



PRIME MODULE

KMU Central Curriculum Committee

Khyber Medical University, Phase V, Hayatabad | Peshawar

Introduction

The PRIME (Professionalism, Research, Identity formation, Management and leadership, and Ethics) is an innovative curricular theme developed by the Institute of Health Professions Education & Research of the Khyber Medical University to develop future doctors who can serve the society with utmost care and empathy. The module is vertically placed for all 5 years of MBBS training which includes the disciplines of behavioral sciences, medical education and research (to be taught by the discipline of community medicine. The module also included the subjects of Islamic studies and Pakistan studies that is meant for developing the identity as a Muslim and a Pakistani respectively before developing the identity as a medical professional. The document presented here includes the topics, learning objectives, placement of the topics in different years and their hours' distribution as well as assessment methods. The first part of the module study guide shows the general learning outcomes while the second part describes the detailed learning objectives and table of specification.

Part- A

Learning Objectives

Professionalism & Behavioral Sciences

General Learning Outcomes

By the end of year 5, the MBBS students will be able to;

1. Define professionalism in various perspectives and list the key attributes of professionalism.
2. Demonstrate caring attitude for the patients.
3. Display honor and integrity in their characters.
4. Practice reflective writing such as portfolio.
5. Communicate skillfully in breaking bad news.
6. Address conflicts, anger and stress situations.
7. Counsel patients for lifestyles modifications.
8. Practice a character of high values, self-respect and self-regulation.
9. Act as positive role models in their practice.

Specific Learning Objectives

1. Define professionalism in various perspectives.
2. Enlist key attributes of professionalism.
3. Recognize and discuss the dynamics of trust in health professional-patient relationship.
4. Differentiate between altruism and fiduciary.
5. Discriminate between empathy and sympathy.
6. Identify their roles in terms of professional identity.
7. Demonstrate caring attitude for the patients
8. Serve the patient as an individual, taking into account lifestyle, beliefs and support system.
9. Display professional behavior while dealing with patients suffering from debilitating diseases, and their families.
10. Demonstrate empathy in patient-health professional interaction.
11. Identify the health care needs of community.
12. display honor, self-respect and integrity in their characters
13. Acts honestly in dealing with patients.
14. Adheres to principles of trust in day-to-day professional interactions.

15. Avoids misuse of power for personal gains.
16. Accept errors and mistakes in responsible manner.
17. Practice discretely and appropriately while dealing with confidential information.
18. Practice reflective writing such as portfolio
19. Identifies his own strengths and weaknesses.
20. Display appropriate emotional and social intelligence.
21. Prepare personal development plan and reflective portfolios.
22. Analyze critically his personal development plan.
23. communicate skillfully in breaking bad news.
24. Develops counselling skills in professional life.

Communication Skills

General Learning Objectives

By the end of year 5, the MBBS students will be able to;

1. Apply general principles of good communication
2. Communicate with patients / relatives with empathy.
3. Communicate with colleagues effectively.
4. Communicate as a teacher effectively.
5. Communicate as a patient advocate effectively.
6. Communicate with media and press effectively.

Specific Learning Objectives

By the end of year 5, the MBBS students will be able to;

- 1) Apply general principles of good communication.
- 2) Listen to the patients about their health problems by communicating very clearly and with respect.
- 3) Discuss with the patients regarding health problems available management options.
- 4) Demonstrate the ability to solve problems keeping in view the individual and cultural differences.

- 5) Display sensitivity towards individual and cultural differences keeping in view the principles of equality and equity.
- 6) Integrate new ideas, models and can actively participate in different academic discussions.
- 7) Display teamwork in group activities for creativity and problem solving.
- 8) Accept responsibility for professional and ethical behavior.
- 9) Display privacy and confidentiality of the patients.
- 10) Adhere to professional behavior while dealing with patients
- 11) Exhibit professional behavior while breaking the bad news.
- 12) Inform the patients in empathetic and responsible manners about their health.
- 13) Display sensitivity in breaking bad news
- 14) Deal appropriately with violent and vulnerable patients in clinical environments.
- 15) Demonstrate ability to deal difficult patients such as psychiatric and aggressive and vulnerable groups such as children, elders, handicapped and women, etc.
- 16) Communicate with patients / relatives with empathy.
- 17) Listen to and educate the patients about their health problems by communicating very clearly and with respect, even in breaking the bad news.
- 18) Listen for and remember the name of newly introduced people.
- 19) Educate the patient regarding the health problem, available choices, management plan, self-care, and use of prescribed drugs and equipment,
- 20) Advise patients on lifestyle modification.
- 21) Demonstrate sensible attitude in problem solving keeping in view the individual and cultural differences.
- 22) Demonstrate sensitivity towards individual and cultural differences (value diversity).
- 23) Demonstrate teamwork in group activities.
- 24) Communicate as a peer-teacher effectively.
- 25) Participates in class discussions.
- 26) Deliver presentation effectively.
- 27) communicate as a patient advocate.
- 28) Recognize the need for balance between freedom and responsible behavior.
- 29) Explain the role of systematic planning in solving problems.
- 30) Accept professional ethical standards.

Research Methods, Statistics, and Proposal Development

General Learning Objectives

At the end of year 5, the MBBS students will be able to;

1. Identify a researchable problem and critically review literature
2. Phrase succinct research questions and formulate hypotheses
3. Differentiate between the different types of research.
4. Conduct analysis of quantitative and qualitative data.
5. Identify the appropriate scientific methods underpinning the research designs.
6. Prepare the research proposal.
7. Differentiate between different types of sampling techniques.
8. Apply the different data collection procedures for quantitative and qualitative research.
9. Collect, analyze and evaluate data, and present results where possible.
10. Demonstrate the use of proper referencing methods and softwares for references.
11. Demonstrate ethics in conducting research and in ownership of intellectual property

Leadership and Management

General Learning Objectives

At the end of year 5, the MBBS student will be able to;

1. Practice principles of leadership in an organizational setup.
2. Motivate groups to achieve common targets and shared vision.
3. Demonstrate character and values necessary to lead groups with ethical practices.
4. Use critical thinking and reasoning in problem solving.
5. Construct effective teams and organizational structures.
6. Persuade people to positively work in right direction.
7. Develop strategic approach for various situations.
8. Display visionary approach for better health care.
9. Create vision for better health care.

Specific Learning Objectives

By the end of year 5, the MBBS students will be able to;

1. Define and differentiate between leadership and management
2. Describe different attributes and styles of leader in their context
3. Compare different models of leadership and management.
4. Demonstrate self-management skills
5. Apply different motivational skills for team members
6. Apply critical thinking skills to different problems
7. Analyze situations and apply ethical principals
8. Demonstrate positive attitude in different environments
9. Exhibit positive attitude and outlook in workplace environment,
10. Practice emotionally intelligent behavior to deal with different situations
11. Willing to work with other people and team members for maintenance and improvement of performance.
12. Respect the leadership and management role of other team members and non-medical colleagues.
13. Describe and design organizational hierarchical structures.
14. Perform SWOT analysis for a particular task.
15. Describe different strategy developing approaches.
16. Develop strategies for given scenarios.
17. Delegate powers to juniors and teammates.
18. Display visionary approach for health care situations.
19. Raising and acting on concerns.
20. Participate confidently in a problem and choose to act in the most proper leadership style.

Part- B

Table of Specification

Year 1

Topic	Contents	Learning Objectives	Teaching Method	Module	Hours	Assessment
Behavioral sciences						
Model of healthcare	Bio-Psycho-Social model of health care	Describe Bio-Psycho-Social model of health care	Lecture/ Group Discussion	Foundation 1	1	MCQs and Formative
	Health and behavioral sciences	Correlate health with Behavioral sciences. Describe Important of behavioral sciences in health.	Lecture/ Group Discussion	Foundation 1	1	MCQ and Formative
Affective domain	attitude	Describe Attitudes in health professionals Describe factors affecting it.	Lecture/ Group Discussion	Foundation 1	1	MCQ and Formative
	Attention and concentration	Define attention and concentration. What factor affect them?	Lecture/ Group Discussion	Blood 1	1	MCQ and Formative
	Personality	Define personality. Describe factor affect personality development	Lecture/ Group Discussion	MSK1	1	MCQ and Formative
	Motivation	Define motivation and describe the types of motivation	Lecture/ Group Discussion	MSK 1	1	MCQ and Formative

Stress	Stress and its management	Define and classify stress and stressors. Describe relationship of stress and stressor with illness. Describe the concept of life events and their relationship with stress and illness.	Lecture/ Group Discussion	MSK 1	1	MCQ and Formative
	Coping skills and Defense mechanism	Describe the concepts of adjustment and maladjustment? explain coping skills and describe the psychological defense mechanisms	Lecture/ Group Discussion	MSK 1	1	MCQ and Formative

Professionalism

Introduction to Professionalism	Definition of a professionalism, behavior's, attitudes, emotions, and their attributes	Define Professionalism, and its attributes	Lectures/Group discussion	Foundation 1	2	MCQ, SAQ,
Dynamics of Professionalism	Trust definition, its attributes, and components, and its' application	Dynamics of trust in health professional-patient relationship	Lecture Role Play Workplace	Foundation 1	1	Formative

Attributes of prof	Differences between empathy and sympathy	Discriminate between empathy and sympathy	Lecture/ Group discussion/ Role play	MSK 1	2	MCQ, SEQ, and Formative
Professional identity formation (PIF)	White coat ceremony, Types, multiple identities, Components, Professional identity formation	Students' roles in terms of professional identity	White coat ceremony	Foundation 1	2	Formative
Attributes	Accept errors and mistakes in responsible manner	Accept errors and mistakes in responsible manner	Lecture	CVS1	2	Formative
PIF	Identifies his own strengths and weaknesses	Identifies his own strengths and weaknesses	Lecture/Group discussion/Role Play	Foundation 1	1	Formative Portfolio
Emotional intelligence	Emotional and social intelligence in given contexts	Describe & Display appropriate emotional and social intelligence	Lecture/Group discussion/Role Play	Blood 1	2	Formative
Personal Development Plan (PDP)	Personal development plan & reflective portfolios	Prepare personal development plan & reflective portfolios	Lecture/ Group Discussion	Foundation 1	2	Assignment
Personal Development Plan (PDP)	Peer feedback session on PDP	Analyze critically his personal development plan (PDP)	Group Discussion among peers	MSK 1	2	Formative

Social accountability	Describe social accountability	Definition, types, components, theoretical background	Lecture	Respiration 1	2	MCQ
Communication skills						
Cultural sensitivity	Concepts of Equality and Equity, Cultural sensitivities.	Display sensitivity towards individual and cultural differences keeping in view the principles of equality and equity	Lecture equity, equality/Role play,	Blood 1	1	Continuous Formative
Teamwork	Dynamics of Teamwork	Display teamwork in group activities for creativity and problem solving	Role play,	SGTs in first year	2	Formative
Communicating with administration	Share with administration on matters one feels sensitive about	Communicating with administration	DME Orientation session /Role play	Foundation 1	3	Formative
Confidentiality	Confidentiality of colleagues and patients Appropriate use of social media	Ensuring confidentiality	Lecture/Role play / Group Discussion	Blood 1	1	continuous Formative

Communicate as a peer-teacher	Recognizing the limits of one's knowledge and skills; and to ensure the accuracy of teaching content delivered to others	Knowing limitations	Lecture /Group Discussion,	MSK 1	2	continuous Formative
	Evaluating the quality of teaching	Understanding of methods to evaluate the effectiveness and quality of teaching	Lecture/Group Discussion	Foundation 1	1	
	Evaluating the quality of teaching and quality of teaching	Understanding of methods to evaluate the effectiveness and quality of teaching	Lecture/Group Discussion	Foundation 1	1	continuous Formative
Communicate with media and press	Use of Social media/blogs for communication Communicating with Media and Press	Understanding of who should give information to the media and press and what form it should take, including the need to maintain confidentiality where individual patients are concerned	Lecture/Group Discussion, Role Play	MSK 1	2	Continuous Formative

Leadership and Management						
Introduction	Definition of a leader & manager Differences between leadership and management	Differentiate between leadership and management	Lecture	Orientation session of foundation 1	1	MCQ, SAQ
Self-management skills	What is self-management? Its importance. Self-management Mechanisms	Demonstrate self-management skills	Task	foundation 1	1	Continuous Formative
	Attributes and style of leadership	Describe different attributes and styles of leader in their own cultural context	Lecture/ Group Discussion	Respiratory 1	2	MCQs Formative
Ethics						
Ethical principles	Ethical principles. (Autonomy, Beneficence, Non-maleficence, Justice)	Explain the pillars of medical ethics and their application in different situations	Lecture/Group Discussion	foundation 1	1	MCQ, Formative

Research							
Introduction	Background, concepts, uses. Definition of medical research Need of medical research	Describe the background and purpose of research.	Lecture/ Discussion	Group	Foundation 1	1	MCQs
Types of Research	Types of Research & Epidemiological methods (descriptive, analytic and experimental).	Explain different types of research.	Lecture/ Discussion	Group	Foundation 1	1	MCQs
Formulation of Research Question	Importance of Research Question in starting research Scope of research question Study design implications for research question Describe how to develop a research question	formulate research question	Lecture/ Discussion	Group	Foundation 1	1	MCQs Assignment
Research objectives Hypothesis	Developing Objectives and hypothesis	Write research objectives for a research study. Develop hypothesis for a study. Select a study design for a study.	Lecture/ Discussion	Group	Foundation 1	2	MCQs Assignment

Literature Search	Literature Review (Background, keywords)	Describe techniques of literature search and review. conduct literature search to finalize the research question using Boolean logic	Lecture/ Group Discussion	Blood 1	4	MCQs Assignments
Title, Rationale, Purpose	Title, Rationale, Purpose	Explain the process of title selection for a research study. Describe the purpose and justification of any selected title.	Lecture/ Group Discussion	Blood 1	2	MCQs Assignment
Operational Definitions	Operational Definitions	Describe Operational Definitions	Lecture/ Group Discussion	Blood 1	1	MCQs Assignment

Year 2

Professionalism and Behavioral sciences

Dealing with patients	Culture, Life style, and Belief System in the society	Serve the patient as an individual, considering lifestyle, beliefs and support system	Lecture	Neurosciences 1A	2	Formative
Power Dynamics	Power dynamics, bullying, harassment, its influences on interrelationships	Avoids misuse of power for personal gains.	Lecture Group Discussion/ Role Play.	Neurosciences 1A	1	Formative

Social accountability	Definition and concept of social accountability	Describe the concept of social accountability	Lecture/ Small group Teaching	Neurosciences 1B	1	MCQ
Mental illness	Definition, types, components, theoretical background	Define mental illness, its importance, impact, and prevention	Lecture/ Small group Teaching	Neuroscience IB	1	MCQ and formative
Social psychology, health & terrorism	Definition, types, components, theoretical background	Describe social psychology, and its relation on health and terrorism	Lecture	Neurosciences IB	1	MCQ and formative
Stigma and reactions to illness	Stigma and reactions to illness, Strategies for not being judgmental	Describe Stigma and reactions to illness, and how not to be judgmental	Lecture	GIT	1	MCQ and formative
Communication Skills						
Verbal and non-verbal communication skills	Verbal and non-verbal communication skills	Develop and Demonstrate effective verbal and non-verbal communication skills	Role play, Group Discussion	GIT 1/ Renal 1	0.5	MCQ and Continuous Formative OSPE
Listening skills	Listening skills	Develop and demonstrate active listening skills for learning purposes and to the patient's problems	Role play, Group Discussion	GIT1/ Renal 1	0.5	MCQ and Continuous Formative OSPE

Reading skills	Reading skills	Develop and Demonstrate effective reading skills	Role play, Group Discussion	GIT 1/ Renal 1	0.5	MCQ and Continuous Formative OSPE
Research						
Qualitative research methodology	Introduction to qualitative research methodology	Describe qualitative research methodology.	Lecture/ Group Discussion	Neurosciences (IB)	3	MCQs/Assignment
Sample size	Sample Size Calculation	Calculate sample size for different research projects. Calculate sample size for a specific research project.	Lecture and Hands on Exercise in Computer lab	GIT 1	1	MCQs/Assignment
Sampling techniques and sample selection	Probability and non-probability Sampling techniques Sample Selection i. Inclusion Criteria ii. Exclusion Criteria	Describe various sampling techniques. Justify sampling techniques chosen for a specific research project. Select sample for a specific research project	Lecture/ Group Discussion	Renal 1	1	MCQs/Assignment
Designing of a Questionnaire	Steps for making a questionnaire	Design a questionnaire Identify validated questionnaire	Lecture/ Group Discussion	Renal 1	2	MCQ and Assignment

Data Collection Procedures	Data Collection Procedures	Discuss procedure of data collection for your study.	Lecture/ Group Discussion	Endocrine 1	2	MCQ and Assignment
Ethical Review	Ethical principles for medical research application for ethical approval	Describe ethical principles for the purpose of medical research	Lecture	Endocrine 1	1	MCQ and Assignment
Plagiarism	Definition, Types, Strategies to avoid it	Describe plagiarism and how to avoid it	Lecture/ Group Discussion	Reproduction 1	1	MCQ and formative

Management and Leadership

Models of Leadership and management	Models of leadership & management	Compare different models of leadership and management	Lecture /group discussion	Endocrine 1/ Reproduction 1	1	MCQs
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Year 3

Professionalism and Behavioral sciences

Dynamics of professionalism	Trust definition, its attributes, and components, and its' application	Dynamics of trust in health professional-patient relationship	Workplace	Foundation 2	2	Formative
Attributes of professionalism	Differences between empathy and sympathy	Discriminate between empathy and sympathy	group discussion/ Role play	Infection and inflammation	2	MCQ, SAQ and Formative

Professional identity formation	Types, multiple identities	Students' roles in terms of professional identity	Group Discussion/ Role Play	Foundation 2		Formative
Attributes of professionalism	Empathy levels & its application	Demonstrate empathy in patient-health professional interaction.	Group Discussion and Role Play	MSK2	1	MCQ, SAQ Formative
	Principles of trust in daily work activities	Adheres to principles of trust in day-to-day professional interactions	Group Discussion/ Role Play	Foundation 2	2	Formative
Communication skills						
Counselling skills	Counselling skills	Develops counselling skills in professional life	Lecture/Group Discussion	CVS-2	2	Formative
Dealing with patient	Patient reception, and respect	Receive patients with respect	Role play, Group Discussion	Foundation 2	1	Continuous Formative
Listening skills	Listening skills	Listen to the patient's problems	Role play, Group Discussion	MSK 2	1	Continuous Formative
Communicating with administration	Communicating with administration	Share with administration on matters one feels sensitive about	Role play, Hospital teaching	Foundation 2	3	Continuous Formative
Principles of ethics	Privacy and confidentiality of the patients, Medico-legal and cultural aspects	Display privacy and confidentiality of the patients keeping in view a-cultural traits b- medico-legal law cases	Role play, Hospital teaching	Blood 2	3	Continuous Formative

Dealing with patients	Professional behavior while dealing with patients	Adhere to professional behavior while dealing with patients	Group Discussion, Hospital teaching	Respiratory 2	2	Continuous Formative
	Answering to patient queries	Answering questions and giving explanations and/or instructions	Role play, Group Discussion	Foundation 2	1	Continuous Formative
Informed consent	Informed consent Special Situations	Obtaining informed consent	Lecture Bedside teaching	CVS -2	2	Continuous Formative
Confidentiality	Confidentiality of colleagues and patients Appropriate use of social media	Ensuring confidentiality	Lecture/Role play, Group Discussion	Blood 2	2	Continuous Formative
Communicate as a peer-teacher	Knowing limitations	Recognizing the limits of one's knowledge and skills; and to ensure the accuracy of teaching content delivered to others	Group Discussion, Hospital teaching	MSK 2	2	Continuous Formative
Motivation	Motivation. Team working	Explain motivational skills for team members for clinical tasks	Small group/team based	Foundation 2	2	Formative

Positive attitude	Positive attitude processes	Exhibit positive attitude and outlook in workplace environment	Bedside/community Visit	CVS-2	2	Formative
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Leadership and Management

SWOT Analysis	SWOT Analysis	Perform SWOT analysis for a particular task	Group Discussion	CVS 2	1	MCQ, SAQ, Formative
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Power dynamics	Power dynamics Power and empower	Delegate powers to juniors and team mates	Lecture, and Role Play	Respiratory 2	1	MCQ, SAQ, Formative
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Research

Purpose and process of health research	Background, concepts, uses. Definition of medical research Need of medical research Broad overview of the different types of research (qualitative, quantitative, mixed methods and the common research methods/design used in each	1.1 Define and categorize types of health research Explain the purpose of health research	Teaching method	Foundation 2	2	MCQ
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	Steps of research process	Explain the steps involved in the research process	Lecture	Infection and inflammation	1	MCQ
Identifying study question	Brainstorming for identifying a research topic. Selecting a general topic Narrowing from a broad general topic to a more specific focused area of research	Develop a list and mind map of possible research topics	Lecture/SGD	Infection and inflammation	2	Assignment
Literature review	Types of literature review					
	Strategies of literature review					
	Search engines and their limitations such as google, google scholar ,PubMed Databases for thesis, abstracts, full text article Difference between the various sources of information Selecting information for academic writing	2.2 Select a single topic of interest from the list 2.3 Review the literature	Lecture/SGD Small group discussion	Infection and inflammation	2	Assignment
	Academic reading and writing					
	Develop an evidence table					
	Formulate / refine research question from gaps from evidence table					

Referencing	Bibliography Intacts (secondary citation Mandelely / Zotero	Differentiate between references, citation & bibliography List different styles of referencing Select appropriate referencing style for research project.	Lecture Self-directed learning	Multisystem module	1	MCQ
	Explore and practice free reference software Zotero for referencing(open access)	4.5 Apply referencing software to word document	Lecture Small group format	Multisystem module	2	Assignment
Academic Reading and writing and Plagiarism	Grammarly		Practical Small group discussion Practical	Blood 2	2	MCQ
Academic integrity		Define academic integrity. Define plagiarism. Explain how to avoid plagiarism. List and explain software used to check plagiarism. Develop writing skills with Grammarly checker				

Proposal writing	Guidelines and Templates for proposal writing /synopsis writing	Write a proposal for research project using KMU or CPSP guidelines or any other standard guidelines		MSK 2	7	Assignment (develop a literature review and synopsis for your topic of interest)
GANTT Chart	How to make a GANTT Chart	Make a GANTT Chart for a research project	Hands-on exercise in computer lab	CVS 2	1	MCQ and Assignment

Year 4

Professionalism and Behavioral sciences

Dealing with patients	Culture, Life style, and Belief System in the society	Serve the patient as an individual, taking into account lifestyle, beliefs and support system	Group Discussion/ Role Play		2	Formative
Community Need analysis (approaches to professionalism)	Needs analysis & SWOT analysis	Identify the health care needs of community	Lecture/ Group Discussion		1	MCQ, SAQ
Power Dynamics	Power dynamics, bullying, harassment, its influences on interrelationships	Avoids misuse of power for personal gains	Lecture/ Group Discussion/role play		1	Formative portfolio
Emotional intelligence	Emotional and social intelligence in given contexts	Describe & Display appropriate emotional and social intelligence	Group Discussion/role play		2	Formative

	Simulated situations	Differentiate between different social accountability issues.	Group discussion/Role play		2	
Communication skills						
Conflict resolution	Problem solving skills	Show the ability to solve problems regarding difficult patients/attendant.	Group discussion/Role play		2	Continuous Formative
dealing with patients	Dealing with difficult patients	Demonstrate ability to deal difficult patients such as psychiatric and aggressive	Group discussion/Role play		1	Continuous Formative
Dealing with vulnerable groups	Knowing the art of dealing with vulnerable groups such as children, elders, handicapped and women.	Dealing with vulnerable groups	Group discussion/Role play		1	Continuous Formative
Counselling	Educating patients and facilitating self-management of illness	Patient education	Role play, Hospital teaching		1	Continuous Formative
Leadership and Management						
Emotional intelligence	Practice in an emotionally intelligent		Practical/ bedside		2	Formative

	manner in different situations	Emotional intelligence				
Creativity and innovation in leadership	Dynamics of Healthcare situations	Display visionary approach for health care situations	Group Discussion and Role play		1	SAQ, and Formative
Conflict management	Conflict management	Raising and acting on concerns	Group Discussion and Role Play		1	SAQ, and Formative
confidentiality	Maintaining confidentiality	Participate confidently in a problem and choose to act in the most proper leadership style	Group Discussion and Role Play		1	SAQ, and Formative

Research and biostatistics

Biostatistics	Intro to biostats	Describe the significance of biostat in health and epidemiology	SGD		2Hrs	
	Data and variable types	Define and classify variables				
Sampling	Sampling	Define sampling	LGF		1 hr	
		Discuss types of sampling				
Bias	Biases in epidemiological studies	Define Bias Discuss different types of bias Discuss ,how bias can be prevented	LGF		1 hrs	

Measures of central tendency	Measures of central tendency	Classify measures of central tendency	LGF		1 hr	
		Calculate measures of central tendency				
		Interpret and signify the results				
		Describe the advantages and disadvantages of different measures				
Measures of dispersion	Measures of dispersion	Classify measures of dispersion	LGF		1 hr	
		Calculate measures of dispersion				
		Interpret the results of measures of dispersion				
		Explain the advantages and disadvantages of measures of dispersion				
		Explain the use of different measures in specific circumstances				
Normal distribution	Normal distribution	Define normal distribution	LGF		1 hr	

		Describe normal distribution				
		Calculate and graphically represent normal distribution				
		Explain it's use & significance in relation to data				
		Describe percentile and interquartile range				
		Calculate and depict percentile and interquartile range				
		Explain use and significance of these in different situations				
Confidence Interval, Confidence level, Standard error	Confidence interval, Confidence level, standard error	Define confidence level and interval	LGF		1 Hr	
		Describe confidence level and interval				

		Calculate confidence level and interval				
		Explain their use and significance in different situations				
P value, critical region, rejection region, alpha beta errors	P value, critical region, rejection region, α β errors	Define P value, critical region, rejection region, α β errors	SGD		2 hrs	
		Describe P value, critical region, rejection region, α β errors				
		Calculate P value, critical region, rejection region, α β errors				
		Describe their use and significance in different situations				
Z test & it's appkication, Types / shapes of frequency distribution	'z' test & it's application in hypothesis testing, applications of parametric and non parametric tests	Define & Describe 'z' test	LGF		1 hr	

		Describe it's use in different statistical settings				
		Calculate 'z' test				
		Explain it's application in hypothesis testing				
		Interpret and apply to clinical settings				
	Discuss various shapes of frequency distribution					
		Describe the applications of parametric and non parametric tests				
T test & it's application	t' test & it's application in hypothesis testing, degree of freedom	Define & Describe 't' test	LGF		1 hr	
		Explain it's use in different statistical settings				
		Calculate 't' test				
		Describe it's application in hypothesis testing				

		Interpret and apply to clinical settings				
		Calculate degree of freedom				
Chi square test & its application	Chi square & its application in hypothesis testing	Describe 'x ² ' test	LGF		1 hr	
		Describe its use in different statistical settings				
		Calculate 'x ² ' test				
		Explain its application in hypothesis testing				
		Interpret and apply to clinical settings				
Correlation, regression	Correlation, regression,	Describe Correlation & Regression	LGF		1 Hr	
		Interpret and apply to clinical settings				
Transformation for not normal distribution	Transformations for Not Normal distributions	Know the use of Transformations for Not Normal distributions				
Referencing						

Practical Problems in biostat		Practical problems in biostat		SGD	2Hrs	
Data analysis	Data analysis Hands on		Use of MS Excel for data analysis		2 HRS	
			Use of SPSS for data analysis		6hrs	
			Use of Endnote for reference management		2hr	
			Data compilation, analysis and dissertation writing		8 hrs	
	Honesty and its dynamics in workplace Fake certification	Acts honestly in dealing with patients	Group Discussion/ Role Play		2	Formative
Attributes	errors and mistakes in responsible manner	Accept errors and mistakes in responsible manner	Lecture Group Discussion/ Role Play		2	Formative
Attributes	Dealing with confidential information	dealing with confidential information	Group Discussion/ Role Play		1	Formative, OSCE
Communication skills	Counselling skills	Develops counselling skills in professional life	Lecture Group Discussion/ Role Play		2	Formative

Cultural competence	Gender sensitivity					
Communication skills						
counseling	Case discussions on health problems and their management	Discuss with the patients regarding health problems and available management options	Role play, Group Discussion		1	Continuous Formative
Cultural sensitivity	Concepts of Equality and Equity, Cultural sensitivities.	Display sensitivity towards individual and cultural differences keeping in view the principles of equality and equity	Role play, Hospital teaching		2	Continuous Formative
Counseling	Empathetic communication with patients	Inform the patients in empathetic and responsible manners about their health	Group Discussion, Hospital teaching		2	Continuous Formative
Breaking the bad news	Breaking the bad news	Display sensitivity in breaking bad news	Group Discussion		1	Continuous Formative
Informed consent	Informed consent Special Situations	Obtaining informed consent	Lecture Bedside teaching		2	Continuous Formative

Communicate with colleagues	Oral and written communication (daily progress report) with colleagues. Subjective, objective, assessment, plan (SOAP) (bedside teaching)	Passing on and sharing information orally, in writing and electronically	Role play, Hospital teaching		2	
Communicate with colleagues	Writing patient referral to colleagues. Setting, background, assessment, recommendation (SBAR protocol)	Writing a good management summary and patient referral	Role play, Hospital teaching		1	Continuous Formative
Communicate with colleagues	Providing all necessary clinical information on request forms to laboratory-based colleagues	Filling lab investigation forms	Role play, Hospital teaching		1	
Communicate as a peer-teacher	Communicating complex information in different settings	Conveying complex information to others, individually or in groups, in a variety of settings and using a range of teaching tools and presentation aids	Group Discussion, Hospital teaching		1	Continuous Formative

Communicate as a patient advocate	Patient Advocacy	Recognizing when patient advocacy is appropriate and how it may be accomplished effectively	Group Discussion, Role Play		2	Continuous Formative
Communicate with media and press	Use of Social media/blogs for communication Communicating with Media and Press	Understanding of who should give information to the media and press and what form it should take, including the need to maintain confidentiality where individual patients are concerned	Group Discussion, Role Play		2	Continuous Formative
Leadership and Management						
Team work	Strategies to Improve performance	Willing to work with other people and team members for maintenance and improvement of performance	Role Play		2	Formative
Change management	Change management	Willingness to assist and bring change of the system in right direction	Lecture and Role play		1	MCQ, SAQ, and Formative

Dealing with colleagues	. Respect for colleagues	Be able to respect the leadership and management role of other team members	Role Play		1	Formative
Organization structure of health care system	Organizational types, hierarchies, and cultures	Describe organizational hierarchical structures	Lecture		1	SAQ, Formative