



**4<sup>th</sup> Year MBBS**

**Fourteenth Batch: 2021-26**

**Module: X, XI & XII**

**STUDY GUIDE**

**2025**



## BAHRIA UNIVERSITY MEDICAL COLLEGE, BUHSCK

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## **MESSAGE FROM THE DESK OF PRINCIPAL & DEAN**

### **Major General (R)**

Professor Dr. Shehla M. Baqai HI(M)  
MBBS, FCPS (Obstetrics & Gynaecology), FICS, MCPS-HPE  
Bahria University Health Sciences Campus Karachi



Dear Students,

Welcome to the fourth year of the MBBS Program at the prestigious Bahria University Medical College.

As the Dean of this esteemed institution, I want to assure you that we all are fully committed to providing you with the best education and training. State of the art facilities, competent and proficient faculty members will provide necessary guidance through this transformative journey. They will challenge you, push you to excel, and support you at every step of the way.

We believe in the holistic development of our students, inculcating emotional intelligence, communication skills, cultural competence, and ethical integrity. Opportunities to cultivate these qualities are provided through workshops, seminars, field visits, co-curricular and extracurricular activities. The curriculum is delivered through active learning strategies like problem based learning (PBL), small group discussion (SGD). The study program supports social & moral development of medical students besides achieving academic excellence.

Medical education requires presence of mind, perseverance and devotion. There will be challenges along the way, but always remember why you chose this path and the impact you aspire to make in the lives of patients and their families. Strive hard with full sincerity & devotion

I wish you a smooth sailing during your stay with us & pray for your bright and successful future!

**Maj. Gen. Prof. Shehla M. Baqai HI(M)**  
Principal, BUMC & Dean-HS, BU  
Bahria University Health Sciences Campus  
Karachi

## **MESSAGE FROM THE DESK OF VICE PRINCIPAL**

**Dr. Khalid Mustafa,**  
MBBS, MPhil  
Bahria University Medical College,  
Bahria University Health Sciences Campus Karachi



Dear Students,

This study guide will give you a road map for the forthcoming activities including the objectives, contents, learning strategies and assessment of your educational course; which we regard as essential. Use this study guide as a reference for your “Code of Conduct”. It gives policies and rules pertaining to examinations, electives, attendance and rotations etc.

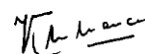
A competent team of experienced professional teaching faculty will guide you towards learning goals in different clinical settings through effective use of different tools of teaching and assessment. You will be encouraged to integrate your learning across the disciplines. Examination questions will not be confined to one discipline but we will assess your knowledge and understanding of i.e. surgery, anatomy, physiology, genetics and pathology simultaneously. Remember this when studying; because one book and one discipline will not suffice.

Teaching in wards, outpatient departments, and clinics, problem solving interactive teachings, workshops and small group discussions will be used to help you learn and understand.

Medical science is rapidly changing based on evidence; keeping abreast is our personal responsibility. Use the library frequently, which has virtual access to thousands of journals and books through PERN (Pakistan Educational Research Network).

You as medical student are expected to demonstrate professional and responsible behavior towards your teachers, colleagues, health professionals and patients.

I wish all of you best of luck for your future and pray that you all work hard and make yourself and everyone around you, proud.



**Dr. Khalid Mustafa**  
Vice Principal, Medical College  
Bahria University Health  
Sciences Campus Karachi

## **ABOUT BUMC, BUHSC**

Bahria University Health Sciences was established in 2008. Twelve batches of students have passed out and received their MBBS degrees. The College has a beautiful custom built basic sciences wing which also houses the Dental College, an auditorium, a library, video link facilities, a skills laboratory and an advanced multi-discipline laboratory for doing research for MPhil leading to Ph.D. programs.

The clinical teaching wing is PNS SHIFA, a tertiary care hospital which takes care of Armed Forces Personnel, their families, parents and civilian patients. There is a large variety of clinical cases for students to see and learn from. Emergency and intensive care facilities are available. About 1500 patients visit PNS Shifa daily. The outpatient departments in all disciplines are in full use and well organized. Where patients are seen promptly, investigations like laboratory tests, X rays and advanced imaging techniques are available on site. Patients are referred to the concerned department. Doctors work as a team to ensure best care of the patient.

Students will be taken on by teams of doctors and taught clinical management in the best possible setting i.e. the bedside of the patient, in the operation theatre, OPD, emergency room, ICU, CCU and labor room. They will also be taken into the community during their rotation with Community Health Sciences Department, the Students will be taught research 2 methodology and expected to do research work. Students will be observed and continuously provided feedback to improve cognitive and professional skills and behavior. It is expected that students will make a seamless transit from basic sciences to clinical sciences. Each year is organized in 3 modules of 12 weeks each. Each module is assessed separately. It is mandatory for students to appear in the end of module tests or they will not be allowed to sit the annual examinations.

Basic Science Education is assessed at the end of 1<sup>st</sup> and 2<sup>nd</sup> year. Clinical training is spread over three years with frequent continuous assessments including end of rotation evaluation. The professional examinations Held in 4<sup>th</sup> year are Ophthalmology, Otorhinolaryngology (ENT), Medicine, Surgery, Gynecology & Obstetrics, and Pediatrics, are held in the final year (5<sup>th</sup> Year). In clinical programs, medical students will spend a designated number of hours in clinical settings of various disciplines including medicine, surgery, pediatrics, gynecology & obstetrics, ENT and ophthalmology Medical students will be required to maintain BUHSC “Log Book” a record of their learning activities throughout the clinical years from 3<sup>rd</sup> to 5<sup>th</sup> year. The BUHSC Log Book is also to be used for case discussions and assessment.

**Strictly prohibited!**  
**Use of mobile phones in**  
**teaching sessions,**  
**wards, clinics,**  
**examination halls**

## **BUHSCK GUIDE**

The Study guide serves as a useful handy resource, helping you to navigate your journey at the Health Science Campus

The Study guide is more than an academic guide.

It not only highlights what, as a student, you should aim to achieve as you work through the curriculum, but also provides essential information about various administrative protocols that you as students of Bahria University are expected to follow.

### **Vision Statement**

To become a knowledge and creativity-driven international university that contributes towards the development of society.

### **Mission Statement**

To produce medical professionals who are humane, ethical and competent physicians and researchers by ensuring excellence in medical education, applied research and practices, in a collegiate environment supported through national and international linkages, to improve the health of community and society.

## **OUTCOME OF THE MBBS PROGRAM**

**The MBBS programs aims to produce medical graduates who are able to:**

1. Recognize signs and symptoms of common illnesses in population of different ages from different settings, and provide cost effective treatment to alleviate suffering
2. Recognize signs and symptoms of chronic and acute illnesses, and refer to appropriate health care provider for appropriate management
3. Obtain accurate medical history that covers essential aspects of history that relates to individual's health
4. Conduct a complete and focused physical examinations in adults and children in a respectful and logical manner
5. Communicate effectively with patients, relatives, attendants to **gather accurate** information that will lead to appropriate diagnosis and treatment
6. Demonstrate team work with colleagues, health care team in both college and health care settings
7. Perform procedures and skills in accordance with established protocols and standards
8. Counsel on health promotion to improve the health of individuals, and families including marginalized population
9. Inculcate and demonstrate ethical and moral values in patient care, research and professional development
10. Develop life-long learning skills to keep pace with the exponential growth of information in the field of sciences relevant to health of the individual and population at large
11. Engage in research activity aimed at improvement of quality of health care including behavior modification of individual and community for quality life.

## **COMPETENCIES**

**The graduate doctor must be a:**

### **Care provider**

Provide care on ethical principles in different settings, emergencies; applies scientific principles of basic, clinical and behavioral sciences to formulate diagnosis; suggest essential investigations, cost effective drugs for treatment. Perform physical examination, basic skills, procedures according to protocol.

### **Communicator**

Interview patients, families skillfully to gather information for formulating diagnosis, treatment; counsel patients, families, communities on health maintenance and promotion; communicate effectively with health care team including peers, supervisors

### **Advocate for health promotion**

Counsel individuals, families, communities on improved lifestyle; maintenance and promotion of health

### **Professional**

Value and Display behaviors befitting to the profession such as honesty, empathy, punctuality, patience, respect for patients and their families, colleagues; accepting one's limitations

### **Critical thinker**

Engage in research projects, assignments, surveys. Search for evidence; analyze facts, data, pros and cons to identify and solve problems. Reflect and write articles, short notes, commentaries.

### **Lifelong learner**

Seek and update knowledge from multiple sources; Consult scientific evidence including journals, web-based knowledge and others; discussion with scholars, practitioners, colleagues; reflection; participation in activities; continuously improve computer skills

### **Team Worker**

Respect and value the contribution of the health team; collaborate with the team to provide efficient patient care.



## **POLICIES AND COMMITTEES**

This section summarizes some key aspects of policies in vogue at Bahria University. The student is advised to read the detail in the latest edition of Bahria University's Student Handbook

### **Student's Code of Conduct**

Every student shall observe the following code of conduct in the University premises, in the University administered hostels (on and off-campus) and places of other activities being held under the auspices of the University:

- Loyalty to Pakistan and refraining from doing anything which is repugnant to its honor and prestige in any way.
- Respect for convictions and traditions of others in matters of religion, conscience and customs while observing own religious duties/customs.
- Truthfulness and honesty in dealing with other people.
- Respect for elders and politeness to all, especially to women, children, elders, the weak and the helpless.
- Special respect for teachers and others in authority in the CUs and BU.
- Cleanliness of body, mind, speech and habits.
- Helpfulness to fellow beings.
- Devotion to studies and prescribed co-curricular activities.
- Observance of thrift and protection of public property.
- Observance of the rules and regulations of the CU in force from time to time.

### **Prohibited Acts & Misconduct/Ill-Discipline**

The following acts shall be unacceptable, and their commission shall be construed as misconduct or ill-discipline:

- Breach of the Code of Conduct.
- Smoking in the areas prohibited by the University.
- Consumption or possession of alcoholic drinks or other intoxicating drugs within the CU/ vicinity or while attending off-site instructions, sports, cultural tours or survey camps.
- Organizing or taking part in any function inside the campus, or organizing any club or society of students, except where permitted and in accordance with the prescribed rules and regulations.
- Collecting donations or receiving funds or pecuniary assistance for or on behalf of the CU except with the written permission of the Head of the CU or any other person authorized in this behalf.
- Staging, inciting or participating in or abetting any walk-out, strike or other form of agitation against BU, its CUs or students, teachers, officers or authorities; inciting others to violence; disruption of the peaceful atmosphere in any way; making inflammatory speeches or gestures which may cause resentment; issuing of pamphlets or cartoons which cast aspersions on the students, teachers, staff or University authorities/bodies; doing anything in a way likely to promote rift and hatred amongst the students; issuing statements in the press; making false accusations against or lowering the prestige of BU or its students, teachers, administrators, staff or bodies.
- Disobeys the lawful orders of a teacher or other person in authority.
- Habitually neglects work or absents from the classroom without valid reason.
- Willfully damages public property or the property of fellow students or any teacher or employees of BU and its CUs.
- Does not pay the fees, fines, or other dues payable under the laid down rules and regulations; uses indecent language; wears immodest dress; makes indecent remarks; gestures; behaves in a

- disorderly manner; commits any criminal, immoral or dishonorable act (whether committed within the CU or outside) or any act which is prejudicial to the interests of BU and its CUs; and/or
- Commits an act of sexual harassment, as defined in the HEC's document 'Policy Guideline against Sexual Harassment in Institutions of Higher Learning'.

### **Action against Misconduct**

Every member of the faculty shall have the power to check any disorder or improper conduct, or any breach of the rules, by students in any part of the campus or outside when the visit is sponsored or organized by it. Misconduct in a classroom when a student is under the charge of a teacher shall not be allowed and a punitive action such as a fine, removal from the classroom or a punishment of greater magnitude may be imposed as decided by the authority so empowered. The Student Advisor, the Admin Officer or any other employee authorized by the Head of the CU shall be responsible for the maintenance of good behavior and law and order amongst the students on the premises of the CU.

### **Penalties:**

A student guilty of an act of indiscipline shall be liable to the penalties specified below or promulgated through written orders/notifications:

<b>Penalty Code</b>	<b>Penalty</b>	<b>Awarding Authority</b>	<b>Appellate Authority</b>
1	Removal from classroom, laboratory, or field work, for a maximum period of two contact hours	Teacher In-Charge	HOD
2	Expulsion from games or field work for not more than one week	Games/ Field Work In-Charge	Director
3	Expulsion from educational visits and sports tours	DD (Admin & Coord) or an officer authorized by the Head of the CU	Director
4	Suspension from classes for a period not exceeding two weeks	Director/ Principal	Head of the CU
5	Monetary penalties	Director/ Principal	Head of the CU
6	Removal from a position of authority on the advice of the Student Advisor / HOD	Director/ Principal	Head of the CU
7	Expulsion from the hostel	Head of the CU	Next Higher Authority
8	Cancellation of remission of fees/assistantship/scholarship etc.	Head of the CU	Next Higher Authority
9	Rustication for one or more semester	Head of the CU with concurrence of BUHO	Rector
10	Expulsion from the CU	Head of the CU with concurrence of BUHO	Rector

### **Procedure In case of breach of discipline:**

A teacher, a staff member or a BU Officer in whose presence or in relation to whom an act of indiscipline has been committed or who gets to know of such act, may deal with the case him/herself, or if in his/her view the case is one which can be more appropriately dealt by another authority or which warrants a penalty of greater magnitude than they are competent to impose, shall refer the case to the Student Advisor or Deputy Director (Admin & Coord) or the higher authority as the case maybe.

All cases of serious breach of discipline shall be referred to the Disciplinary Committee for investigation which, after due process of investigation, will either impose the penalties if within its powers or recommend them to the Campus Head/Head of the CU/Rector, as the case may be. When a case against a student is referred to the Disciplinary Committee, it may, if it deems fit, suspend the student from the classes till the finalization of the case, with the approval of the Head of the CU.

### **Appeals**

An appeal against the penalty may be filed by the student with the Appellate Authority within 30 days of announcement of the punishment. No appeal by a student shall be entertained unless it is presented within 30 days from the date of communication of the decision, provided that the Rector may, for valid reasons, extend this period.

No appeal shall lie against the decision of an authority imposing a penalty other than rustication or expulsion except on the grounds that such authority imposed a penalty which it was not competent to impose.

An appeal on the grounds that an authority imposed a penalty which it was not competent to impose, shall lie with the body or person of higher authority than the one who imposed the 44 penalty.

### **Compensation for loss**

The Head of the CU, or any teacher or officer to whom he may delegate the powers, may instruct a student to pay compensation for any loss or damage to property belonging to the CU/University, public authority, a fellow student or an employee of the CU/University, caused by a willful act or gross negligence of the student. If the student does not pay such compensation within a specified period, the Head of the CU will proceed against the student in the manner as prescribed in these rules.

### **Offences during examination**

Cases of indiscipline in or around the Examination Hall, and use of unfair means, shall be dealt with by the Examination Committee.

### **Dress code:**

#### **Male students:**

1. Dress/Casual Trousers
2. Jeans (Plain blue) without an image, graphics, and write ups
3. Casual Shirts (Half/ Full sleeves)
4. T Shirts without any messages, images, graphics, and write ups
5. Dress/Casual shoes or Joggers with socks (no sandals)
6. Shalwar Kameez with shoes (only on Friday)
7. Suit/ Combination
8. Coat/ Pullovers/ Sweaters/ Jackets in winter

#### **Female students:**

1. Shalwar Qameez (no sleeveless)
2. Hijab, Abaya, Chaddar etc
3. Full length Jeans(no tights) with long shirt/ kurta (knee length)
4. Light jewelry and light makeup
5. Shoes, Sandals and Joggers
6. Dupatta/ Scarf is compulsory with all dresses

**NOTE: All BUHSC students are expected to wear white coat during classes, laboratory and hospital rotations, as well as outside the campus, when on official visit.**

### **Student card**

Students shall be issued ID Cards. The students shall be required to wear their ID Cards in the campus and show them to the authorized persons on demand.

### **Loss of ID card**

In case ID card is lost, it should be immediately reported to Admin Office who will make arrangements for re-issue of a new card by the University after payment of fine.

### **Personal behavior**

The University expects that all students should sustain professional manner when interacting with colleagues and others. The University recognizes that personalities, characters, and management styles may differ but, notwithstanding these differences, as a minimum standard, all are expected to:

- Work co-operatively with each other to achieve objectives and establish good working relationships.
- All should behave and speak professionally, respectfully, and courteously at all times.
- Tidiness and cleanliness must be always adhered to within the BUDC premises which will help us maintain a safe, clean, and professional learning environment.
- Use the college's property, facilities, supplies, and other resources in the most effective and efficient manner.
- Unacceptable behavior such as aggressive or abusive behavior, shouting or personal insults or spreading rumors or gossip, or insulting someone is to be avoided at all costs. All these matters, if experienced, should be reported to the vice principal or your mentor or a senior faculty member.

### **Punctuality:**

Students are expected to arrive in class well in time. All cell phones, smartphones, and other electronic devices (e.g., pagers, iPods) must be turned off and hidden from view during class time. Talking and other disruptive behaviors are not permitted while classes are in session. If the students miss a class, they are themselves responsible for the missed part of the course. It is the student's responsibility to contact a classmate or teacher to determine and cover what was missed.

At BUDC classes start immediately after holidays. There is no lag period after leave. There will be no relaxation for students who are absent. **Please inform your parents of this and make your travel arrangements accordingly.** Avoid taking leave for personal reasons like weddings during the academic year.

### **Conduct in library**

The University campuses have well stocked libraries, and time spent by the students there will meet your research requirements in a calm place. The libraries also provide electronic access through the internet to databases throughout the world.

Library also provides plagiarism detection services

While using the library, Mobile Phones/ iPods/ laptops should be kept on silent mode. Sleeping, listening/ watching drama and music etc, while staying at library is prohibited.

### **Rules for borrowing books**

1. Students are permitted to borrow 3 books at a time for a maximum period of 14 days. Books borrowed may be re-issued on completion of the time period.
2. A valid University card is must for borrowing the Book(s) and other material
3. Textbooks will be issued for 7 working days only but may be reissued the next day of the due date
4. For the Book(s) returned after the due date, a fine of Rs.10/- per day would be charged.

5. Book Bank books will be issued for a period of whole/ one semester.
6. Writing, underling or marking any book is strictly prohibited. Library books are carefully examined on return and the borrower will be held responsible for any damage
7. Following library material will not be issued and must be consulted in the library:
  - a. Reference Material.
  - b. Thesis/ Project Reports.
  - c. Audio/ Video cassettes/ CDs/ DVD's.
  - d. Magazines and periodicals.
  - e. Newspapers.

#### **Library Timings**

<b>DAY</b>	<b>TIMINGS</b>
WEEKDAYS: MON- FRI	8:30 AM to 8:30 PM
WEEKENDS	9:00 AM to 8:30 PM

#### **Conduct in the hospital**

When you are working in the hospital be quiet, avoid rowdiness and unnecessary laughter and chatter. Remember the patients need peace, quiet and their rest. You must always wear a white coat. Ladies will wear their dupattas inside the white coat and the gentlemen's ties must be tucked inside the shirt so that infection is not carried from one area to the next. Shoe covers, sterile aprons, caps and gowns must be worn where appropriate. Be polite to the patients, greet them appropriately and inquire after their health and wish them well. All nursing staff must be addressed appropriately and politely. Don't hang around once your work is done. Do not eat or drink inside the wards and treatment areas. Avoid making phone calls and put your phones on the silent mode.

#### **Conduct in cafeteria and common rooms**

Campus has a cafeterias with a variety of food items and snacks available at reasonable rates. Students are expected to show care, courtesy towards the cafeteria staff as well as to others. Place garbage and recyclables in the appropriate containers. This behavior will maintain a clean and enjoyable environment for all.

#### **Academic misconduct and disciplinary committee**

The Discipline Committee is responsible for maintaining discipline (both academic as well as conduct), and deals with all cases of indiscipline on the part of students. It recommends award of penalties/ punishments and renders advice to the Director on administrative matters needed to maintain a peaceful environment on the campus. Intimation will be sent to BUHO for all penalties awarded to a student

#### **Members of the committee**

<b>Chairperson</b>	Brig (Retd) Prof. Syed Pervez Asghar, BUMC
<b>Secretary</b>	Dr. Jaweria Zeeshan, BUMC
<b>Members</b>	<ul style="list-style-type: none"> <li>• Prof. Dr. Khalid Aziz, Principal, BUCPT</li> <li>• Prof. Dr. Ahmed Omer, BUDC</li> <li>• Prof. Dr. Yasmeen Mehar, BUMC</li> <li>• Sr. Associate Prof. Abida Razzaq, VP PNNC</li> </ul>
<b>Co-opted member</b>	Varies according to the case

**Students are to avoid the following:**

- a) Unauthorized use of University's name or logo which is property of university.
- b) Harassment, sexual or otherwise, or intimidation of any member of university.
- c) Coming late for classes. The student may be considered absent and marked accordingly.
- d) Improper/inappropriate dress
- e) Loud and aggressive behavior in Cafeteria or Common rooms or within the premises of BUHS or PNS Shifa.
- f) Non clearance of bills/dues. Non-clearance of dues may prevent student from appearing in the professional examination. The student may also be refused permission to attend classes.

**Use of mobile phone**

- a) Use of mobile phone for photography at cafeteria is restricted.
- b) Library is 'NO Mobile Zone' area.
- c) Use of mobile in class room is prohibited.
- d) Students are not allowed to use mobile phone for photography/ video capturing during farewell parties.
- e) Making videos, images, Vlogs etc are monitored through CCTV cameras installed inside and outside building.

**Smoking**

Student guilty of an act of smoking in the premises of Bahria University/ Constituent Unit or while entering/ attending offsite instructions like sports, cultural tours or survey campus shall be liable to the penalties asunder:

Occasion	Penalties
1st occasion of offence on act of smoking.	Fine of Rs.5000/- along with warning letter with copy to parents from Director Campus
2nd or onward occasion of offense(s).	Fine of Rs.10,000/- along with warning letter (s) with copy to parents from DG Campus on each offence.

Student guilty of an act of possession/ consumption/ usage/ supplying of intoxication drugs/ Alcoholic drinks in premises of CU and or entering CU or events of BU being intoxicated and or during official/ informal offsite events of the University shall be liable to expulsion from the CU.

**Criminal conviction**

- a) Applicants are required to inform BU of any criminal conviction. Full details are to be provided.
- b) The University reserves the right to refuse admission to any applicant with a criminal conviction that may jeopardize the reputation of the University.
- c) Failure to declare any criminal conviction by a student already enrolled in BU shall result in immediate cancellation of his/her admission.
- d) Where admission to the program is denied on the basis of the criminal conviction, the applicant will be notified of the decision in writing by respective Campuses/CUs

**Academic misconduct**

Following acts shall constitute academic misconduct:

- a) Cheating.
- b) Fabrication.
- c) Misuse

- d) Forgery.
- e) Plagiarism.
- f) Facilitating academic misconduct.
- g) Academic Dishonesty.

The student is advised to refer to their Student Handbook to become fully cognizant of these terms.

#### Penalties for academic misconduct

TYPE OF MISCONDUCT	PENALTY
Attempt (Successful/ unsuccessful) to know contents of question papers through unfair means prior to examination	<b>Minor punishment</b> a Warning letter (Copy to parents) b. Fine of Rs.2,000. <b>Major punishment</b> a. Expulsion from the University b. Fine Rs. 5000/00. c. Letter to parents
Possession of written material, relevant to the subject/paper concerned. <ul style="list-style-type: none"> <li>• Writing on palm, arm or anywhere on the candidate's body or clothes whether the written material is relevant or irrelevant to the concerned paper.</li> <li>• Possession of Mobile phones, Smartwatches, PDAs and other electronics devices, whether or not carrying any relevant or irrelevant material in the memory.</li> </ul>	a. Grade 'F' in the subject. b. Fine Rs 5,000. c. Warning, copy to parents. d. Mobile phones/electronic devices to be confiscated. (will be returned after investigation)
Giving/receiving assistance or allowing any other candidate to copy from his/her answer books.	<b>Minor Punishment</b> a. Cancellation of the relevant paper. b. Fine Rs 2,000/-. c. Letter of Warning. <b>Major Punishment</b> a. Grade 'F' in the subject.(for students involved) b. Fine Rs 5,000/- c. Letter of Warning.
Removing a leaf from answer book. Taking the whole or a part of an answer book or a continuation sheet into or out of examination hall.	a. Grade "F" in the subject. (for students involved) b. Fine Rs. 5,000. c. Letter of warning
Substituting the whole or a part of an answer book or a continuation sheet not duly issued to him for the examination;	a. Grade 'F' in the subject. (For students involved) b. Fine Rs 5,000. c. Letter of Warning.
Forging, mutilating, altering, erasing or otherwise tampering with marked answer scripts	a. Grade "F" in the subject. (for students involved) b. Fine Rs 5,000. c. Letter of Warning
Impersonation	a. Grade "F" in all subjects of relevant semester studied at BU (including the

	impersonator/facilitator, if a student of BU). b. Expulsion from the university (including the impersonator/ facilitator, if a student of BU). c. In case the impersonator/facilitator is an ex-student of BU or not a BU student, an FIR may be lodged for the offence, as per law of the land.
Using abusive or obscene language in answer book	a. Grade 'F' in the relevant course. b. Fine Rs 5,000. c. Letter of Warning.
Refusing to obey the Invigilator or Head Invigilator in the Examination Hall and misbehaving, resorting to misconduct, or creating any kind of disturbance in or around the Examination Hall	<b>Minor Punishment</b> a. Grade 'F' in the course. b. Fine Rs 5,000. c. Letter of Warning. <b>Major Punishment</b> a. Rustication for one Semester. b. Grade 'F' in the course. c. Fine Rs5,000/ d. Letter of Warning.
Communicating or attempting to communicate with Examiners with the intention of influencing them in the award of marks.	a. Cancellation of relevant paper. b. Fine Rs 5,000. c. Letter of Warning.
Possession of firearms, knives etc. inside and in the close vicinity of Examination Hall	a. Expulsion from the University. b. Fine Rs 5,000. c. Letter of Warning.

### Sexual Harassment

All students are required to educate and familiarize themselves about the act/actions categorized as "Sexual Harassment" may it be physical, verbal or while utilizing electronic media and refrain from it being a punishable offence.

Higher Education Commission has issued very strict policy guideline against "Sexual Harassment in Higher Education Institutions (HEI)".

All such policies are strictly applicable and followed in Bahria University.

All students are therefore required to go through the entire policy's contents which are available with campus (concerned HODs) and University/ HEC website.

- The Protection against Harassment of Women at Workplace Act, 2010
- The Protection against Harassment of Women at Workplace (Amndt) Ac& 2022.
- HEC Policy on Protection against Sexual Harassment in HEIs effective 01 July 2020

### Committee for protection against sexual harassment in BUHSCK

FOCAL PERSONS	
Prof. Dr. Khalid Mustafa Vice Principal, BUMC	Cell 0300-21 30868 Phone: 021-35319491-9, ext: 1038 & 1070



Professor of Pharmacology	Email: khalid.bumdc@bahria.edu.pk drkhaidmm@yahoo.com
Prof. Dr. Shazia Shakoor HOD, Physiology	Phone: 021-35319491-9 Ext: 1056 Email: shazia.bumdc@bahria.edu.pk shazia2304@hotmail.com
<b>INQUIRY COMMITTEE</b>	
Prof. Shama Asghar, Chairperson Professor of Operative Dentistry Chairperson	Cell 0334-3078082 Phone: 021-35319491-9 ext: 1121 Email: sham.burndc@bahria.edu.pk sham.asqhar24@gmail.com
Prof. Dr. Nasim Karim Principal, BUHS-PGI HOD Pharmacology Member	Cell 0332-3151774 Phone: 021-35319491-9, ext: 1057 & 1072 Email: nasimkarim.bumdc@bahria.edu.pk
Dr Aini Samreer Sr. Associate Professor, Gyn & Obs Member	He 0333-3763592 Phone: 021-35319491-9 ext: 1064 Email aini.bumdc@bahria.edu.pk drsam222@yahoo. Com
<b>APPELLATE BODY</b>	
Capt (R) Noaman Imam PN Director Campus Chairman	Cell 0336-9369222 Phone: 021-35319491-9 Ext: 1001 Email: dac.burndc@bahria.edu.pk
Prof. Farzeen Tanwir Vice Principal, BUDC HOD Periodontology Member	Cell 0336-1802464 Phone: 021-35319491-9 Ext: 1104 Email: farzeentanwir21@ gmail.com
Prof. Saifullah Shaikh Professor of Physiology Member	Cell 0333-2279425 Phone: 021-35319491-9 Ext: 1066 Email: dr.saif74@yahoo.com

#### **Code of conduct for protection against harassment of woman at the work place**

1. An informal approach to resolve a complaint of harassment may be through mediation between the parties involved and by providing advice and counseling on a strictly confidential basis.
2. A complainant or a staff member designated by the complainant for the purpose may report an incident of harassment informally to her supervisor, or a member of the Inquiry committee, in which case the supervisor or the committee member may address the issue at her discretion in the spirit of this Code. The request may be made orally or in writing.
3. If the incident or the case reported does constitute harassment of a higher degree and the officer or a member reviewing the case feels that it needs to be a formal complaint, the case can be taken as a formal complaint.
4. A complainant does not necessarily have to take a complaint of harassment through the informal channel. She can launch a formal complaint at any time.
5. The harassment usually occurs between colleagues when they are alone, therefore usually, it is difficult to produce evidence. It is strongly recommended that staff should report offensive behavior immediately to someone they trust, even if they do not wish to make a formal complaint at the time.

## **HEC policy on protection against sexual harassment in higher education institutions**

1. Higher Education Institutions ("HEIs") are highly consequential institutions in society that are dedicated to the pursuit and dissemination of knowledge. Members of the HEI community have several important rights and privileges, central among which is the right to pursue inquiry and search for knowledge without hindrance from unlawful or otherwise unacceptable constraints. The HEC, takes very seriously the freedom of teachers, researchers, scholars, students to live and work in a safe environment in which their dignity is protected.
2. Protection against sexual harassment is important not only because it threatens the freedom and conduciveness of the environment and the institutions of higher learning. At a more fundamental level, such conduct is unacceptable because it violates personal dignity and shall not be tolerated at HEIs in Pakistan under any circumstance.
3. All administrators, deans, managers, faculty, department chairs, directors of schools or program and others in supervisory or leadership positions have an obligation to be familiar with and to uphold this policy and its procedures along with informing members of their staff about its existence.
4. In order to ensure protection of women against harassment complaint may be lodge by any person who has experienced sexual harassment with either the focal person or with any member of the Sexual Harassment Inquiry Committee.

### **Students grievances oversight committee**

There shall be a Student Grievances Oversight Committee (SGOC), at CU level for each department, to address grievances of students against any teacher, instructor, or administrative staff, with respect to matters of code of conduct, grades, or any administrative matter. The committee shall comprise:

- a) Head of CU.
- b) HOD.
- c) CU Exam-In-charge.
- d) Two (2) seniors-most FMs of the department.

### **If grievance is about the award of a grade, the procedure shall be as follows:**

- a) The student must submit the grievance, in writing, within seven working days of the receipt of the grade, to the HOD who shall forward it to the SGOC
- b) The SGOC shall hear both sides and will give its decision, which shall be final and binding on all parties, within five working days or before the start of registration for the new semester, whichever is earlier.

## **ATTENDANCE POLICY FOR STUDENTS**

### **Attendance policy for regular students.**

#### **PMDC rules for eligibility in annual examinations.**

- Minimum attendance requirement is 85% in each subject: attendance is for lectures, demos, practicals, clinics, PBLs, PSILs, CPC, presentations etc: indoor and outdoor
- The attendance is not simply for lectures.
- No shortfall in attendance will be condoned in any case by any authority

Attendance is maintained by the Attendance Department at BUMC.

All students should try and achieve 100% attendance. Every teaching session is essential. For clinical students remember a disease being demonstrated may not be seen during the rest of your stay in the college again. You will make the mistake of a life time by missing the opportunity to attend a clinical demonstration. You must have at least 85% attendance in to be permitted to sit for the professional examination.

- Lecture Attendance is marked at the start of the class.
- Students who come more than 10 minutes late are marked absent.
- A random head count is done to ensure correct entry of attendance.
- The attendance sheet is signed by the teacher and sent to Scholastics Department.
- The attendance is entered into the spreadsheet as soon as possible on that day.
- No correction will be made later than 24 hours as the system is then locked.

#### **Attendance for clinics, demonstrations, and practical's etc.**

- Student signs the attendance sheet in front of the teacher.
- The teacher countersigns it daily.
- Weekly attendance is given by the CR to the Scholastics Department - every Monday.
- Attendance submitted later than Friday of the current week will not be accepted.

The University rules permit a 15% short fall for genuine reasons of personal ill health of a life threatening nature or unavoidable circumstances such as death of a blood relative. This 15% relaxation is not so that you can take a holiday.

**If you have less than 85% attendance even for reasons of health, you will be asked to repeat the year. Maintaining adequate attendance is your personal responsibility.**

#### **Attendance policy for students repeating a year.**

Students who have been asked to repeat the year either because of poor attendance or failure in the professional examination or supplementary examination will attend the classes of the failed subject(s).

- Their previous year attendance will not be considered.
- If their attendance is less than 85% in their current class they will not be allowed to appear in the next examination.
- If a student is repeating one subject then the attendance must be equal to or more than 85% in that subject. This includes all practical classes, demonstrations, PBL sessions, lectures and clinical classes.

#### **Attendance policy for students appearing in supplementary exams.**

1. Only students who have appeared in a professional examination are allowed to appear in the supplementary examination.
2. Those who were not eligible for the annual exam are not eligible for the supplementary exam.
3. Those who did not avail the chance will have to repeat the year and cannot appear in

the supplementary.

4. Students will be provisionally promoted to the next class while preparing for the supplementary examination.
5. Attendance will be marked in the class to which they have been promoted.
6. The student will prepare for the supplementary exam in his/her own time.
7. In case the student fails to pass the supplementary exam he/she will revert to the previous class and the attendance in the new class will be counted in the class to which they revert.
8. Those students who do not attend classes will be marked absent and may face a shortage of attendance and will be asked to repeat the year.

#### **ELIGIBILITY CRITERIA FOR APPEARING IN ANNUAL PROFESSIONAL EXAMINATIONS**

A student will be eligible to appear in the annual professional examination if he/she fulfills the following criteria:

- 1. 85% attendance**
- 2. Must have cleared all financial dues**
- 3. Must have appeared in all three end-of-module examinations**
- 4. No breach of discipline should have occurred for which the Disciplinary Committee has advocated a punishment**

#### **RESEARCH**

BU has a strong emphasis on research and students are not only taught research methodology as part of their curriculum, but also actively engage in research work, under the supervision of faculty members.

BUHSC has a Research Advisory Committee that has been specifically formulated to guide students in every aspect of their research, from synopsis writing through to publications in peer reviewed journals.

## THE MODULES

### Organization of modular curriculum and teaching

Each Academic Year is divided into three Modules

- |               |   |         |   |              |
|---------------|---|---------|---|--------------|
| • First Year  | - | Modules | - | I,II,III     |
| • Second Year | - | Modules | - | IV,V,VI,     |
| • Third Year  | - | Modules | - | VII,VIII,IX, |
| • Fourth Year | - | Modules | - | X,XI,XII,    |
| • Final Year  | - | Modules | - | XIII,XIV,XV  |

The Examining subjects are

- **FIRST AND SECOND YEAR MBBS**
  - Anatomy
  - Physiolog  
y
  - Biochemi  
stry
- **THIRD YEAR MBBS**
  - General Pathology  
Pharmacology
  - Forensic Medicine
- **FOURTH YEAR MBBS**
  - Special pathology,
  - Community Health  
Sciences Ophthalmology
  - Otorhinolaryngology
- **FINAL YEAR MBBS**
  - Medicine (including Dermatology and Psychiatry),
  - Surgery (including Orthopedics, Urology, Anesthesiology and Radiology)
  - Pediatric medicine
  - Obstetrics and Gynecology

You will be taught clinical subjects from first year as this need to be taught in great detail and the final year is not sufficient. **The attendance for the subjects of medicine, surgery, gyne/obs and pediatrics will be counted from third year.** You will also be taught ethics, Islamiat, Pakistan Studies and communication skills.

A weekly schedule is placed on the notice board

### Learning Methods

**Following Learning Strategies encourage active learning**

- PBL
- PSIL
- Journal Club
- Interactive lecture,

- Practicals,
- Demonstrations,
- Dissection Hall Teaching
- Clinical Skills learning Skills Lab,.
- Small group discussions
- Bed Side Teaching
- Field / Community field Trips
- Self-Study with feedback
- Seminars, Workshops

### **The program emphasis on**

#### **Problem Based Learning (PBL):**

This is a small group activity in which the discussion revolves around a real life problem using the Seven Jump process. Students are expected to consult various learning resources to develop better understanding of the subject. PBL sessions contribute towards internal assessment. Students are expected to attend all PBL sessions.

#### **Self-Directed Study:**

Student may achieve the objectives by assuming responsibilities of their own learning. By sharing and discussing with peers, working individually, seeking information from LRC, teachers and resources persons within and outside the college. This is possible by utilizing scheduled self-study period in college, and time outside the college.

#### **Problem Based Learning (PBL): What is it?**

It is a student-centered approach encouraging deeper learning. Students learn about a problem by working in groups. In first encounter, a problem which is close to real life situation is given. The problem is generally discussed in two sessions.

**Frist Session:** Learners in small groups, using existing knowledge, discuss (in the presence of facilitator) and list what they do not know or are not sure of, about the problem, the list is known as learning goals objectives.

**Self-Study:** Learners have approximately three days, during which learners search for new information required to achieve the learning objectives listed. In this process, learners are encouraged to consult various learning resources in addition to the textbooks. This does not require a tutor.

**Second Session:** Students present their solution and review what they have learnt. Students engage in self-peer, and tutor review of the classes. Learners discuss learning issues and application of new knowledge to the problem and summarize by integrating prior and new knowledge in understanding the problem.

## ASSESSMENT POLICY

The student at BUHS will be assessed by following strategy

### **1. Continuous / Formative Assessment done throughout the Year**

- Practical journals, PBL sessions
- Quizzes and tests
- Reflective, constructive feedback is provided

### **2. Internal Assessment based upon 03 end of module exams**

**Each year is organized in 3 modules. Each module is assessed separately. It is mandatory for students to appear in the end of module exams**

End of Module Exam comprises of

- Knowledge assessment by MCQs & SAQs;
- Skills & attitude are assessed by OSPE / OSCEs

***The internal evaluation will contribute 20% towards final results***

**Student not appearing in end of module exams will lose internal evaluation marks**

### **3. Summative Assessment**

1. The written examination comprises of three papers (paper 1, 2 & 3). Each paper has
  - MCQs section
  - SAQ section divided into 03 parts (A, B & C)
2. Practical Examination will consists of 03 OSPE sessions

### **Pass Percentage**

For all examinations of MBBS courses the percentage of passing marks in each subject shall be 65% i.e. 65 % in theory and 65% in practical.

## POLICY FOR ELECTIVES

- Electives are not mandatory nor are they a part of the curriculum. Electives are considered add on extra-curricular activities with benefits for selection for jobs or postgraduate training after MBBS.
- The Electives Rotation will be of four weeks duration.
- It will be planned at least six months in advance during the 3<sup>rd</sup> or 4<sup>th</sup> Year.
- The Elective will be planned during the **SUMMER HOLIDAYS** preferably.
- The institution or department will be of the student's choice.
- During the elective the student will not get credit for attending lectures at BUHSCK.
- It is the student's responsibility to ensure that his/her overall attendance record is not affected adversely by the elective.
- The student will not proceed on an elective without informing the vice principal.
- The student will sign a waiver to the effect that any shortfall in attendance is his /her own

responsibility and will be dealt with as per rules of Bahria University

- The adequacy of education during the elective is the student's own responsibility.
- Permission to attend an elective is given by the Chairperson Student Affair Department designated for this purpose at BUHSCK. This simply implies that the college authorities are aware that the student is away for this period so that admission is not cancelled.
- **Student will submit a complete report after completion of electives.**
- **The student will ensure that the Elective Supervisor completes an evaluation report at the end of the elective.**
- BUHSCK will not provide any financial assistance for the elective.

### **Student affairs and student assist program**

Chairperson of student affairs is assigned to cooperate with students and parents concerning academic and non-academic matters and can be contacted according to availability or after setting an appointment.

### **Students' Affairs office**

The Students' Affairs Office coordinates administrative co-curricular and extracurricular activities. Students are advised to approach the coordinator student affairs (CSA) for any academic or non-academic matter.

### **Liaison with parents**

The Students Affairs Office also serves as a bridge between the College Administration and parents. Students' progress reports will be mailed to parents on request at the conclusion of every term and annual examination. Similarly, the issue of short attendance, college discipline, and violation of college rules and regulations are handled by this Office.

### **Clubs for Extracurricular Activities**

Different clubs for extracurricular activities are established for students to participate.

1. Literary and debates society
2. Arts and dramatics society
3. Adventure club
4. Event club
5. Community support club
6. Sports club
7. Media club
8. Music club





## **WHOM TO CONTACT?**

### **Administration BUHSCK**

Prof. Dr. Khalid Mustafa, Vice Principal

Dr. Saifullah Shaikh, Academic Coordinator

Brig. (R) Shahid Ali Khan, Clinical Coordinator, BUHSCK

Prof. Dr. M. Sajid Abbas Jaffri, Head of Scholastic Record Department.

Surg. Capt. Dawood Ahmed, Liaison Officer, PNS SHIFA

Ms. Marvi Bhutto, Chairperson, Student Affairs



**Smoking is strictly prohibited!**

## **MENTORING PROGRAM**

BUHSCK have student assisting programs such as mentoring. Mentors have been already assigned at the start of the teaching program in first year. The students will meet the assigned mentor in the mentor's office to discuss academic, non-academic, experiences, problems for advice and guidance.

### **Following will be the meeting schedule:**

One mentoring session monthly (Mentor with students) reflected in the timetable.

### **Duration**

2 hours

### **Following will be the meeting schedule:**

#### **Meeting**

Mentors ( 12 minutes with each student)

#### **Duration**

2hours/week

#### **Summary submitted to**

Supervisors (with the mentors)

1 hour/fortnightly

Department of Medical  
Education

Program Manager (with supervisor)

Last Friday of every month

### **Mentors will supervise following students as follows:**

<b>Senior Mentor</b>	<b>Mentor</b>	<b>Departments</b>	<b>Mentees</b>
Dr. Hina Moazzam, Physiology	Dr. Huma Mumtaz	Forensic Medicine	1665-1679
	Dr. Lalarukh Munawar	Medicine	1680-1694
	Dr. Shizma Junejo	Pharmacology	1695-1709
Dr. Faraz Anwar, Biochemistry	Dr. Bilal Yousuf	Anatomy	1710-1724
	Dr. Syed Wajahat Hasib	Anatomy	1725-1739
	Dr. Rabia Siddiqui	Physiology	1740-1754
Dr. Fouzia Shariq, CHS	Dr. Sana Akbar	Physiology	1755-1769
	Dr. Mahail Khan	Anatomy	1770-1784
	Dr. Hadia Khursheed	Pathology	1785-1800
	Dr. Ambreen Kalam	Forensic Medicine	1801-1816
Prof. Khalid Mustafa	Dr. Meher Fatima	Pharmacology	945

## **INTRODUCTION TO DEPARTMENTS**

- **Pathology**
- **Community Health Sciences**
- **Ophthalmology (Eye)**
- **Otorhinolaryngology (ENT)**

### **Parallel Discipline**

- **Surgery**
- **Pediatrics**

## DEPARTMENT OF PATHOLOGY

A dynamic and rapidly evolving field, Pathology is the study of disease. As an intellectual discipline, pathology bridges the basic and clinical sciences. Basic research into the causes and mechanisms of disease (experimental pathology) goes hand in glove with identifying the morphologic and biochemical manifestations of disease in human patients (anatomic and clinical pathology, respectively). All of these aspects of pathology have important diagnostic and therapeutic implications for patient care. Teaching of this body of knowledge at various pre- and post-doctoral medical and scientific levels of interest and understanding provides a unifying component to laboratory and clinic. The Department of Pathology at Bahria University is a large multi-disciplinary department having two wings: Basic, located in the premises of Bahria University Health Sciences, Karachi and Clinical, functioning at PNS Shifa, Karachi. It is one of the seven basic science departments at BUM&DC. Our diverse faculty teaches in different phases of MBBS and BDS undergraduate programmes as well as engaged in post-graduate fellowship training in various specialties of pathology. Our mission is to provide a research-based academic environment that allows our faculty, students, fellows and staff not only to succeed, but to excel. Our goal is to advance our fundamental understanding of the pathology and the patho-physiologic mechanisms of disease, and to bring this knowledge to others through teaching and publication.

S. NO	FACULTY NAME	DESIGNATION
1	Prof. Dr. Yasmeen Taj	Senior Professor / HOD
2	Prof. Dr. Naveed Faraz	Senior Professor
3	Prof. Dr. Summayya Shawana	Senior Professor
4	Dr. Shaista Bakhat	Associate Professor
5	Dr. Santosh Kumar	Associate Professor
6	Dr. Hadia Khursheed	Assistant Professor
7	Dr. Sadia Arif	Assistant Professor
8	Dr. Hira Faisal	Senior Lecturer
9	Dr. Maria Ali	Senior Lecturer
10	Dr. Erum Khaliq	Senior Lecturer
11	Dr. Kiran Saleem	Lecturer
12	Dr. Khawar Abbas	Lecturer
13	Dr. Zara Akram	Lecturer

## DEPARTMENT OF COMMUNITY HEALTH SCIENCE

The Department of Community Health Sciences (CHS) is the back bone of Bahria University Health Sciences. The goal of the department of Community Health Sciences (CHS) is to equip the students with public health skills required to address the common health problems of Pakistan and the developing world in the specific/particular socio-economic, cultural. The curriculum of community medicine is therefore prepared in such a way as to prepare the students to value community health and thereby contribute effectively to the health care system of Pakistan including health needs of the region. CHS is taught for four years out of total five years of MBBS program. CHS Objectives include behavior, socio-anthropology and social determinants of health and disease. Special emphasis is given to the planning and management of primary health care systems and students are also involved in fieldwork under the guidance and supervision of trained staff. In this regard they are taken to various organizations of public health importance like factories, hospitals, MSA and naval ships etc.

In order to inculcate the habit of research among the students, they are conducting various independent research tasks on the general problems of the community. Students themselves select the topics and carry out complete research.

For student learning, the department includes spacious and well-equipped museum and a laboratory.

S. No.	Name	Designation
1.	Prof. Dr. Inayat Hussain Thavar	Senior Professor / HOD
2.	Prof. Farid Midhet Mahmood	Senior Professor
3.	Dr. Fareeha Shahid	Associate Professor
4.	Dr. Talha Khan	Assistant Professor
5.	Dr. Fouzia Shariq	Assistant Professor
6.	Dr. Farrukh Zehravi	Assistant Professor
7.	Dr. Ayesha Ayaz	Assistant Professor
8.	Dr. Hira Shaikh	Senior Lecturer
9.	Dr. Mishal Haque	Lecturer
10.	Dr. Sukaina Abbas	Lecturer

## DEPARTMENT OF OPHTHALMOLOGY (EYE)

The branch of science that deals with the study of normal structure, diseases, treatment and surgical procedures on the eye is called Ophthalmology. The aim of teaching Ophthalmology is to train the undergraduate students about basic clinical ophthalmology. Student training focuses on how to evaluate, investigate, treat or refer the patient to the appropriate specialist.

The curriculum emphasizes on recognition of common eye diseases as well as counseling patients and community on promotion and preventive strategies. Third year students training primarily focuses on history taking and basic clinical examination skills. Fourth year students are trained and prepared for patient care, clinical examinations, case presentations, discussion. The students are also subjected to observe and assist minor surgical procedures and are also provided opportunities to observe advanced investigations e.g. FFA, OCT, Corneal Topography and computerized visual field analysis etc.

S.no.	Faculty Name	Designation
1.	Prof Sameer Shahid Ameen	Senior Professor
2.	Dr. Muhammad Kamran Saeed	Professor
3.	Dr. Faisal Aziz Khan	Associate Professor
4.	Dr Beenish Saleem	Assistant Professor
5.	Dr. Khalid Baloch	Senior Registrar
6.	Dr. Wajiha Niaz	Senior Lecturer

## DEPARTMENT OF OTORHINOLARYNGOLOGY (ENT)

Oto-rhino-laryngology (ENT) is the specialty which deals with the diseases of the Ear, Nose, Throat, head and neck. The aim of teaching oto-rhino-laryngology is to train the undergraduate student about the basics of clinical ENT and how to evaluate, investigate, treat or refer the patient to the appropriate specialist. The curriculum emphasizes on recognition and management of common ENT diseases as well as counseling patients regarding its prevention.

This subject is mainly taught in 3rd and 4th year MBBS. Final examination of the subject is held at the end of 4th year MBBS. Instructional strategy for this subject includes lectures, tutorials, OPD teaching, wards round, problem solving interactive learning and operation theatre teaching. Students of 3rd year and 4th year MBBS are posted in the ENT ward in small groups for 3 to 5 weeks each. At the end of each clinical posting, a test is taken from each student and grading is noted in the student's log book. During the 3rd year MBBS, main focus is on the history taking and clinical examination of a patient who come to hospital for some ENT problem. During the 4th year MBBS, case discussions including history taking, examination, investigation and further management are done. Skill lab is also available where many skills related with the ENT examination and procedures are taught on mannequins. Evening clinical posting is a regular feature where students come for 2 hours daily in the ENT ward or evening OPD.

During the 4th year MBBS, whole subject of ENT is divided into 3 modules. First module (module X) covers the diseases of the nose, paranasal sinuses, oral cavity and the pharynx. Second module (module XI) covers the diseases of the ear and the third module (module XII) covers the diseases of the larynx and head & neck. At the end of each module, formal assessment is undertaken and its marks are included in the internal assessment at the end of year annual examination.

S.no.	Faculty Name	Designation
1.	Prof Dr Iqbal Hussain Udaipurwala	Senior Professor / HOD
2.	Dr. Shahzad Maqbool	Associate Professor
3.	Dr. Asif Alam Gul	Associate Professor
4.	Dr. Fatima Siddiqui	Assistant Professor
5.	Dr. Shahid Bin Faiz	Assistant Professor
6.	Dr. Muhammad Moiz Ullah Khan	Assistant Professor
7.	Dr. Muhammad Fahad Wasim	Senior Registrar

## **CURRICULUM GUIDELINES**



## **MODULE- X**

### **Special Pathology**

#### **Oral Cavity, Alimentary Tract & Hepatobiliary System, Respiratory System, Hematopoietic & Lymphoid System**

##### **Outcome**

By the end of this module, students should be able to discuss the:

1. Etiology, Morphology & Pathogenesis of non-neoplastic and neoplastic lesions of oral cavity, alimentary Canal & Hepatobiliary system
2. Etiology, Morphology & Pathogenesis of neoplastic and non-neoplastic lesions of the respiratory system
3. Etiology, Pathogenesis and morphological findings of the various Hematopoietic & Lymphoid pathologies

##### **Objectives**

1. Describe the etiology, pathogenesis, morphological features and management of oral and pharyngeal premalignant and malignant lesions
2. Describe the swellings of the salivary glands including pleomorphic adenoma with their clinical significance
3. Discuss the pathogenesis and complications of gastro-esophageal reflux disease (GERD) and dyspepsia.(L)
4. Describe the causes and management of dysphagia and carcinoma of esophagus
5. Describe the etiology and pathogenesis of acid peptic disease including acute and chronic gastritis
6. Describe the etiology, pathogenesis, morphological and clinical features of tumors of stomach including carcinoma
7. Discuss abdominal tuberculosis and its complications
8. Describe malabsorption syndromes
9. Discuss the diagnosis and management of Crohn's disease and ulcerative colitis
10. Discuss the causes of recurrent diarrheas including irritable bowel syndrome (IBS)
11. Classify non-neoplastic and neoplastic polyps of intestinal tract
12. Describe colorectal carcinoma and its clinical management
13. Discuss the etiology, morphology, clinical features and complications of acute appendicitis
14. Describe the pathogenesis and clinical features of diverticular diseases of GIT
15. Describe the types, causes, clinical features and laboratory diagnosis of jaundice
16. Describe the causes, pathogenesis, clinical features and complications of hepatic failure
17. Describe the clinical features, pathology and complications of cirrhosis
18. Discuss portal hypertension and its clinical presentation
19. Differentiate how viral hepatitis A, B, C, D, E and other viruses affect the liver and their long term effect on the body
20. Discuss the carrier state and differentiate between acute and chronic hepatitis
21. Describe the pathogenesis, clinical and morphological features of liver abscesses
22. Describe the pathogenesis, morphological and clinical features of hemochromatosis and hemosiderosis
23. Describe the clinical and morphological characteristics of Wilson's disease and alpha-1 antitrypsin deficiency
24. Discuss the epidemiology, etiology, pathogenesis, morphological and clinical features of hepatocellular carcinoma and metastatic disease
25. Describe the risk factors, pathogenesis and complications of cholelithiasis and cholecystitis (L)
26. Describe the clinical features and morphological changes seen in carcinoma of gall bladder
27. Discuss the etiology, pathogenesis, clinical and morphological features of acute and chronic pancreatitis
28. Describe the morphological and clinical features of carcinoma of pancreas, bile duct and

periampullary carcinoma

29. Describe pathogenesis, clinical features, differential diagnosis and management of Nasal Allergy and Vasomotor Rhinitis
30. Describe the etiological agents and clinical features of common cold, recent viral infections causing swine flu, bird flu and SARS
31. Discuss the etiology, clinical features, morphology and complications of pneumonia (L)
32. Discuss the clinical presentation, morphology, lab findings, complications, treatment and measures for prevention of pulmonary tuberculosis(L)
33. Discuss the etiology, presenting symptoms, natural history and complications of COPD
34. Describe the etiology, pathogenesis, clinical presentation, natural history and Complications of bronchial asthma
35. Describe neonatal and adult respiratory distress syndrome
36. Discuss interstitial lung disease their diagnosis and management
37. Describe pulmonary function tests in the management of chronic lung diseases and mechanical ventilation
38. Discuss the etiology, pathogenesis, classification, clinical course, complications and Preventive measures of lung cancer(L)
39. Describe the common occupational lung diseases, their preventive measures, natural history and complications
40. Describe the normal values of RBC count, hemoglobin level, packed cell volume, MCH, MCV, MCHC, WBC count and platelet count
41. Describe normal peripheral smear and bone marrow findings and correlate these to Pertinent laboratory tests to evaluate hematologic disorders
42. Classify anemias and apply laboratory values for characterization of anemias and in Clinical decision making
43. Discuss the pathogenesis, clinical features and management of Thalassemia
44. Classify hemolytic anemias and discuss the mechanism of glucose-6-phosphate deficiency
45. Describe aplastic anemia with respect to etiology, pathogenesis, clinical features and lab Diagnosis
46. Classify white blood cell disorders (leukemia and lymphoma) and compare pathologic features of each category (L)
47. Describe multiple myeloma with respect to etiology, pathogenesis, morphology and clinical features
48. Describe coagulation cascade, pertinent laboratory tests and clinical features of bleeding disorders
49. Describe disseminated intravascular coagulation with respect to its etiology, pathogenesis, clinical features and lab diagnosis
50. Define thrombocytopenia and distinguish between quantitative and qualitative platelet disorders
51. Describe ABO and Rhesus blood groups and write an outline of how a blood sample is typed.
52. Discuss latest developments and advances in diagnostic approaches and treatment modalities of Gastrointestinal, respiratory and hematological pathologies.
53. Integrate current advancement and innovative research developments with the established pathological aspects of common GI, respiratory and hematological diseases.

## **Pathology**

### **Lab Skills / Practicals Module – X (Duration 24hrs)**

**Identify** the following pathological lesions on the basis of gross morphological features:

- Acute appendicitis
- Adenocarcinoma stomach
- Intestinal tuberculosis
- Colorectal carcinoma
- Hepatoma
- Chronic cholecystitis with cholelithiasis
- Carcinoma gall bladder
- Adenocarcinoma of pancreas
- Pulmonary tuberculosis

- Lung carcinoma

**Identify** the following pathological lesions on the basis of histopathological features:

- Acute appendicitis
- Chronic hepatitis
- Hepatic cirrhosis
- Hepatoma
- Chronic cholecystitis with cholelithiasis
- Carcinoma gall bladder
- Chronic pancreatitis
- Adenocarcinoma of pancreas
- Pneumonia
- Pulmonary tuberculosis
- Lung carcinoma
- Iron deficiency anemia.
- Megaloblastic anemia.
- Hereditary spherocytosis.
- Sickle cell anemia.
- Leukaemias
- Hodgkin's disease
- Non-hodgkin lymphoma
- Vasculitis

### **Community Health & Sciences**

**Epidemiology, Biostats, ARI, Diarrheal Diseases, Immunization, Communicable Disease-I Outcome:**

1. To study the Epidemiology, Biostats, ARI, Diarrheal Diseases, Immunization, Communicable Disease-I.
2. To study the prevention of diseases in community

1. Describe the common occupational lung diseases, their preventive measures and complications
2. Identify the types of variables
3. Describe different epidemiological study designs
4. Calculate and interpret different measures of association
5. To calculate the screening tests
6. Explain the steps of hypothesis testing
7. Describe different sampling techniques
8. Presentation of various graphical data
9. Define epidemiological transition and surveillance
10. To diagnose the community problems
11. Describe the normal distribution curve
12. Calculate and interpret different measures of central tendency
13. Calculate different measures of dispersion
14. Calculate different rates, ratios and proportions
15. Calculate different measures of morbidity, mortality and disability
16. Explain regression, correlation and coefficient of variance
17. Describe various tests of significance
18. Describe the dynamics of disease transmission
19. Investigate an epidemic

20. Discuss the epidemiology of infectious disease
21. Classify the condition of a child with ARI according to the WHO guidelines for the Management of ARI
22. State the general principles of domiciliary management of ARI according to the WHO Guidelines
23. Describe the basic principles of management of diarrhoea according to Plan A & B of WHO guidelines for management and prevention of diarrhoea
24. Describe the domestic method for the preparation of ORS
25. Describe the epidemiology of vaccine preventable diseases that are included in Expanded program of immunization (EPI) in Pakistan
26. Describe the schedule, dose and route of administration of vaccines included in EPI
27. Describe indications and contraindications of vaccines included in the EPI.
28. Describe the aetiology / mode of transmission , incubation period, period of Communicability, signs / symptoms, major complications and prevention measures of vaccine preventable disease of public health importance: Cholera, Typhoid, Dysentery, Poliomyelitis and Hepatitis (A B C D & E)
29. Describe host etiological factors, vector, prevention and management of rabies
30. Design the questionnaire of research
31. Describe the fundamental concepts and methods of statistics in the areas of medical research
32. Identify different epidemiological study designs
33. Describe the principles of investigation of an epidemic.
34. Define epidemiological transition and surveillance
35. Define and calculate different types of screening tests
36. Describe types of data and ways of collection of data
37. Explain organization, categorization and analyses of collected data
38. Recognize different types of variables
39. Identify appropriate graphical presentation for each variable type
40. Compute measures of central tendency and measure of dispersion of the variables
41. Calculate the measures of morbidity, mortality and disability
42. Explain regression, correlation and coefficient of variance
43. Describe various tests of significance
44. Calculate and interpret different measures of association
45. Define the concept of normal distribution curve
46. List the steps of hypothesis testing
47. Differentiate between sampling techniques
48. Develop a questionnaire for research
49. Describe research, research methods, research studies, their designs and work feasibility.

<b><u>Teaching Strategies</u></b>	<b><u>Assessment Tools</u></b>
Discussion LGIS SGD	Assignment CAT exams

S. NO.	COURSE CONTENT
1.	Descriptive Study
2.	Variables
3.	Measure of Central Tendency
4.	Measures of dispersion
5.	Hepatitis all types with prevention
6.	Case Control Study
7.	Dynamics of Disease Transmission
8.	Cohort Study
9.	Graphical Representation of Data
10.	ARI and growth chart
11.	Cross-sectional Study
12.	Rate, ratio and proportion
13.	Sampling
14.	Investigation of an epidemic
15.	Association and causation
16.	Randomized Controlled Trial
17.	Questionnaire Designing
18.	Epidemiological Transition
19.	Typhoid Fever
20.	WHO Protocol of Diarrhoea
21.	Normal Distribution Curve
22.	Incidence and Prevalence
23.	Vaccination
24.	Community Diagnosis
25.	Screening
26.	Reference writing
27.	Epidemiological Surveillance
28.	Cholera
29.	Rabies
30.	Correlation and Regression
31.	Hypothesis
32.	Infectious disease epidemiology
33.	Test of significance
34.	Communicable diseases
35.	Preparation of ORS

**Ophthalmology (Eye)**  
**Eyelids, Conjunctiva, Cornea, Sclera & Lacrimal System**

**OUTCOME:**

To take detail history, perform clinical examination, understand rationale of investigation and initiate management of common diseases of THE EYE.

1. Describe the clinical and morphological characteristics of Wilson's disease and alpha-1 antitrypsin deficiency along with ocular findings
2. Describe applied anatomy, physiology and congenital malformations of the eyelids and lacrimal Apparatus
3. Formulate differential diagnosis of the following: Eyelid oedema, erythema, nodular & non-nodular lesions, (Stye, Chalazion), Ocular pain, foreign body sensation and watery eye
4. Describe the lesions of the Eyelashes including trichiasis and distichiasis
5. Describe causes, types and management of injury to eyelids and lacrimal drainage System.
6. Describe differential diagnosis, causes, types and management of benign and malignant tumors of eyelids, orbit and lacrimal gland
7. Describe the types, causes and management of blepharitis
8. Describe causes of entropion & ectropion and their management.
9. Discuss causes, evaluation and management of ptosis.
10. Describe types, clinical features and management of dacryocystitis
11. Present detailed history from a patient with symptoms of the eyelids and lacrimal apparatus
12. Discuss the differential diagnosis and management of proptosis including thyroid disease.
13. Perform the torch examination of Eye.
14. Perform direct ophthalmoscopy.
15. Perform Nasolacrimal drainage system Patency test
16. Perform regurgitation test
17. Palpate draining lymph nodes of Eye.
18. Observe Chalazion and Pterygium surgery
19. Observe eyelid repair and reconstruction surgery
20. Describe applied anatomy and physiology of the conjunctiva, cornea and sclera
21. Discuss differential diagnosis of :
  - Itching, pain, photophobia and foreign body sensation and discharge.
  - Blurring of vision and Conjunctival congestion e.g. ciliary or diffuse.
  - Nodular lesions of the conjunctiva, episclera and sclera
22. Describe the types, clinical features, diagnosis and management of acute and chronic conjunctivitis including spring catarrh and adenoviral keratoconjunctivitis
23. Describe types, clinical features and management of injuries to conjunctiva, cornea & sclera:
24. Describe the degenerative conjunctival diseases including Pterygium, pseudopterygium, Pinguecula and retention cyst along with differences.
25. Describe the clinical presentation and diagnosis of Episcleritis and Scleritis
26. Present a brief overview of contact lenses and refractive corneal surgery
27. Explain complications and types of keratoplasty
28. Discuss the complication of contact lens.
29. Observe removal of corneal foreign body
30. Describe a red eye, including corneal ulcers caused by bacteria, fungi and viruses and their management.

**Otorhinolaryngology (ENT)**  
**Nose and Paranasal Sinuses Oral Cavity and Pharynx**

**OUTCOME**

To take detail history, perform clinical examination, understand rationale of investigation and initiate management of common diseases of nose and oral cavity

**OBJECTIVES**

1. Describe the etiology, pathogenesis, morphological features and management of oral and pharyngeal premalignant and malignant lesions.
2. Describe the swellings of the salivary glands including pleomorphic adenoma with their clinical significance.
3. Describe applied anatomy and physiology of the oral cavity and pharynx
4. Formulate differential diagnosis of:
  - Acute and chronic sore throat
  - dysphagia
  - disturbances of taste sensation/salivation
  - mouth ulcers
  - patches in the mouth & pharynx
5. Describe congenital malformations of the mouth, lips, palate and pharynx
6. Describe types, clinical features and management of Injuries to mouth & pharynx
7. Describe types, clinical features, differential diagnosis and management of stomatitis and oral ulcers.
8. Describe types, clinical features, differential diagnosis and management of acute and chronic pharyngitis
9. Describe etiology, clinical features, differential diagnosis and management of acute, recurrent and chronic tonsillitis, quinsy and enlarged adenoids.
10. Elicit and present detailed history from a patient with oral and pharyngeal symptoms
11. Examine mouth and pharynx with a headlight or head mirror
12. Perform clinical examination of mouth and pharynx
13. Palpate draining lymph nodes
14. Examine salivary glands
15. Perform Indirect Laryngoscopy
16. Observe Tonsillectomy and Adenoidectomy
17. Identify different surgical instruments used in nose, oral cavity and pharynx
18. Interpret the findings of plain X-ray PNS, nasal bone, nasopharynx, carotid angiography and CT scan of the nose & PNS
19. Describe applied anatomy and physiology of the nose and paranasal sinuses.
20. Formulate differential diagnosis of common nasal symptoms: Nasal obstruction, discharge, post-nasal dripping, Sneezing, snoring, Epistaxis, Rhinolalia, Disturbances in sense of smell, Facial pain, headache, Nasal deformity, swelling
21. Describe management of common congenital malformations of the nose
22. Describe causes, types and management of nasal Injuries
23. Describe causes and management of epistaxis
24. Describe pathogenesis, clinical features and management of Deviated Nasal Septum (DNS)
25. Describe pathogenesis, clinical features and management of common septal diseases (Hematoma, Abscess and Perforation)
26. Describe types, clinical features and management of foreign bodies in the nose and Rhinoliths
27. Describe etiology, pathogenesis, clinical features, differential diagnosis and management of acute and chronic Rhino-sinusitis

28. Describe pathogenesis, clinical features, differential diagnosis and management of Nasal Allergy and Vasomotor Rhinitis
29. Describe types, pathogenesis, clinical features, differential diagnosis and management of Nasal Polyp
30. Describe types, clinical features and management of Neoplasia of the Nose & Paranasal Sinuses
31. Elicit and present detailed history from a patient with nasal symptoms
32. Use headlight skillfully for nasal examination
33. Perform external inspection of the nose
34. Perform Anterior Rhinoscopy with the help of nasal speculum
35. Perform Nasal Patency test
36. Observe Posterior Rhinoscopy
37. Palpate Nose and Paranasal sinuses
38. Palpate draining lymph nodes
39. Observe Anterior and posterior Nasal Packing
40. Observe SMR, Septoplasty
41. Observe Antral Washout, SMD, Electric Cautery of turbinate
42. Observe Nasal Polypectomy/FESS
43. Observe removal of foreign bodies
44. Describe the etiological agents and clinical features of common cold, recent viral infections causing swine flu, bird flu and SARS



## Clinical Skills Lab Objectives

**By the end of skill sessions, 4<sup>th</sup> year MBBS students should be able to**

- Take history of a patient with ENT complaints
- Examine the patients by adjusting ENT head lights
- Identify instruments used for ENT Examination in outpatient department.
- Perform anterior rhinoscopy.
- Perform posterior rhinoscopy
- Examine oral cavity and oropharynx
- Perform external and functional examination of the nose.

Program Outcomes	Outcomes	MIT	Special Pathology	CHS	Eye	ENT	Assessment Tools
1,2,10,11	<b>PATHOLOGY:</b> <b>1,2,3</b> <b>CHS:</b> 1. To study the Epidemiology, Biostats, ARI, Diarrheal Diseases, Immunization, Communicable Disease-I. 2. To study the prevention of	LGIS	1,2,4,5,6,8,9,12,15,22,23,24,26,28,33,34,35,36,43,44,45,46,49	1-35	1,2,3,5,6,7,22,23,24,25,26,30	1,2,3,4,5,6,7,8,9,19,20,21	BCQs , SEQ, VIVA
		SGD	3,7,16,17,18,19,20,21,31,32,37	1-35, case studies	2,4,6,9,10,23,26,27,28	17,18,39,40,44	BCQs , SEQ, OSPE,VIVA
		Lab Skills / Ward Based Teaching	3,5,6,12,13,17,20,24,25,27,31,32,38,40,41,42,46,48,51	7,10,20,23,26,34,35	8,9,11,12,13,14,15,16,17,18,19,20,29	10,11,12,13,14,15,3	BCQs , SEQ, OSPE,VIVA
		Assignment	11,12,29,30	Case studies	3,8,9,27,30		BCQs , SEQ, OSPE,VIVA
		Self- study	2,6,10,47,50		3,7,12,27		BCQs, SEQ
		Student presentation /Journal club	52, 53	Case studies	2,9,20,22,28		OSPE,VIVA,

MIT: Mode of information transfers

LGIS: Large group Interactive session

SGD: Small group discussion

Demo: Demonstration

DIS: Dissections

PBL: Problem based learning

## **MODULE- XI**

### **Special Pathology**

#### **Breast, Urinary, Female Genital, Male Genital & Endocrine System**

##### **Outcome**

By the end of this module, students should be able to discuss:

1. Etiology, pathogenesis and morphological features of the diseases of urogenital system
2. Pathogenesis and morphological features of benign and malignant lesions of breast
3. Underlying pathogenesis, morphological features and chemical changes of various endocrinological pathologies

##### **Objectives**

1. Describe etiology, pathogenesis and management glomerulonephritis, nephrotic and nephritic syndromes
2. Describe the epidemiology, morphology, clinical features and management of renal cell carcinoma and transitional cell carcinoma
3. Discuss acute and chronic renal failure with respect to the etiology, pathogenesis, diagnosis and management
4. Discuss the causes, clinical features and complications of hydronephrosis
5. Describe various types of renal calculi, their pathogenesis, clinical features, diagnosis and management
6. Describe acute and chronic pyelonephritis, cystitis and urethritis with regards to their etiology and pathogenesis
7. Interpret the findings of urine D/R and Culture and sensitivity for various pathologies of urinary tract
8. Describe the etiology, pathogenesis, diagnosis and preventive measures for carcinoma of cervix
9. Discuss the causes, diagnosis and management of dysfunctional uterine bleeding
10. Describe the etiology, pathogenesis and clinical features of endometrial hyperplasia and neoplasms of endometrium and myometrium
11. Describe the types, morphology, clinical features and management of ovarian tumors
12. Describe ectopic pregnancy and toxemia of pregnancy with regards to their pathogenesis and management
13. Describe the diagnosis, clinical features and management of gestational trophoblastic tumors.
14. Discuss the causes, pathogenesis, investigations and treatment of infertility.
15. Describe the causes, pathogenesis, investigations, clinical manifestations and management of breast lumps.
16. Discuss the causes, pathogenesis and management of gynecomastia
17. Describe the etiology, pathogenesis, morphology, diagnosis and management of non-neoplastic and neoplastic prostatic lesions
18. Discuss the causes, pathogenesis, investigations, clinical features and management of congenital, non-neoplastic and neoplastic testicular lesions.
19. Describe the causes, pathogenesis, clinical presentation and management of hyper and hypopituitarism and pituitary tumors
20. Describe diabetes insipidus as regards to its etiology, diagnosis and management
21. Describe the etiology, clinical features, pathogenesis, lab findings and management of syndrome of inappropriate secretion of antidiuretic hormone (SIADH)
22. Discuss the etiology, pathogenesis, clinical features, lab diagnosis and management of hyper and hypoadrenalism.
23. Describe the clinical features, diagnosis and management pheochromocytoma.
24. Discuss the causes, clinical presentations, diagnostic workup of hypercalcemia and hypocalcemia
25. Describe the morphology, clinical features and management of parathyroid tumors
26. Discuss the causes, differential diagnosis, investigations and management of thyroid swellings
27. Describe the etiology, pathogenesis, clinical manifestations, complications and management of diabetes mellitus

28. Discuss latest developments and advances in diagnostic and prognostic approaches and treatment modalities of important urogenital, breast and endocrinological pathologies.
29. Integrate current advancement and innovative research developments with the established pathological aspects of common urogenital, breast and endocrinological diseases

## Pathology

### Lab Skills / Practicals Module – Xi (Duration 24 Hrs)

**Identify** the following pathological lesions on the basis of gross morphological features:

- Renal cell carcinoma
- Hydronephrosis
- Nephrolithiasis & Renal stones
- Prostate hyperplasia
- Testicular tumors
- Carcinoma cervix
- Endometrial polyp
- Endometrial carcinoma
- Adenomyosis
- Leiomyoma
- Ovarian tumors
- Hydatidiform mole
- Choriocarcinoma
- Fibroadenoma breast
- Carcinoma of breast
- Multinodular goiter
- Follicular adenoma of thyroid
- Adenocarcinoma of thyroid

**Identify** the following pathological lesions on the basis of histoapthological features:

- Renal cell carcinoma
- Benign Prostatic hyperplasia
- Testicular tumors
- Carcinoma cervix
- Endometrial polyp
- Endometrial carcinoma
- Adenomyosis
- Leiomyoma
- Ovarian tumors
- Hydatidiform mole
- Choriocarcinoma
- Fibroadenoma breast
- Carcinoma of breast
- Nodular adenomatous hyperplasia of thyroid
- Follicular adenoma of thyroid
- Adenocarcinoma of thyroid

## Community Health & Sciences

### **Ear Carriers & Control of Infection, Reproductive Health, Nutrition & Demography**

#### **OUTCOMES:**

To study the ear carriers & control of infection, reproductive health, nutrition & demography

1. Demonstrate various methods of purification of water
2. Identify different sampling technique used to select a sample
3. Understand the steps of hypothesis testing
4. Discuss the impact of high population growth on national development
5. Discuss the role of social mobilization in community development
6. Describe the impact of urbanization on country
7. Learn to use the HMIS to enter, collect and analyse the data with its application
8. Study the effect of human activities that produces the unnatural changes in climate
9. Demonstrate the classification of water borne diseases and influence of water pollution on health
10. Describe the effect of air and ventilation on health
11. Understand the public health importance of healthy housing
12. Describe the methods of different types of waste disposal with its hazards and safety measures
13. Illustrate the effects of radiation and noise on health
14. Understand the roles of the various phases of disaster management
15. Explain the concepts of 'health for all' and 'primary health care'
16. Illustrate the health system and its pillars and role of leadership in health system
17. Discuss the health system of Pakistan and its challenges
18. Describe the classification of infectious diseases and discuss the important infectious diseases
19. Discuss the prevention & control parasitic diseases of public health importance
20. Identify the importance of Family Planning, its concept and application
21. Recognize the challenges in family planning programs in Pakistan
22. Explain the Integrated Management of Pregnancy and Childbirth(IMPAC) and Integrated Management of Childhood Illness IMNCI
23. Describe the knowledge of safe motherhood and evaluate the quality of system
24. Assess the determinants of Infant mortality / Neonatal mortality.
25. Describe the epidemiology of vaccine preventable diseases that are included in Expanded program of immunization (EPI) in Pakistan
26. Describe the schedule, dose and route of administration of vaccines included in EPI
27. Describe the concepts of Occupational Health, its hazards and Principles of control
28. Health Planning Information and Communication
29. Study the effect of human activities that produces unnatural changes in climate
30. Describe the impact of urbanization on country(causes, issues and challenges)
31. Classify water borne diseases and the influence of water pollution on health
32. Assess the various methods of Waste Disposal and Biomedical Waste Management
33. Describe the methods of different types of waste disposal with its hazards and safety measures
34. Describe the effect of air and ventilation on health
35. Recognize the public health importance of healthy housing
36. Identify the effects of radiation and noise on health
37. Describe the roles of the various phases of disaster management
38. Describe the health system and its pillars and role of leadership in health system
39. Recognize the health system of Pakistan and its challenges
40. Explain how to use the HMIS to enter, collect and analyze the data with its application
41. Compare and contrast accidental deaths with other causes of death. Explain the costs and rates of workplace accidents

42. Describe the causes of accidents and methods for prevention; safety programs and practices that will protect them from hazards

**Field visits** help in the conversion of theoretical concepts into its practical application of public Health in various settings. Participate actively by generating reasoning and solution strategies. Acquire a better grasp of linking their clinical knowledge with public health approach.

<u>Teaching Strategies</u>	<u>Assessment Tools</u>
Discussion LGIS SGD	Assignment CAT exams

<b>S. No.</b>	<b>Course Content</b>
1.	Hypothesis testing
2.	Demographic & social implications of high population growth
3.	Social Mobilization
4.	Urbanization
5.	Major sources of population Data & HMIS
6.	Environmental & global health, basic concepts & types of environment Related health Problems
7.	Water pollution & diseases related to water pollution
8.	Air & Ventilation pollution
9.	Introduction & public health importance of housing
10.	Hazards & safety measures for different types of wastes
11.	Different measures of waste disposal
12.	Other types of pollution—radiation & noises
13.	Disaster management & control
14.	PHC & its Evolution
15.	Health system & its pillar; role of leadership
16.	Health system of Pakistan
17.	Infectious diseases, overview & its classification
18.	Important infectious diseases
19.	Prevention & control parasitic diseases of public health importance

**Ophthalmology (Eye)**  
**Anterior Chamber of Eye**

**Outcomes:**

1. To identify pathologies and management of lens.
2. To diagnose and manage the medical emergencies related to Glaucoma.
3. To identify, diagnose Pathologies of Uveitis.

**Objectives:**

1. Describe applied anatomy and physiology of the crystalline lens.
2. Describe differential diagnosis of Progressive visual blurring, Coloured halos, Unilateral diplopia, Frequent changes of spectacles
3. Describe aetiology, classification, pathogenesis and clinical features of congenital and acquired cataract.
4. Describe complications and management of hypermature cataract.
5. Present detailed history of cataract
6. Examine cases of cataract and differentiate between mature and immature cataract With a torch and direct ophthalmoscope
7. Describe peri-operative management of ophthalmic patient.
8. Describe surgical procedures for congenital and acquired cataract.
9. Describe peri-operative complications and management of cataract surgery.
10. Describe applied anatomy and physiology of the uveal tract
11. Discuss differential diagnosis of Pain, photophobia, Ciliary congestion and Blurring of vision
12. Describe the types, differential diagnosis and management of anterior, intermediate and posterior uveitis.
13. Differentiate between acute and chronic uveitis.
14. Describe the benign and malignant tumours of uveal tract, retina and optic nerve.
15. Describe Injuries of uveal tract.
16. Describe the investigations of diseases of uveal Tract and ocular tumors
17. Observe intra-ocular injections
18. Observe surgery of ocular tumors
19. Describe the clinical features, types and management of open and narrow angle glaucoma.
20. Observe the measurement of intra ocular pressure, gonioscopy, optic disc cupping and visual fields by projection
21. Demonstrate awareness of the use of laser and surgical procedures in glaucoma

## **Otorhinolaryngology(ENT)**

### **Ear and VestibularSystem**

#### **OUTCOME**

To take detail history, perform clinical examination, understand rationale of investigation and initiate management of common diseases of ear.

#### **OBJECTIVES**

1. Describe applied anatomy and physiology of the ear. Formulate differential diagnosis of Earache, Deafness, Discharge, Vertigo, Tinnitus, Itching, swelling and deformity of the ear.
2. Read and identify each type of audiogram, tympanogram and BERA
3. Identify and name different congenital malformations of the ear
4. Identify and describe types and management of different injuries to the ear
5. Describe types and management of foreign bodies in the ears
6. Describe etiology, pathogenesis, complications and management of otitis externa
7. Describe etiology, pathogenesis, complications and management of different types of otitis media
8. Describe clinical features, complications and management of wax in the ear
9. Describe types, clinical features and management of the ear neoplasia
10. Describe etiology, pathogenesis, clinical features, and management of Otosclerosis
11. Describe etiology, pathogenesis, clinical features, and management of Meniere's disease
12. Describe types, etiology, pathogenesis, clinical features, and management of labyrinthitis
13. Describe types, etiology, pathogenesis, clinical features, and management of facial nerve paralysis
14. Describe causes, clinical features, prevention and management of sensori-neural deafness (Ototoxicity, Noise Induced Hearing Loss and Presbycusis)
15. Elicit and present detailed history from a patient with ear symptoms.
16. Examine the ears with the headlight skillfully
17. Inspect external ear and tympanic membrane
18. Handle ear speculum skillfully
19. Check mobility of tympanic membrane
20. Perform Tuning fork tests (Rinne's, Weber's & Schwabach's)
21. Handle Otoscope skillfully
22. Palpate and illicit findings of mastoid region and preauricular region
23. Palpate and illicit findings of cervical lymph nodes
24. Observe syringing/ suction cleaning of the ears
25. Observe removal of foreign body from the ears
26. Observe incision and drainage of mastoid abscess
27. Observe mastoidectomy and tympanoplasty operations
28. Identify and enlist uses of different surgical instruments used in ear
29. Interpret the findings of plain X-ray mastoid

#### **Module - XI Clinical Skills Lab Objectives**

- Perform external examination of the ear.
- Perform examination of tympanic membrane and otoscopy.
- Perform hearing assessment tests.
- Perform facial nerve examination.
- Perform vestibular function tests.
- Identify the instruments used in common ENT Surgeries.



PROGRAM OUTCOMES	OUT COMES	MIT	SPECIAL PATHOLOGY	CHS	EYE	ENT	ASSESSMENT TOOLS
1,2,10,11	PATHOLOGY: 1,2,3 CHS: To study the ear carriers & control of infection, reproductive health, nutrition & demography. EYE: 1. To identify pathologies and management of lens. 2. Glaucoma. 3. Uvietis. ENT: To study diseases of ear and vestibular system.	LGIS	1,2,4,5,6,8,9,10,11,14,16,17,18,19,20,21,22,23,25,26	1-19	1,3,8,9,12,14,15,19	1-14	BCQ,S, SEQ,S, OSPE, VIVA
		SGD	2,3,15,16,24,25	1-19 case studies	2,4,10,13,16	2,24-29	BCQ,S, SEQ,S, OSPE, VIVA
		Lab Skills /Ward Based Teaching	2,4,7,10,11,13,15,17,18,26	7,10,11,19	6,7,8,17,18,20,21	2,15-23,28,30	OSPE, VIVA,BCQ,S
		Assignment	12,13	case studies	11,12		BCQ,S, SEQ,S, VIVA
		Self-study	9,13,15,17,16,19		5,21		BCQ,S, SEQ,S, VIVA
		Student's presentations	28, 29	Presen tati on case studies	1,3,10,13		BCQ,S, SEQ,S, VIVA

MIT: Mode of information transfers  
 LGIS: Large group  
 Interactive session  
 SGD: Small group discussion  
 Demo: Demonstration  
 DIS: Dissections  
 PBL: Problem based learning

## **MODULE- XII**

### **Special Pathology**

#### **Skin, Blood Vessels, Heart, Musculoskeletal & Nervous System**

##### **Outcome**

By the end of this module, students should be able to discuss:

1. Various cardiovascular diseases with regards to their etio pathogenesis and morphological features
2. The pathogenic mechanisms underlying various musculoskeletal pathologies and their morphological featured
3. Etiology, pathogenesis and morphological features of the diseases of the nervous system and skin

##### **Objectives**

1. Describe the risk factors, pathogenesis, clinical presentations, diagnosis and management of ischemic heart disease
2. Discuss the causes, pathogenesis, clinical features and management of heart failure cases
3. Describe hypertension with respect to its etiology, pathogenesis, clinical features, complications and management)
4. Describe the etiology, types and management of aneurysms
5. Describe various types of vasculitidies and varicose veins on the basis of pathogenesis, morphology and treatment
6. Describe the tumors of blood vessels
7. Describe the etiology, pathogenesis, morphological, clinical features and treatment of osteoporosis
8. Describe the pathogenesis, morphological and clinical features of Osteomyelitis and Paget's disease
9. Describe the morphology, diagnosis and management of bones and catilagenous tumors
10. Describe the pathogenesis, diagnosis and management of osteoarthritis, rheumatoid arthritis, infectious arthritis and crystal induced arthritis
11. Describe the pathogenesis, morphology, clinical features and management of muscular dystrophies
12. Describe the types, diagnosis and management of myopathies
13. Describe the pathogenesis, clinical features, complications and management of increased intracranial pressure
14. Describe the etiology, pathogenesis, morphology, clinical presentation and management of Cerebro-vascular diseases
15. Describe etiology, morphology, clinical features and management of acute and chronic meningitis, encaphlitis and brain abscess
16. Describe the pathogenesis, morphology, clinical features, diagnosis and management of neurodegenerative and demyelinating diseases
17. Describe the types, morphology, clinical features and management of brain and nerve tumors
18. Define the following terms: Macule, papule, nodule, plaque, vesicle, bulla, blister, pustule, scale, lichenification, excoriation, hyperkeratosis, parakeratosis, acanthosis, dyskeratosis, acantholysis, papillomatosis, spongiosis
19. Describe the morphological and clinical features of urticaria
20. Classify eczematous dermatitis based on etiology and describe its pathogenesis and clinical features
21. Describe the pathogenesis, morphology and clinical features of psoriasis and seborrheic dermatitis
22. Describe bullous (blistering) lesions
23. Describe the morphology and clinical features of acne vulgaris
24. Describe verrucous lesions
25. Discuss the causative agents and clinical features of impetigo and scabies
26. Classify pigmented and non-pigmented skin tumors
27. Describe the morphological and clinical features of melanocytic nevi
28. Describe morphology, clinical presentation, diagnosis and management of skin tumors
29. Discuss latest developments and advances in diagnostic and prognostic approaches and treatment modalities of important cardiovascular, musculoskeletal and neurological pathologies.

30. Integrate current advancement and innovative research developments with the established pathological aspects of common cardiovascular, musculoskeletal and neurological diseases.

**Pathology Lab Skills / Practicals Module – Xii (Duration 24 Hrs.)**

**Identify** the following pathological lesions on the basis of gross morphological features:

- Osteomyelitis
- Osteosarcoma
- Chondrosarcoma
- Ewing's sarcoma
- Giant cell tumor of bone
- Brain infarct
- Brain abscess
- Cerebral atrophy
- Astrocytoma
- Oligodendroglioma
- Ependymoma
- Medulloblastoma
- Meningioma
- Neurofibroma
- Schwannoma
- Malignant melanoma
- Basal cell carcinoma
- Squamous cell carcinoma
- 

**Identify** the following pathological lesions on the basis of histopathological features:

- Osteomyelitis
- Osteosarcoma
- Chondrosarcoma
- Ewing's sarcoma
- Giant cell tumor of bone
- Astrocytoma
- Oligodendroglioma
- Ependymoma
- Medulloblastoma
- Meningioma
- Neurofibroma
- Schwannoma
- Malignant melanoma
- Basal cell carcinoma
- Squamous cell carcinoma

## Community Health & Sciences

### **Ergonomics, Communicable Diseases-II, Non-Communicable Diseases & Parasitic Diseases**

#### **OUTCOMES:**

To recognize, identify, Communicable diseases-II, Non-Communicable diseases & Parasitic diseases

1. Recognize the nutritional needs of children and adults
2. Identify the role of diet in causing and preventing various diseases
3. Describe the methods used to assess nutritional status of community
4. Discuss the burden and prevention of behavioural and life-style related diseases
5. Discuss the concepts, definitions and life course approach to RMNCH
6. Describe the strategic approach for RMNCH including Family planning
7. Illustrate the population effects on health and development
8. Identify the challenges in family planning programs in Pakistan
9. Discuss the impact of high population growth on national development
10. Identify the population effects on health and development
11. Explain the concepts of 'health for all' and 'primary health care'
12. Describe the dynamics of disease transmission
13. Discuss the epidemiology of infectious disease
14. Classify infectious diseases and their importance
15. Differentiate between the etiology / mode of transmission, incubation period, period of Communicability, signs / symptoms, major complications and prevention measures of vaccine preventable disease of public health importance: Cholera, Typhoid, Dysentery, Poliomyelitis and Hepatitis (A B C D & E)
16. Classify the condition of a child with ARI according to the WHO guidelines for the Management of ARI
17. State the general principles of domiciliary management of ARI according to the WHO Guidelines
18. Describe the basic principles of management of diarrhea according to Plan A & B of WHO guidelines for management and prevention of diarrhea
19. Describe the domestic method for the preparation of ORS
20. Recognize the nutritional needs of children and adults
21. Identify the role of diet in causing and preventing various diseases
22. Interpret the development of child by the growth chart
23. Discuss the challenges and issues to achieve the SDG 2 in Pakistan and different age groups
24. Identify strategic plans for the prevention of malnutrition and the consequences
25. Recognize different nutritional program in Pakistan
26. Identify the methods used to assess nutritional status of community
27. Recognize the burden and prevention of behavioral and life-style related diseases
28. Discuss the prevention & control parasitic diseases of public health importance.

<u>Teaching Strategies</u>	<u>Assessment Tools</u>
Discussion LGIS SGD	Assignment CAT exams Quizzes

S. No.	Course Content
1.	Nutrition: Concepts, requirements, balanced diet, pyramid
2.	Nutritional issues and challenges in Pakistan
3.	Assessment of nutritional status in a community
4.	Approaches for addressing Malnutrition in Pakistan
5.	Behavioural sciences and life style: Epidemiology of common Public Health problems
6.	Prevention and control of behavioural and life-style related diseases
7.	Life course approach to RMNCH: concepts, definitions, approaches
8.	Strategic approach for RMNCH including Family planning
9.	How population affects health and development?
10.	Family planning programs in Pakistan
11.	IMNCI: strategic approaches
12.	IMNCH: indicators, issues and challenges in Pakistan
13.	Child health and development
14.	Growth charts demonstration and application
15.	Adolescent health and development

### **TEACHING STRATEGIES ASSESSMENT TOOLS**

- Continue assessment test (CAT) exam
- Assignments
- BCQs, SAQs and OSPEs
- LGIS: Large group Interactive session
- SGD: Small group discussion
- Demo: Demonstration
- Ø Same goes for all modules.

### **LAB SKILLS OBJECTIVE ASSESSMENT TOOL**

**Conduct Research:** Identify the tools and skills required to understand research terminology and assess published research · Identify the types of methods best suited for investigating different types of problems and questions · Design a research proposal · Organize and conduct research in appropriate manner Write a research report

**SPSS:** Practice SPSS (Windows) to examine the distribution of different types of data with the use of descriptive statistics, tabulations and charts · Calculate descriptive Analyze and interpret the results statistics, standard errors and confidence intervals for the means. · Examine the relationships between two variables (e.g. income and educational level) with the use of cross-tabulations and charts · Conduct hypothesis tests and draw inferences

**Mendeley:** is a free reference manager that can help you collect references, organize your citations, and create bibliographies.

**Open Epi Calculator:** For sample size calculation

**Purification of water:** Demonstrate various methods of purification of water BCQ, SAQ, OSPE, VIVA

**Domestic preparation of ORS:** Demonstrate the preparation of ORS at domestic level BCQ, SAQ, OSPE, VIVA

**Vaccination:** Recognize the importance of immunization as a critical public health intervention · Identify vaccine-preventable diseases · Identify an appropriate anatomical site for vaccination · Understand the importance of proper vaccine storage and handling · Identify the contraindications and complications associated with vaccination BCQ, SAQ, OSPE, VIVA

**Contraception:** Understand different methods of contraception and its implications in long term and emergency situation · Describe mechanism of action, benefits, limitations and complications of various BCQ, SAQ.

**Incinerator:** Understand the function of incinerator. It is a waste treatment process are described as "thermal treatment It converts waste materials into ash, flue gas and heat .This process is usually selected to treat waste that has cannot be recycled, reused in a land fill site

### **CHS TUTORIAL LIST**

<b><u>LAB SKILL</u></b>	<b><u>OBJECTIVE</u></b>	<b><u>ASSESSMENT TOOL</u></b>
Conduct Research Proposal	<ul style="list-style-type: none"><li>• Understand the tools and skills required to understand research terminology and assess published research</li><li>• Identify the types of methods best suited for investigating different types of problems and questions</li><li>• Design a research proposal</li><li>• Organize and conduct research in appropriate manner</li></ul>	BCQ, SAQ, OSPE, VIVA <b>CAT and theory class test after the end of the Module</b>
SPSS and Mendely	<ul style="list-style-type: none"><li>• Practice SPSS (Windows) to examine the distribution of different types of data with the use of descriptive statistics, tabulations and charts</li><li>• Calculate descriptive statistics, standard errors and confidence intervals for the means.</li><li>• Examine the relationships between two variables (e.g. income and educational level) with the use of cross-tabulations and charts</li><li>• Conduct hypothesis tests and draw inferences</li></ul>	

M I T : M o d e l o f i n f o r m a t i o n t r a n s	Purification of water	<ul style="list-style-type: none"> <li>• Demonstrate various methods of purification of water</li> </ul>	
	Domestic preparation of ORS	<ul style="list-style-type: none"> <li>• Demonstrate the preparation</li> <li>• of ORS at domestic level</li> </ul>	
	Vaccination	<ul style="list-style-type: none"> <li>• Recognize the importance of immunization as a critical public health intervention</li> <li>• Identify vaccine-preventable diseases</li> <li>• Identify an appropriate anatomical site for vaccination</li> <li>• Understand the importance of proper vaccine storage and handling</li> <li>• ? Identify the contraindications and</li> </ul>	
	Contraception	<ul style="list-style-type: none"> <li>• Understand different methods of contraception and its implications in long term and emergency situation</li> <li>• Describe mechanism of action, benefits, limitations and complications of various family planning methods</li> </ul>	

s

LGIS: Large group Interactive session SGD: Small group discussion

Demo: Demonstration

DIS: Dissections

PBL: Problem based learning

Modular exams will be held at the end of each module

**Field visits** help in the conversion of theoretical concepts into its practical application of Public Health in various settings. Participate actively by generating reasoning and solution strategies. Acquire a better grasp of linking their clinical knowledge with public health approach.

**Ophthalmology (Eye)**  
**Retinal Diseases, Neuro-Ophthalmology, Squint, Refraction & Occular Trauma**

**OUTCOMES:** To identify pathologies and manage diseases of retina.

**Objectives:**

1. Describe applied anatomy and physiology of vitreous and retina.
2. Discuss the differential diagnosis of Floaters, Flashes of light, blurring of vision, falling of curtain in front of eye.
3. Explain differential diagnosis of sudden or gradual painless and painful loss of vision
4. Describe the types, clinical features and management of Injuries to vitreous and retina.
5. Describe types, clinical features, differential diagnosis and management of acute posterior vitreous detachment (PVD)
6. Describe types, etiology, clinical features, differential diagnosis and management of retinal detachment
7. Describe aetiology, stages, clinical features, differential diagnosis, complications and management of diabetic retinopathy (DR), periphlebitis retinae (Eale's disease), hypertensive and atherosclerotic retinopathy.
8. Describe the age related macular degeneration (ARMD),
9. Explain the causes, signs, differentials and management of central retinal arterial and venous occlusion
10. Discuss signs, causes and management of retinitis pigmentosa (RP)
11. Present detailed history of vitreo-retinal disorders
12. Demonstrate use of laser in retinal disorders
13. Observe intravitreal injections
14. Observe surgery for vitreo-retinal disorders
15. Describe applied anatomy & physiology of 2nd to 7th cranial nerves.
16. Describe lesions, types, differential diagnosis and management of optic nerve, 3rd, 4th, 5th & 6th cranial nerves and visual pathways
17. Describe the path way of pupillary reflexes and their lesions.
18. Describe the applied anatomy and physiology of extra ocular muscles.
19. Describe the ocular motility defects Describe lesions, complications, types and management of refractive errors including Amblyopia.
20. Describe the types and management of squint

**Otorhinolaryngology (ENT)**  
**Larynx, Head & Neck**

**OUTCOME**

To take detail history, perform clinical examination, understand rationale of investigation and initiate management of common diseases of Larynx and head and neck.

**OBJECTIVES**

1. Describe applied anatomy and physiology of the larynx, Trachea and neck
2. Formulate differential diagnosis of Cough (laryngeal & pharyngeal causes), hoarseness, stridor, dyspnea, bleeding and pain in the throat.
3. Describe types and management of congenital malformations of the larynx
4. Describe types, clinical features, differential diagnosis and management of laryngeal injuries, stenosis and foreign bodies



5. Describe etiology, pathogenesis, clinical features, differential diagnosis and management of vocal nodules
6. Describe etiology, pathogenesis, clinical features, differential diagnosis and management of vocal cord paralysis
7. Describe etiology, pathogenesis, clinical features, differential diagnosis and management of acute and chronic laryngitis
8. Describe etiology, types, pathology, clinical features, differential diagnosis and management laryngeal neoplasia
9. Describe procedure, indications, contraindications and complications of tracheostomy
10. Describe procedure, indications, contraindications and complications of laryngoscopy, bronchoscopy and esophagoscopy
11. Elicit and present detailed history from a patient with laryngeal symptoms.
12. Use headlight or head mirror skillfully for examination of larynx
13. Perform external examination of the larynx
14. Perform Indirect laryngoscopy
15. Observe direct laryngoscopy and microlaryngoscopy
16. Observe tracheostomy
17. Describe applied anatomy and physiology of the salivary glands.
18. Identify and diagnose a case of salivary calculus, parotitis, sialadenitis or tumour of the salivary gland.
19. Describe pathophysiology, clinical features, investigations and management of a case of salivary calculus, parotitis, sialadenitis or tumour of different salivary glands.
20. Identify and diagnose a case of swelling or mass in the neck.
21. Describe pathophysiology, clinical features, investigations and management of a case of swelling or mass in the neck.
22. Describe types, clinical features and management of neck space infections.
23. Describe general principles, technique, types, clinical uses and safety measures of laser surgery.

24. Interpret the findings of plain X-ray floor of the mouth, orthopantomogram, sialogram, barium swallow and CT scan of the head & neck.
25. Identify and enlist uses of different surgical instruments used larynx
26. Perform and illicit findings on palpation of cervical lymph nodes.
27. Perform and illicit findings on clinical examination of a swelling or mass in the neck or salivary gland.

### **Module – XII Clinical Skills Lab Objectives**

- Perform external examination and palpation of the neck.
- Examine cervical lymph nodes.
- Perform indirect laryngoscopy.
- Examine salivary glands.
- Examine thyroid glands.

PROGRAM OUTCOMES	OUT COMES	MIT	SPECIAL PATHOLOGY	CHS	EYE	ENT	ASSESSMENT TOOLS
1,2,10,11	PATHOLOGY 1,2,3	LGIS	12,4,5,6,7,9,10,13,14,16,17,18,19,20,21,22,23,26,27,28	1-15	2,3,4,6,8,11,18,19,20,	1-10,17-23	BCQ,S, SEQ,S, OSPE, VIVA
		SGD	2,8,11,12,15,24,25	2,4,8,9,12,14 Case studies	6,7,8,17	10,15,16,20,24,25	BCQ,S, SEQ,S, OSPE, VIVA
		Lab Skills / Ward Based Teaching	9,17,26,27,28	1,3,8,10,14	1,9,10,12,13,14,15,1	11-14,25-28	OSPE, VIVA,B CQ,S
		Assignment	15,17	Case studies	11,20		BCQ,S, SEQ,S,
		Self- study	12,19,22,25		10,16,17		BCQ,S, SEQ,S, VIVA
	identify, Communicable diseases-II, Non-Communicable diseases & Parasitic diseases. <b>EYE:</b> Identify pathologies and manage diseases of retina. <b>ENT:</b> understand	Student's presentations	29,30	Case studies presentation	11,17		BCQ,S, SEQ,S, VIVA

## **General Surgery**

**At the end of MBBS 4th year Clinical Rotation, every student should be able to:**

1. Apply knowledge of basic and clinical sciences to formulate a probable diagnosis.
2. Interpret surgical diseases on the basis of imaging technique/s.
3. Demonstrate knowledge of peri and post-operative management.
4. Demonstrate knowledge of sterilization and asepsis.
5. Demonstrate professional behavior in theatre.
6. Demonstrate knowledge of Fluid electrolyte balance and Acid Base Balance.
7. Blood transfusions, complications & blood product. Writing blood Transfusion notes.
8. Demonstrate all aspects of Shock

### **Plastic Surgery**

1. Differentiates between malignant and benign ulcer
2. Differentiates between malignant and benign nevi
3. Demonstrate signs of vascular lesion
4. Demonstrate skin and subcutaneous infections
5. Demonstrate congenital deformities of face lips and palate
6. Demonstrate types of skin grafts and causes of rejections

### **Pediatric Surgery**

1. Demonstrate physical examination of infants
2. Demonstrate signs / symptoms of dehydration and fluid overload
3. Demonstrate the knowledge of fluid and electrolyte in children
4. Demonstrate the radiological feature and S/S of congenital causes of intestinal obstructions
5. Demonstrate common congenital Urological problems
6. Learns common surgical diseases in neonate and children
7. Learns problems of hypothermia during surgery

### **Urology**

1. Demonstrate Knowledge of Renal function test and Acute & chronic renal failure
2. Demonstrate knowledge of obstructive uropathology
3. Demonstrate knowledge of congenital problems& calculus uropathy
4. Demonstrate knowledge of urogenital Tumors
5. Demonstrate knowledge of renal tract infection
6. Identify Radiological features of urological deformities

## **Pediatrics**

### **Introduction**

The curriculum of Pediatric is based on common health related problems of Pakistani children. A medical student should have the minimum knowledge and skills to provide comprehensive health care to children, counsel mothers and care givers on immunization, nutritional diet, and risk factors. Medical students should be sensitive to children needs and behavior.

From MBBS fourth to fifth year, students will have several learning opportunities in different clinical settings to achieve the objectives.

### **Outcomes**

#### **Medical Knowledge**

- Perform age-appropriate differential diagnosis and critically appraise information to make evidence based decisions
- Demonstrate the ability to generate an age-appropriate differential diagnosis based on the interview and physical examination.

#### **Clinical Care**

- Demonstrate an ability to perform an age-appropriate history and physical examination in children of all ages.
- Interpret the results of common diagnostic tests with an emphasis on age related norms.
- Search for relevant information using data sources (textbooks, electronic searches) and critically appraise the information obtained to make evidence based decisions in patient care.

#### **Professional Behavior**

Demonstrate a positive attitude and regard for education by demonstrating universal attendance, punctuality, intellectual curiosity, initiative, honesty, responsibility, dedication to being prepared, maturity in soliciting, accepting, and acting on feedback.

#### **Communication Skills**

- Demonstrate communication skills with patients and families that convey respect, integrity, flexibility, sensitivity, and compassion while avoiding use of medical jargon.
- Present a complete, well-organized verbal and written summary of the patient's history and physical examination findings, including an assessment and plan modifying the presentation to fit the time constraints and educational goals of the situation.

### **Learning Objectives**

#### **History taking:**

1. Taking and presenting age appropriate detailed Pediatric history.
2. Neonatal detailed history taking with special emphasis on antenatal history.

#### **Examination:**

3. Examination of newborn.
4. Conducting physical examination of children. Know the normal and abnormal findings and their causes.
5. Understanding normal growth and development.

**General Physical Examination:**

1. General physical examination and Anthropometry.
2. Performing anthropometry and its interpretation.
3. Plot the anthropometric measurements on the growth charts.
4. Basics about the growth charts.
5. Know the causes of abnormal GP examination findings.

**Respiratory Examination:**

1. Conduct Chest examination: anterior, posterior and lateral.
2. Signs of respiratory distress

**Abdominal examination:**

1. Perform the abdominal examination: inspection, palpation, percussion and auscultation.
2. Examine for visceromegaly.

**Central nervous system examination:**

1. Perform the GCS examination and know the variation in GCS scoring system of infants.
2. Perform lower motor examination.
3. Signs of Upper motor neuron lesion.
4. Cranial nerve examination.
5. Examine for the Cerebellar signs.

**Cardiovascular Examination:**

1. Perform precordial examination.
2. Examine the peripheral pulses.

**Newborn examination:**

1. Perform head to toe examination of a neonate.
2. Perform and explain the APGAR scores.
3. Determine the gestational age based on Ballard score.

## COMMUNICATION LEADERSHIP AND PROFESSIONALISM

At the end of each academic year student will be able to

Learning objectives	Instructional strategies
<ul style="list-style-type: none"> <li>Communicate in an effective and engaging way for the recipient</li> <li>Communicate bad news appropriately</li> <li>Communicate effectively about ethical issues with patients and family</li> <li>Disclose harmful patient safety incidents to patients and their families accurately and appropriately</li> </ul>	<ul style="list-style-type: none"> <li>Small group discussion video presentation with multiple scenarios</li> <li>Role play</li> <li>Demonstration on Standardized patients</li> <li>Small group exercises</li> <li>Student's presentations.</li> <li>PBL, PSIL, Journal club</li> </ul>
<ul style="list-style-type: none"> <li>Practice skills to engage in conflict productively and work toward conflict resolution</li> </ul>	
<ul style="list-style-type: none"> <li>Avoid conflicts of interest</li> <li>Relates to the patient respectfully including ensuring confidentiality, privacy and autonomy</li> </ul>	

## INTEGRATED PATIENT SAFETY CURRICULUM

S.No	TOPICS/ THEME	LEARNING OUTCOMES	LEARNING OBJECTIVES	INSTRUCTIONAL STRATEGIES	ASSESSMENT TOOLS
1.	<b>Introduction to Patient Safety</b>	<ul style="list-style-type: none"> <li>The learners shall be able to                             <ul style="list-style-type: none"> <li>Understand the importance of patient safety in healthcare.</li> </ul> </li> <li>Recognize common types of medical errors and their impact.</li> </ul>	<ul style="list-style-type: none"> <li>Define patient safety and its relevance to clinical practice.</li> <li>Identify and categorize different types of medical errors.</li> <li>Recognise the Role of a doctor in a Culture of Safety and in Building Safer, More Reliable Systems</li> </ul>	LGIS x 1	MCQ SEQ SAQ MEQ EMQ
2.	<b>From Error to Harm</b>	<ul style="list-style-type: none"> <li>The learners shall be able to                             <ul style="list-style-type: none"> <li>Understand the progression from medical error to patient harm.</li> <li>Identify factors contributing to patient harm.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Explain the mechanisms through which errors lead to harm.</li> <li>Discuss preventive strategies to minimize harm.</li> </ul>	SGD x 1 Interactive workshops x 1	MCQ SEQ SAQ MEQ EMQ

			<ul style="list-style-type: none"> <li>Describe the Swiss Cheese Model</li> </ul>		
3.	<b>Human Factors and Safety</b>	<ul style="list-style-type: none"> <li>The learners shall be able to               <ul style="list-style-type: none"> <li>Understand the role of human factors in patient safety.</li> <li>Apply human factors principles to clinical practice.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Explore the Science of Human Factors</li> <li>Design Principles to Reduce Human Error</li> <li>Recognize the Risks and Rewards of Technology</li> <li>Define human factors and their impact on healthcare delivery.</li> <li>Analyze case studies to identify human factor issues.</li> </ul>	LGIS x 1 SGD x 1	MCQ SEQ SAQ MEQ EMQ
4.	<b>Teamwork and Communication</b>	<ul style="list-style-type: none"> <li>The learners shall be able to               <ul style="list-style-type: none"> <li>Appreciate the importance of effective teamwork and communication.</li> <li>Develop skills for effective interdisciplinary communication.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Discuss the fundamentals of Teamwork and Communication</li> <li>Recognize the Tools and Techniques for Effective Communication</li> <li>Prioritize Safety During Transitions Across the Continuum of Care</li> <li>Identify key components of effective teamwork.</li> <li>Practice communication techniques such as SBAR (Situation, Background, Assessment, Recommendation)</li> </ul>	LGISx1 SGD x 1 Or Role play x1 Communication skills workshop x1	MCQ SEQ SAQ MEQ EMQ
5.	<b>Responding to Adverse Events</b>	<ul style="list-style-type: none"> <li>The learners shall be able to               <ul style="list-style-type: none"> <li>Learn to respond appropriately to adverse events.</li> <li>Understand the importance of disclosure and apology.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Explain the steps to take following an adverse event.</li> <li>Practice delivering a disclosure and apology.</li> </ul>	LGISx2 Skill Lab x 2 Standardized patient encounters. Role play x1	MCQ SEQ SAQ MEQ EMQ OSCE



6.	<b>Root Cause Analyses and Actions</b>	<ul style="list-style-type: none"> <li>• The learners shall be able to               <ul style="list-style-type: none"> <li>○ Conduct root cause analysis (RCA) for adverse events.</li> <li>○ Implement actions based on RCA findings.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Outline the steps involved in conducting an RCA.</li> <li>• Develop action plans to address root causes.</li> <li>• Discuss Actions to Build Safer Systems</li> </ul>	LGIS x1 Skill Lab x 1 Problem-based learning session x1	MCQ SEQ SAQ MEQ EMQ OSCE/Action plan presentations
7.	<b>Achieving Total Systems Safety</b>	<ul style="list-style-type: none"> <li>• The learners shall be able to               <ul style="list-style-type: none"> <li>○ Understand the concept of total systems safety.</li> <li>○ Develop strategies to promote systems- based safety improvements.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Explain the principles of systems safety in healthcare.</li> <li>• Identify systems-based approaches to improving safety.</li> <li>• Suggest Eight Recommendations for Total Systems Safety</li> <li>• Support the Health Care Workforce with Patients and Families</li> </ul>	SGD x 2	MCQ SEQ SAQ MEQ EMQ
8.	<b>Pursuing Professional Accountability and a Just Culture</b>	<ul style="list-style-type: none"> <li>• The learners shall be able to               <ul style="list-style-type: none"> <li>○ Appreciate the balance between accountability and a just culture.</li> <li>○ Foster a culture of safety and learning.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Define professional accountability and just culture.</li> <li>• Develop strategies to implement a just culture in clinical settings.</li> </ul>	LGIS×1, SGD×1  Bed side teaching x 1	MCQ SEQ SAQ MEQ EMQ OSCE

## **LEARNING RESOURCES**

### **Pathology**

#### **Recommended Books:**

- Cotran RS, Kumar V and Collins T. Robbin's Pathologic Basis of Disease (8<sup>th</sup> ed.). Philadelphia: W.B. Saunders. 2010.
- Walter JB and Talbot IC. Walter and Israel's General Pathology (7<sup>th</sup> ed.). New York: Churchill Livingstone. 1996.
- Kumar V, Cotran RS, and Robbins SL. Basic Pathology (8<sup>th</sup> ed.). Philadelphia: W.B. Saunders. 2007.
- Rubin E, Pathology (4<sup>th</sup> ed.) Philadelphia: Lippincott-Raven. 2005
- Harsh Mohan. Textbook of Pathology (6<sup>th</sup> ed.). Jaypee brothers. 2010.
- Damjanov I and Linder J. Anderson's Pathology (10<sup>th</sup> ed.). Mosby, Elsevier Inc. 2009.
- Rosai J. Rosai and Ackerman's Surgical Pathology (9<sup>th</sup> ed.). Mosby, Elsevier Inc. 2009.

#### **ATLAS:**

- Wheeler P et al. Basic Histopathology: A Color Atlas and Text (2<sup>nd</sup> ed.). Edinburgh: Churchill Livingstone. 1990.
- Harsh Mohan. Pathology practical book (2<sup>nd</sup> ed.). Jaypee brothers, 2007

#### **WEBSITES:**

- The internet pathology laboratory for medical education
- Library.med.utah.edu/WebPath/webpath.html

### **Community Health Sciences**

#### **Recommended Books**

- Park's Textbook of Preventive and Social Medicine- K.Park 20<sup>th</sup> Edition
- Public Health In Community Medicine by Mohammad Iliyas- Iliyas.Shah.Ansari

### **Ophthalmology (EYE)**

#### **Recommended Books**

- Basic Ophthalmology 2016 – By Jogi
- Clinical Ophthalmology 2016 –By Jotoi
- Kanski Ophthalmology 8<sup>th</sup>.ed –By Kanski
- Ophthalmology Undergraduates 2015 –By Devi PG

## **Otorhinolaryngology(ENT)**

### **Recommended Books**

- Lange's Current Otolaryngology, 2008 edition -By L. Lalwani.
- Diseases of Ear, Nose & Throat, 7<sup>th</sup> edition-By P.L. Dhingra
- Logan Turner's Diseases of ENT, 11<sup>th</sup> edition -By P.M. Stell
- Principles & Practice of Oto-rhino-laryngology, 6<sup>th</sup> edition -By Iqbal Hussain Udaipurwala.
- Oto-rhino-laryngology - A problem oriented approach, 2<sup>nd</sup> edition- By Iqbal Hussain Udaipurwala.
- Scott Brown's Otolaryngology, 8<sup>th</sup> edition. For references and selected topics

### **Atlas:**

A color atlas of Otorhinolaryngology by Bruce Benjamine. Martin Dunitz. 6 volumes.

### **Websites:**

<https://tradownload.co/results/cummings-otolaryngology.html>.

## ACADEMIC CALENDAR

### **BAHRIA UNIVERSITY HEALTH SCIENCES CAMPUS KARACHI**

#### **Fourth Professional MBBS**

#### **Batch 2021-2026**

#### **Academic Calendar**

#### **Revised**

Dated: 28 Jan 2025

#### **SESSION STARTS**

9th December 2024 (Monday)

#### **TENTH MODULE (12 WEEKS)**

Module Starts	-	9th December 2024 (Monday)
Module Ends	-	28th Feb 2025 (Friday)
Theory Examination	-	3rd, 4th, 5th & 6th Mar 2025 (Monday to Thursday)
OSPE / Viva Examination	-	7th, 10th & 11th Mar 2025 (Friday, Monday & Tuesday)

#### **ELEVENTH MODULE (12 WEEKS)**

##### **Pre-Vacation Session (03 Weeks)**

Module Starts	-	12th Mar 2025 (Wednesday)
Module Break	-	28th Mar 2025 (Friday)

<b>Eid-ul-Fitr Vacations*</b>	-	31st Mar 2025 to 4th Apr 2025 (Monday to Friday)
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##### **Post-Vacation Session (09 Weeks)**

Module Starts	-	7th Apr 2025 (Monday)
Module Ends	-	6th Jun 2025 (Friday)

<b>Eid-UI-Adha Vacations*</b>	-	9th Jun 2025 to 20th Jun 2025
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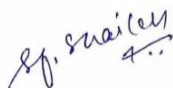
Theory Examination	-	23rd, 24th, 25th & 26th Jun 2025 (Monday to Thursday)
OSPE / Viva Examination	-	27th, 30th Jun & 1st Jul 2025 (Friday, Monday & Tuesday)

#### **TWELFTH MODULE (12 WEEKS)**

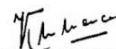
Module Starts	-	2nd Jul 2025 (Wednesday)
Module Ends	-	19th Sep 2025 (Friday)
Theory Examination	-	22nd, 23rd, 24th & 25th Sep 2025 (Monday to Thursday)
OSPE / Viva Examination	-	26th, 29th & 30th Sep 2025 (Friday, Monday & Tuesday)

#### **FINAL EXAMINATION:**

-	<b>November/December 2025</b>
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**PROF. DR. SAIFULLAH SHAIKH**  
Academic Coordinator (Medical)  
BUHSCK



**DR. KHALID MUSTAFA**  
Vice Principal (Medical)  
BUHSCK

\* Subject to Sighting of Moon