes

By the end of the course, the MBBS student is expected to be skilled in

- Proficient Manuscript Composition

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4.Electives on Applications of Statistical Software in Medical Research

Name of Elective:	**Application of Statistical Software in Medical Research**
Name of Supervisor:	Dr. Azhar Uddin, Statistician Cum Assistant Professor
Name of Co-Supervisor:	(1) Dr. Richa Gautam, Assistant Professor (2) Dr. Mohd Rashid, Assistant Professor
Department:	Department of Community Medicine
Duration: Intake:	15 days 05 Students

Introduction

In the modern era of medical research, the application of statistical software has become indispensable for analyzing complex datasets, interpreting findings, and ensuring the validity and reproducibility of results. Statistical software, such as Excel, SPSS and R, offers powerful tools for conducting diverse analyses ranging from descriptive statistics to advanced modeling techniques like survival analysis, machine learning, and predictive modeling.

Medical research benefits immensely from these tools, as they enable researchers to uncover patterns, identify risk factors, and assess interventions with a high degree of accuracy. The growing demand for data-driven decision-making in healthcare further emphasizes the need for equipping researchers and practitioners with statistical software proficiency.

This proposal outlines a series of research activities designed to explore, implement, and disseminate the application of statistical software in medical research. These activities aim to enhance

methodological rigor, foster interdisciplinary collaboration, and build capacity among researchers.

OBJECTIVES

Objectives

This course will provide the opportunity for MBBS student to

1. To provide hands-on training for medical researchers on statistical software tools relevant to healthcare research.
2. To apply statistical software for analyzing real-world datasets in areas such as epidemiology, clinical trials, and public health.
3. To develop guidelines and workflows for integrating statistical software into routine medical research processes.
4. To evaluate the role of some basic and advanced statistical techniques in improving the quality of medical research outcomes.

Proposed Activities

1. **Training Programs**
   - Introduction of types of Statistical software such as Excel, SPSS and R.
   - Topics include data cleaning, visualization, hypothesis testing and regression modeling.
   - Target datasets: Analyze of primary and secondary datasets.
2. **Research Projects**
   - Use case studies to demonstrate the practical application of software in areas like disease prevalence, vaccine efficacy, and health economics.
3. **Learning Resources**
   - Online tutorials, manuals, and video lectures to make statistical software accessible.
   - Focus on case-based learning to highlight real-world medical research applications.
4. **Publication of Research Findings**
   - Analyze medical datasets using statistical software and publish findings in peer-reviewed journals.

- Topics may include risk factor analysis, prevalence studies, and treatment outcome evaluations.

5. **Evaluation of Software Tools**
   - Compare the performance of different statistical software packages in handling medical research datasets.
   - Assess usability, efficiency, and accuracy to guide researchers in selecting the right tools.

Expected Outcomes

By the end of the course, the MBBS student is expected to be skilled in

- Enhanced capacity among researchersto utilize statistical software for robust medical research.
- High-quality research outputs that inform evidence-based decision-making in healthcare.
- Establishment of a knowledge base and resources that can be utilized by the medical research community.
- Increased interdisciplinary collaboration between statisticians, medical researchers, and healthcare providers.

Conclusion

The proposed activities aim to bridge the gap between medical research and statistical methodologies, fostering a culture of data- driven inquiry in healthcare. By equipping researchers with the necessary skills to use statistical software effectively, this initiative will contribute significantly to advancing the quality and impact of medical research.

Assessment Guidelines

- Assessment will align with the general assessment pattern document of CBME.
- Students should maintain and submit a logbook with all academic and non-academic activities, along with their stories and reflections about each event.

- Students will be assessed during and at the end of each elective posting.
- Feedback, comments, and/or grades about the student's performance by the faculty mentor will be documented with the help of a checklist, including both professional and academic attributes.
- 75% attendance is mandatory for each block of electives.

TEACHING LEARNING METHODS

The following strategy is used for organizing teaching learning activities:

1. Interactive Lectures are used for teaching the basic principles of statistical data analysis.
2. Tutorials and hands on activities
3. Seminars presentations of case studies
4. Self-directed learning
5. Problem solving in Epidemiology and Biostatistics using computers provides opportunity for skill development for the students

COURSE CONTENTS

- Introduction of Medical Research and its benefits in healthcare
- Different types of use of Epidemiology Study design in Medical Research
- Ethics of use of Medical Data in Research
- Introduction of different types of data used in Medical Research
- Introduction of Statistical methods in Medical Research
- Introduction of Statistical software (Excel, SPSS and R)

- Data Analysis using statistical software
- Data presentation and interpretation
- Practical Exercises
- Writing statistical analysis in publication

Log book:

Attached Separately

- Basic data analysis
- Ethical use of Artificial Intelligence

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Selection criteria

- This course will be a part of Pre/Paraclinical electives.
- Electives will be displayed on the website, and students should submit an application to the Dean, HIMSR with a copy to meu@himsr.co.in mentioning their choices.
- If the applicants are more than the number allotted to each elective, then the final discretion will be of the MEU/ supervisor / Department. Allotment will be done by MEU.
- Preference will be given to learners who have undergone ICMR STS / other research project but finding it difficulties in manuscript writing.

Expectations from the students

- Learners are expected to being to the course their research ideas to help them navigate into academic research.
- It is expected that learners have good understanding of basic research methodology from their Community Medicine curriculum.
- They are also expected to develop the protocol and conduct the study with support from the supervisors after the course.

Assessment Guidelines

- Assessment will align with the general assessment pattern document of CBME.
- Students should maintain and submit a logbook with all academic and nonacademic activities, along with their stories and reflections about each event.
- Students will be assessed during and at the end of each elective posting.
- Feedback, comments, and/or grades about the student's performance by the faculty mentor will be documented with the help of a checklist, including both professional and academic attributes.
- The performance of the students in the electives will also contribute to internal marks.
- 75% attendance is mandatory for each block of electives.

TEACHING LEARNING METHODS

The following strategy is used for organizing teaching learning activities:

1. Interactive Lectures are used for teaching the basic principles.
2. Small Group discussion, tutorials and hands on activities
3. Seminars presentations
4. Self-directed learning
5. Teaching learning methods like field visits, practical demonstrations, problem solving in Epidemiology and Biostatics using computers provides opportunity for skill development for the students

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3.	**ELECTIVES**		