Frontier Medical & Dental College Study Guide
(Adapted from Bahria University Guide)

3rd Year MBBS





FRONTIER MEDICAL & DENTAL COLLEGE,
FMDC ABBOTTABAD

FMDC STUDY GUIDE

The study guide serves as a useful handy resource, helping you to navigate your journey at FMDC.

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 Frontier Medical & Dental College are expected to follow.

Vision Statement of FMDC

To become an internationally recognized medical institution that contributes towards development of community health through excellence in medical education.

Mission Statement of FMDC

To attain highest standard in teaching, learning and research according to WFME and PMDC standards.

Program Learning Outcomes (PLOs)

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

1.0 Knowledge

1.1 Explain the microscopic, macroscopic and gross structure of different organ systems in the human body, including musculoskeletal system with their clinical correlation.
1.2 Explain the normal functions of the human body at the molecular, cellular and organ level with their regulation.
1.3 Describe the basic biochemical reactions, synthesis and function of body enzymes and hormones, metabolism of carbohydrate, proteins and lipids with their clinical correlation and basics of human genetics.
1.4 Describe the general principles and concepts of diseases along with etiology, pathogenesis, gross and microscopic morphology of diseases in different organ systems.
1.5 Describe the pharmacokinetics and pharmacological properties of different drugs in common use for human diseases with their different actions, adverse effects and interactions.
1.6 Describe life cycle, mode of transmission and microbiological properties of pathogens affecting human body including bacteria, viruses and parasites, with emphasis on body defense mechanism with their immunological bases and autoimmune diseases.
1.7 Recognize basics of forensic medicine and toxicology along with their clinical applications.
1.8 Recognize clinical presentations, differential diagnosis, investigations and principles of treatment of common diseases affecting the pediatrics age group including congenital and developmental diseases.
1.9 Recognize clinical presentations, differential diagnosis, investigations and principles of treatment of common internal medicine, psychiatric and dermatological diseases including medical emergencies.
1.10 Recognize clinical presentations, differential diagnosis, investigations and principles of treatment of common surgical diseases including diseases of the eye and ear and their surgical emergencies.
1.11 Recognize clinical presentations, differential diagnosis, investigations and principles of treatment of common gynecological diseases and stages of normal and abnormal pregnancy and delivery with their

complications.
1.12 Recognize basics of biostatistics and methods of medical research.
1.13 Explain the principles of problem solving & management strategies.
1.14 Analyze symptoms and signs of different diseases with their impact in differential diagnosis.
1.15 Interpret the results of commonly used diagnostic procedures (laboratory and radiological).

2.0 Skills

2.1 Perform different laboratory experiments with proper handling of laboratory tools.
2.2 Construct a complete medical history in the outpatient, inpatient or emergency settings.
2.3 Perform and document a complete or focused physical and mental examination with eliciting different special physical signs essential for diagnosing different diseases.
2.4 Illustrate the principles and international guidelines for management of traumatic conditions with emphasis on the severely polytraumatized patients.
2.5 Perform basic clinical procedures under strict supervision as and accordingly listed.

3.0 Attitude

3.1 Show respect, empathy and responsibility with the patients and respect for their privacy and dignity.
3.2 Demonstrate communication with the patients and to provide knowledge to patients and their families about the possible therapies and risks in alternative treatment along with obtaining informed consent.
3.3 Demonstrate how to work with the colleagues in a team and to seek consultation from senior doctors.
3.4 Illustrate and present different case studies and give accurate and clear oral summary of the patient's illness.
3.5 Illustrate ethical behavior expected from the doctors towards patients with recognition of patients' rights, particularly as regards to confidentiality and informed consent, access to health care for the members of the underserved populations.
3.6 Demonstrate professional image in manner, dress, speech and interpersonal relationships that is consistent with the accepted contemporary medical profession standards.

7 Star Competencies

The graduate doctor must be a:

1. **Skillful** – Demonstrates proficiency in clinical and procedural skills, applying them safely and effectively in patient care.
2. **Knowledgeable** – Possesses comprehensive medical knowledge integrating basic, clinical, and applied sciences.
3. **Community Health Promoter** – Advocates for public health, engages in preventive care, and addresses community health challenges.
4. **Critical Thinker** – Analyzes clinical problems, applies evidence-based reasoning, and makes sound clinical decisions.
5. **Professional** – Upholds ethical standards, empathy, and integrity while respecting patients' rights and dignity.
6. **Scholar** – Engages in lifelong learning, research, and academic activities to advance medical practice.
7. **Leader and Role Model** – Demonstrates leadership in healthcare teams, mentors peers, and serves as an example for future professionals.

PMDC'S 7 STAR DOCTOR



POLICIES

This section summarizes some key aspects of policies in vogue at FMDC. The student is advised to read the detail in the latest edition of FMDC'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 FMDC 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 FMDC 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 college.
- Consumption or possession of alcoholic drinks or other intoxicating drugs within the college 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 were permitted and in accordance with the prescribed rules and regulations.
- Collecting donations or receiving funds or pecuniary assistance for or on behalf of the college except with the written permission of the Head of the College 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 FMDC 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 college 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 FMDC.

- 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 FMDC or outside) or any act which is prejudicial to the interests of FMDC; 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 college shall be responsible for the maintenance of good behavior and law and order amongst the students on the premises of the college.

Penalties:

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

Penalty Code	Penalty	Awarding Authority	Appellate Authority
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	Head of FMDC
3	Expulsion from educational visits and sports tours	Director Admin	Head of FMDC
4	Suspension from classes for a period not exceeding two weeks	Director/ Principal	Head of FMDC
5	Monetary penalties	Director/ Principal	Head of the FMDC
6	Removal from a position of authority on the advice of the Student Advisor / HOD	Director/ Principal	Head of the FMDC
7	Expulsion from the hostel	Head of FMDC	Next Higher Authority
8	Cancellation of remission of fees/assistantship/scholarship etc.	Head of FMDC	Next Higher Authority
9	Rustication for one or more semester	Head of FMDC with concurrence of BUHO	Rector
10	Expulsion from FMDC	Head of FMDC with concurrence of BUHO	Rector

Procedure In case of breach of discipline:

A teacher, a staff member 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/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 FMDC.

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 FMDC, 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 FMDC, public authority, a fellow student or an employee of FMDC, 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 FMDC 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 Trousers (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 FMDC 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 FMDC after payment of fine.

Personal behavior

FMDC 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 Campus 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 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 FMDC 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 College campus has a well-stocked library, 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 college 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

DAY	TIMINGS
WEEKDAYS: MON- SAT	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 cafeteria 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

Chairperson	Prof.Dr.Munir Tahir, FMDC
Secretary	Mr. Arif Zaman Student section
Members	• Prof. Dr. Johar Ali Principal FMDC • Prof. Dr. Saif ur Rehman, Physiology Dept FMDC • Assistant Prof.Dr.Saadia Community Medicine, FMDC • Mr.Y.M.Khokhar Exam Dept FMDC
Co-opted member	Varies according to the case

Students are to avoid the following:

a) Unauthorized use of the college & 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 FMDC or the affiliated hospitals.
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.

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Student guilty of an act of possession/ consumption/ usage/ supplying of intoxication drugs/ Alcoholic drinks in premises of FMDC and or entering FMDC or events of FMDC being intoxicated

and or during official/ informal off-site events of the college, shall be liable to expulsion from FMDC.

Criminal conviction

a) Applicants are required to inform FMDC of any criminal conviction. Full details are to be provided.
b) The college 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 FMDC 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 FMDC.

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	***Minor punishment*** a Warning letter (Copy to parents) b. Fine of Rs.2,000. ***Major punishment*** a. Expulsion from the University b. Fine Rs. 5000/00. c. Letter to parents
Possession of written material, relevant to the subject/paper concerned. • 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. • Possession of Mobile phones, Smartwatches, PDAs and other electronics devices, whether or not carrying any relevant or irrelevant material in the memory.	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.	***Minor Punishment*** a. Cancellation of the relevant paper. b. Fine Rs 2,000/-. c. Letter of Warning.

	Major Punishment 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, asper 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	***Minor Punishment*** a. Grade 'F' in the course. b. Fine Rs 5,000. c. Letter of Warning. ***Major Punishment*** 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 at FMDC.

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 FMDC

FOCAL PERSONS	
Prof. Dr. Munir Tahir Dean & Prof of Biochemistry FMDC Associate Prof.Dr.Abir Hussain Dean Dental section	Cell: 03345253446 Email:drmunirtahir355@gmail.com Cell:03339108387
Prof. Dr. Johar Ali Principal & HOD General Surgery	Cell: 03009110744
INQUIRY COMMITTEE	
Prof.Dr.Saif-ur-Rehman; Physiology Dept FMDC Associate.Prof.Dr.Irfan;Anatomy Dept	Cell:03213025911 Cell:03370438990
Prof.Dr.Safdar Malik Asst.Prof.Dr.Zeeshan Baig HOD Maxillofacial surgery	Cell:03145154748 Cell:03214669917
Mr.Arif Zaman student section FMDC Mr.Khurram Shehzad student section FMDC	03009118232 03315719810

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 though 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 feel that its needs to be complainant, 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's violet 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), 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 FMDC.
b) HOD.
c) FMDC 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, practical's, 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 FMDC.

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 Attendance 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 Attendance Department - every Monday.
- Attendance submitted later than Friday of the current week will not be accepted.

FMDC 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.

RESEARCH

FMDC 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 supervisor of faculty members.

FMDC 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,Xll,**
Final Year	**Modules**	**XIII,XIV,XV**

The Examining subjects are

- **FIRST AND SECOND YEAR MBBS**
  - Anatomy
  - Physiology
  - Biochemistry
- **THIRD YEAR MBBS**
  - General Pathology
  - Pharmacology
  - Forensic Medicine
- **FOURTH YEAR MBBS**
  - Special pathology
  - Community Health Sciences
  - Ophthalmology
  - Otorhinolaryngology
- **FINAL YEAR MBBS**
  - Medicine & Allied
  - Surgery & Allied
  - Pediatric medicine
  - Obstetrics and Gynecology

You will be taught clinical subjects from 3rd 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, Gynae/Obs and pediatrics will be counted from third year.** You will also be taught ethics, Islamiyat, 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,
- Practical's,
- 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 lays 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.

ASSESMENT POLICY

The student at FMDC 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 consist of 03 OSPE sessions

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**

PASS PERCENTAGE

Passing marks in each subject shall be 65% with 55 % in theory and 55% 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.
- The Elective will be planned during the **WINTER 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 FMDC.
- 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 Dean.
- 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 BU & FMDC.
- 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 FMDC. This simply implies that the college authorities are aware that the student is away for this period so that admission is not cancelled.
- The student will ensure that the Elective Supervisor completes an evaluation report at the end of the elective.
- FMDC 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.

Within FMDC & Attached SJTH & KATH always display your Student Identity Card!





WHOM TO CONTACT?

Administration FMDC

Prof. Dr. Munir Tahir Dean MBBS section FMDC

Prof.Dr.Syed Abir Hussain Dean Dental section FMDC

Prof. Dr. Johar Ali Principal MBBS section FMDC

Prof.Dr.Wahid Principal Dental section

Mr.Amir Malik HR & Finance Department

Mr.Awais Finance Department

Chairperson: Madam Dr. Shahina Jamil Khan FMDC

Dental & MBBS sections

CURRICULUM GUIDELINES

Module VII	Cell Injury, Inflammation, General and Special Bacteriology Pain Relief and Medico Legal Procedures
Duration	**12 weeks**
Module VIII	Coagulation Disorders, Infections and Tumors with their Treatment Causes of Unnatural Death with Tissue changes, Special Bacteriology and Virology
Duration	**12 weeks**
Module IX	Basic and Applied Immunology, Parasitic and Mycotic Diseases, Genetics; Hormonal Therapy; Medico Legal aspect of Sexual Offences and Toxicology
Duration	**12 weeks**

Module-VII

Cell Injury, Inflammation, General and Special Bacteriology Pain-Relief and Medico Legal Procedures

Course Content

General pathology/microbiology/pharmacology/toxicology Cell injury/adaptations/inflammation, diseases caused by inflammation-chronic and acute/wound healing Analgesics/anti-inflammatory- steroidal and non-steroidal agents/immune suppression/legal procedure/ traumatology

Course Learning Outcomes

1. **Understand Core Biological Mechanisms and Laboratory Diagnostics**

   Recognize the essential structure and function of bacterial cells, including growth, genetics, resident flora, and pathogenesis. Apply this understanding in laboratory settings to diagnose diseases, considering antibiotic resistance and vaccines while following established protocols and standards.

2. **Analyse Pathophysiological and Pharmacological Processes**

   Describe and correlate fundamental pathological concepts such as cell injury, adaptation, inflammation, and wound healing. Integrate knowledge of pharmacokinetics and pharmacodynamics to interpret drug actions, particularly those affecting the autonomic nervous system and pain, and assess factors influencing drug interactions within the human body.

3. **Apply Forensic Principles in Clinical and Legal Contexts**

   Interpret fundamental concepts of forensic medicine, with an emphasis on legal procedures, trauma assessment, and medicolegal responsibilities within the Pakistani legal system.

Objectives

1. Describe drug development, preclinical & clinical trials of drugs
2. Recognize importance of rational prescribing of drugs.
3. Differentiate and compare different cellular adaptive responses along with examples.
4. Describe the stepwise mechanisms for cell injury caused by hypoxia, ischemia, reperfusion and free radicals.
5. Differentiate between reversible and irreversible cell injury based on morphological changes in the different morphological patterns of Necrosis.
6. Explain the mechanisms of apoptosis with the help of flow diagrams.
7. Describe the morphological changes and clinical consequences of different intracellular accumulations (lipids, glycogen, pigments)
8. Differentiate between dystrophic and metastatic calcification based on underlyingcause and morphological appearance.
9. Compare dystrophic and metastatic calcification based on underlying cause and morphological appearance.
10. Differentiate between self- inflicted, defense wound, or wounds produced by criminal intent
11. Describe medico legal aspects of different mechanical injuries
12. Compare and contrast between ante-mortem and postmortem wounds
13. Describe the causes of death and methods of dating of wound
14. Describe the medico legal aspect of chest, abdominal and neck injuries
15. Identify the injuries caused by firearm and estimate the distance between firearm and body
16. Describe the precautions adopted in autopsy procedure and preservation of bullets in death from firearms
17. Explain the various types of skull fractures and coup and counter coup injuries with

examples

18. Discuss the role of forensic expert in explosive (blast) injuries
19. Describe the injuries caused by road traffic accidents to pedestrians, vehicle occupants andmotor cyclists.
20. Interpret the nature of injuries in the light of Qisas and Diyat Ordinance 1991
21. Discuss medico-legal aspect of injury and death caused by starvation, cold, heat, electricity, lightening & Burns.
22. Discuss the classification, effects and postmortem appearance of burns
23. Discuss the role of a medical officer handling a case of death due to burns
24. Describe the common pathological features of all types of non –accidental violence in the family e.g. Child abuse/ battered baby and laws related to it.
25. Associate different routes of administration of drugs with their advantages and disadvantages
26. Infer the principles and factors affecting absorption, distribution, metabolism and excretion of drugs
27. Calculate bioavailability of drug, volume of distribution, clearance, half-life and extraction ratio from the given data
28. Articulate the principles and factors affecting the mechanism of action, actions &adverse effects of drugs
29. Describe various types of drugs- receptor interactions
30. Interpret various types of dose-response curves.
31. Categorize the principles governing Drug-Drug interactions.
32. Plot the given values on the graph paper and calculate therapeutic index and therapeutic window from it
33. Interpret competitive, non –competitive antagonist and antagonism on the given graphs
34. Recognize & diagnose various types of adverse Drug reactions
35. Deduce drug treatment of various types of adverse Drug reactions
36. Differentiate b/w drug and poison
37. Describe the classification, administration, elimination and factors affecting action of poison
38. Discuss the role of a doctor in the management of poisoning
39. Discuss the analytical procedure to screen a poison in a forensic lab
40. Elaborate the actions of local and systemic chemical mediators of inflammation with the vascular and cellular changes seen in inflammation
41. Recognize and differentiate the different morphological patterns of acute inflammation.
42. Describe chronic granulomatous inflammation with regards to the underlying mechanism, morphological appearance, cellular response and clinical management.
43. Discuss the effects of different cytokines in the acute phase responses.
44. Contrast the mechanism of wound healing by primary and secondary intention based on morphological appearance and clinical response
45. Relate the effects of different local and systemic factors to delay in wound healing
46. Describe abnormal wound healing based on underlying abnormality of repair process
47. Discuss the overview of general bacteriology.

48. Discuss the significance of medically important bacteria on the basis of their classification.
49. Describe the structure of bacterial cell wall.
50. Correlate pathogenesis of bacteria with host defenses.
51. Correlate the bacterial genes to cause antibiotic resistance.
52. Explain antimicrobial drug stewardship.
53. Explain the normal flora as permanent resistant of certain body sites.
54. Describe the types and principles of sterilization.
55. Discuss the effectiveness of bacterial vaccine
56. Describe the growth cycle of bacteria and their response to antibiotic during growth cycle
57. Describe the types and principles of disinfection.
58. Describe the pathogenesis, clinical presentation, diagnosis of staphylococcus.
59. Describe the pathogenesis, clinical presentation, and diagnosis of streptococcus.
60. Describe the pathogenesis, clinical presentation and diagnosis of Gram-negative cocci.
61. Describe the pathogenesis, clinical presentation and diagnosis of Gram-positive sporeforming rods.
62. Discuss the pathogenesis, clinical presentation and lab diagnosis of non-spore forming Grampositive rods.
65. Explains the ethical principles by telling the laboratory procedure to make patients diagnosis. 64.
66. Describe the mechanism of action, clinical uses & adverse effects of steroidal anti-inflammatory drugs (glucocorticoids)
67. Describe the mechanism of action, clinical uses & adverse effects of non-steroidal anti-inflammatory drugs
68. Describe the mechanism of action, clinical uses & adverse effects of drugs acting on opioid receptors (meu, kappa, lamda, delta)
69. Describe the prophylactic and acute treatment of Migraine
70. Diagnose & differentiate common types of arthritis
71. Describe drug treatment of rheumatoid arthritis, osteoarthritis & gout
72. Describe the various types of law and relation with medicine
73. Discuss the ethics of professional behavior of a doctor
74. Describe the various types of inquiry of all unnatural deaths
75. Discuss the power and sentence authorized to Pakistani Courts
76. Describe the types of witnesses, evidence and procedure of recording medical evidence in thecourt.
77. Describe the protocol of appearance in the courts
78. Discuss the constitution and functions of PMC (Pakistan Medical Council) including the privileges and obligations of a registered medical practitioner.
79. Discuss professional misconduct, professional secrecy, privileged communication and medical negligence
80. Discuss the ethical principles in medical examination, including the importance of obtaining consent.
81. Describe the mechanism, action, clinical uses and adverse effects of drugs acting on receptors of parasympathetic nervous system (Muscarinic, nicotinic)
82. Discuss the clinical features and medicolegal importance of poisoning by organophosphate

compounds (insecticides)

83. Describe the mechanism, actions, clinical uses and adverse effects of drugs acting on receptors of parasympathetic nervous system (muscarinic, nicotinic)
84. Discuss the clinical features and medico legal importance of poisoning by organophosphate compounds (insecticides)
85. Describe the mechanism, actions, clinical uses and adverse effects of drugs acting on receptors of sympathetic nervous system (alpha, beta, dopamine)
86. Discuss the diagnosis and management of Bronchial Asthma
87. Describe the drug treatment of Bronchial Asthma
88. Prescribe treatment of simple cough
89. Describe the various types of law and relation with medicine
90. Discuss the ethics of professional behavior of a doctor
91. Describe the various types of inquiry of all unnatural deaths
92. Discuss the power and sentence authorized to Pakistani Courts
93. Describe the types of witnesses, evidence and procedure of recording medical evidence in the court.
94. Describe the protocol of appearance in the courts
95. Discuss the constitution and functions of PMC (Pakistan Medical Council) including the privileges and obligations of a registered medical practitioner.
96. Discuss professional misconduct, professional secrecy, privileged communication and medical negligence
97. Discuss the ethical principles in medical examination, including the importance of obtaining consent.
98. Discuss the clinical features and medicolegal importance of poisoning by organophosphate compounds (insecticides)
99. Understand different methods for making instrument and surfaces to be used free from microorganism
100. Understand the interventions to control the communicable diseases in daily routine life as well as in catastrophic situation

HO Protocol of Diarrhea
icken Pox
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phoid
cident and emergencies
saster Management
olera

101. Establish a therapeutic and professional relationship with patients and their families. Explore their own competence with regards to the dimensions of difference in opinion and attitudes.
102. Demonstrate caring, compassion, empathy and respect

Ds	D	S	athology	armacology	Forensic Med	m/ LS/ PR & Eth	Assessment	
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LAB SKILLS / PRACTICALS MODULE – VII

PHARMACOLOGY:

1. Identify the sources of drugs
2. Comprehend basic pharmacological terminologies
3. Identify the pharmaceutical preparations. (Part-1)
4. Identify the pharmaceutical preparations. (Part-2)
5. (a) Identify the units of weights and measures belonging to different systems
   (b) Interconvert the units of weights & measures
6. Identify the different routes (I/V, I/M, S/C, I/P, I/D, topical) of drug administration in laboratory animals (mice, rat, rabbit, frog)
7. (a) Prepare one percent stock solution of $KMnO_4$
   (b) Find out the ingredients needed to prepare 100 ml of 0.01 % solution of $KMnO_4$ from a stock solution of 1% strength
8. Calculate the drip rate in adults and children
9. Find out the amount of the ingredients needed to prepare 60ml of 5% dextrose in normal saline solution
10. Calculate the dose of drugs in adults & children
11. Study the given case 1 and discuss it in small group session
12. Study the given case 2 and discuss it in small group session
13. Application of statistics in biological experiments

Pathology:

Identify and describe the gross morphological features of following:

1. Hyperplasia (Prostate)
2. Atrophy (Uterus, kidney)
3. Hypertrophy (Heart)
4. Infarction (Bowel)
5. Caseation necrosis (Lymph node)
6. Gangrene (intestine)
7. Calcification (uterus)
8. Acute Inflammation (Appendix)
9. Chronic Inflammation (Gall Bladder)

Identify and describe the microscopic features of following:

1. Hyperplasia (prostate, endometrium)
2. Hypertrophy (heart)
3. Metaplasia (esophagus)
4. Coagulative necrosis (kidney)
5. Liquefactive necrosis (brain)
6. Caseation necrosis (Lymph Node)
7. Fatty change (Liver)

8. Hemosiderosis (liver)
9. Calcification
10. Acute inflammation (appendix)
11. Chronic inflammation (Gall bladder)
12. Chronic granulomatous inflammation (Lymph Node, Intestine)

Microbiology

1. To study different parts of a compound microscope and their functions
2. To study and perform procedure of simple staining and study the morphology of bacteria
3. To study and perform Gram staining
4. To study various types of culture media
5. To perform and observe antimicrobial drug sensitivity and resistance
6. To study various biochemical reactions and their interpretations.

Forensic Medicine:

1. Prepare a medico legal report of an injured person
2. Identify the weapons of assault and major injuries caused by these weapons
3. Identify firearms and various parts of its cartridges
4. Prepare a medico legal report of a case of suspected poisoning
5. Identify aspirin by physical and chemical methods
6. Identify Acetaminophen (Paracetamol) by physical and chemical methods
7. Interpret the nature of injuries in the light of Qisas and Diyat Ordinance 1991
8. Explain the various types of skull fractures in detail.
9. Discuss the classification, effects and postmortem appearance of burns

ABBOTTABAD
EXCELLENCE & INNOVATION

Module- VIII

Coagulation Disorders, Infections and Tumors with their Treatment

Causes of Unnatural Death with Tissue changes, Special Bacteriology and Virology

Course Contents

Dynamics of intra and extra vascular compartments including shock & thrombosis and their treatment/diseases caused by bacteria & viruses and drugs used in their treatment principles of neoplasia and anti-cancer drugs/disease processes causing dyspepsia, dysphagia, constipation, diarrhea & their treatment/thanatology/autopsy/infanticide/asphyxia death/corrosive irritants/cardiac poisons

Course Learning Outcomes

4. **Demonstrate Integrated Knowledge of Infectious Diseases and Treatment Strategies**
   Recognize the clinical presentations, laboratory diagnostic techniques, and preventive measures for bacterial and viral infections. Correlate microbial pathogenesis with pharmacological interventions, particularly the use of antimicrobial drugs, to effectively manage and treat infectious diseases.
5. **Analyse Pathophysiological Processes and Therapeutic Approaches**
   Relate key pathological concepts, including fluid dynamics within vascular compartments, shock, thrombosis, and neoplasia, to appropriate therapeutic interventions. Apply knowledge of pharmacology to understand the mechanisms of anti-cancer drugs and treatments for gastrointestinal disorders such as dyspepsia, dysphagia, constipation, and diarrhea.
6. **Apply Forensic Principles in Medical and Legal Contexts**
   Discuss foundational forensic topics, including thanatology, autopsy, infanticide, asphyxia, corrosive irritants, and cardiac poisons. Interpret these principles in relation to medico-legal investigations and procedures, ensuring alignment with ethical and legal standards.

Objectives

103. To understand the different virulence factors that help different bacteria to invade immune system of host
104. To write out different laboratory investigation and clinical features to find out bacteria involve in infection
105. Compare the pathophysiologic categories of edema based on underlying mechanismand clinical features.
106. Relate the abnormalities of normal hemostasis with the development of thrombosis and its clinical consequences.
107. Compare different types of emboli based on underlying cause and clinicalpresentation.
108. Differentiate between the various types of infarcts according to the mechanism of development, morphological features and clinical consequences.
109. Describe the types of shock as regards their etiology, pathogenesis and management.
110. Describe the drugs used in the treatment of heart failure and fluid retention.
111. Discuss the drug treatment of hypertension
112. Discuss the clinical management of hypertension.
113. Discuss the tachy- and- Brady arrhythmias with ECG changes.
114. Summarize the drug treatment of arrhythmias.
115. Observe the medical and interventional treatment of arrhythmias.
116. Describe the features, and medico legal aspect of aconite and nicotine poisoning.
117. Discuss the pathogenesis of thrombosis and embolism and their clinical consequences.

118. Elaborate the onset, development and consequences of infarction.
119. Describe the clinical uses and problems of oral and parenteral anticoagulant drugs. 18. Correlate the various coagulating agents and their clinical uses.
120. Choose the appropriate drug treatment according to the type of anemia.
121. Discuss the clinical consequences of high level of lipids in blood
122. Describe the mechanism, actions, clinical uses and adverse effects of lipid lowering drugs.
123. Describe mechanism, actions, clinical uses and adverse effects of vasodilator drugs with respect to ischemic heart disease.
124. Describe beta lactam cell wall synthesis inhibitor antibacterial drugs (penicillin and cephalosporin)
125. Explain non-beta lactam cell wall synthesis inhibitor antibacterial drugs (carbapenems, monobactams and vancomycin)
126. Describe protein synthesis inhibitor anti- microbial drugs (tetracyclines, aminoglycosides, macrolides, chloramphenicol and clindamycin)
127. Describe the mechanism, actions, clinical uses and adverse effects of anti-folate antibacterial drugs (sulfonamides and quinolones)
128. Describe helicobacter pylori infections and peptic ulcer disease
129. Differentiate between drug treatment of nausea, vomiting, constipation & diarrhea
130. Describe the drug treatment of acidity, heart burn, gastric and duodenal ulcers
131. Describe the drugs used for treatment of inflammatory diseases of intestine
132. Describe the clinical features and medico legal aspect of corrosive and irritant poisons.
133. Describe different diseases transmitted by ingestion including diagnosis and prevention
134. Categorize the drug therapy for tuberculosis (first & second line) and leprosy
135. Describe DOTS from public health importance
136. Describe the clinical features and medico legal aspect of kerosene oil poisoning
137. Describe the pathogenesis and diagnosis of Mycobacteria
138. Describe the pathogenesis, clinical presentation and diagnosis of mycobacterium.
139. Explain the overview of Gram-negative rods and discuss the pathogenesis and clinical presentation of E coli.
140. Describe the pathogenesis, clinical presentation and diagnosis of vibrio cholera.
141.
142. Discuss different biochemical tests for identification of Gram-negative rods.
143. Explain the role of pathogens to cause infection in hospitalized patients.
144. Describe the pathogenesis, clinical presentation and diagnosis of Pseudomonas aeruginosa.
145. Correlate the clinical presentation of spirochetes with lab diagnosis.
146. Describe the role of intracellular bacteria in causing a disease.
147. Discuss pathogenesis, clinical presentation and diagnosis of mycoplasma and actinomyces.
148. Comprehend the role of respiratory Gram-negative rods to cause various pulmonary diseases.
149. Discuss the pathogenesis and clinical presentation of zoonotic organisms.
150. Write out the points in viral structure to identify disease causing viruses.
151. Discuss classification of different viruses on the basis of their structure.
152. Use morphology and replication of viruses to prescribe laboratory investigation for their identification
153. Correlate pathogenesis of viruses with host defense.
154. Discuss the effectiveness of viral vaccine.
155. Discuss the role of herpes simplex 1 & 2 & varicella zoster virus as contagious diseases.
156. Discuss the pathogenesis, clinical presentation and diagnosis of cytomegalovirus and Ebstein bar virus.
157. Discuss pathogenesis, clinical presentation and diagnosis of measles and mumps.
158. Explain the different types of influenza virus and its preventive strategies.
159. Correlate the pathogenesis of rabies and rubella with their clinical presentation.

160. Explain the pathogenesis of non-enveloped viruses.
161. Describe different types of hepatitis and their pathogenesis.
162. Correlate the pathogenesis of HIV with its clinical presentation and lab diagnosis.
163. Describe the mechanism of action, clinical uses and adverse effects of antiviral drugs
164. Describe symptoms of a case of malaria including diagnosis, treatment and prevention
165. Describe diseases transmitted by contact: Scabies, Trachoma, Lice and Leprosy.
166. Describe the nomenclature, characteristics and classification of tumors
167. Discuss the molecular basis of carcinogenesis with special emphasis on proto-oncogene, oncogene and tumor suppressor genes.
168. Classify tumors according to tissue of origin and clinical behavior
169. Compare benign and malignant tumors based on their morphological characteristics and clinical behavior.
170. Comprehend the role of genetic alterations in carcinogenesis.
171. Explain the effects of physical, chemical and viral carcinogen and relate them to tumorigenesis
172. Explain the clinical effects of tumors based on size, site and syndromes they produce.
173. Describe the significance of tumor markers in the diagnosis and management of cancers
174. Interpret the principles governing use of anticancer drugs
175. Describe the drug treatment of common types of ovarian, prostatic, colon, breast and blood cancers
176. Describe the methods of collection and laboratory tests for biological stains
177. Explain the criteria for the diagnosis of brain death, organ harvesting and organ donation
178. Discuss the mode, cause, manner, mechanism and medicolegal aspect of sudden and unexpected death
179. Discuss the physicochemical changes in tissues and organs after death and approximate time of death
180. Describe rules, requirements, type and objectives of autopsy
181. Describe the procedure and incisional techniques of postmortem
182. Describe exhumation in adults and in infants
183. Recognize dead born, still born and infanticide
184. Discuss suicide, types and epidemiology
185. Describe medico legal aspect of violent asphyxia death
186. Describe the medico legal aspects of snake bite.
187. Discuss the clinical features and medico legal aspect of asphyxiants.
188. Observe cases of forensic importance in medico-legal section and mortuary of hospital
189. Discuss the procedure of selection, preservation, labeling and dispatch of biological material for chemical analysis.
190. Bioethics
191. Discuss the religious views on euthanasia CHS
192. To comprehend the different approaches to control the disease problems
193. To introduce concepts related to disease transmission using the epidemiologic approach to infectious diseases as a model
194. To understand the WHO recommended interventions to address non-communicable diseases (NCDs)
195. Use patient-centered interviewing skills to effectively gather relevant biomedical and psychosocial information
196. Correlate ethics, morals, and values to their leadership dilemmas

Os	CLO	bject	Pathology	harmacology	Forensic Medicine	Com/ LS/ Pr & Eth	Assessment	
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LAB SKILLS / PRACTICALS MODULE – 8

Pharmacology

By the end of this module every student should be able to:

1. Prepare dilutions from 1mg of the given drug having strength of 10^{-3} up to 10^{-8} dilution
2. Interpret the effect of antibiotic drugs on bacterial colonies
3. Interpret the effects of given drugs on the eyes of rabbit
4. Interpret the effects of agonist and antagonist drugs on the eyes of rabbit
5. Identify the parts of kymograph and organ bath assembly
6. Interpret the effects of different dilutions of a given drug on an isolated piece of rabbit intestine. (Drug-A)
7. Interpret the effects of different dilutions of a given drug on an isolated piece of rabbit intestine. (Drug-B)

Pathology

Identify and describe the gross morphological features of following:

1. Keloid
2. Lipoma
3. Leiomyoma
4. Follicular adenoma (thyroid)
5. Fibroadenoma (Breast)
6. Carcinoma-Breast
7. Adenocarcinoma Pylorus

Identify and describe the microscopic features of following:

1. Keloid
2. Granulation tissue
3. Thrombus
4. Lipoma
5. Lieomyoma (uterus)
6. Fibroadenoma (breast)
7. Follicular adenoma (thyroid)
8. Leiomyosarcoma (uterus)
9. Liposarcoma
10. Adenocarcinoma Stomach
11. Ductal Breast carcinoma

Microbiology

1. To study Staphylococci and laboratory investigations for their identification
2. To study Streptococci and laboratory investigations for their identification
3. To study Mycobacterium and laboratory investigations for its identification
4. To study Salmonella and laboratory investigations for its identification
5. To study Escherichia coli and laboratory investigations its identification
6. To study hepatitis virus and lab diagnosis
7. To study HIV laboratory diagnosis

Forensic medicine

By the end of this module every student should be able to

1. Identify and examine blood and seminal stains
2. Identify and examine hair and fiber
3. Identify the different types of snakes and discuss the management of snake bite
4. Prepare a medico legal report of a case of vitriolage
5. Prepare a death certificate.
6. Identify the following by physical and chemical means:
    a. Castor and Croton tiglium
    b. Abrusprecatorius and marking nut
    c. Copper and mercury
    d. arsenic and lead
    e. Aconite and nicotine
    f. Kerosene oil

FRONTIER MEDICAL COLLEGE ABBOTTABAD EXCELLENCE & INNOVATION

Module- IX

Basic and Applied Immunology, Parasitic and Mycotic Diseases, Genetics; Hormonal Therapy; Medico Legal aspect of Sexual Offences and Toxicology

Course content

Immunology/immuno-pharmacology/genetics/mycology/ parasitology/anti-parasitic drugs/ pharmacogenetics Drugs acting on cns/endocrine pharmacology/ forensic obstetrics/sexual offences/ personal identity/ special toxicology

Course Learning Outcomes

7. **Identify and Manage Infectious Diseases Through Integrated Diagnostic and Preventive Measures**

   Recognize the clinical presentations, laboratory diagnostics, and preventive strategies for viral, fungal, and parasitic infections. Apply knowledge of immunology and immune pharmacology to understand the host defence mechanisms and pharmacological treatments used to manage these infections.

8. **Integrate Concepts of Genetics, Pharmacology, and Pathophysiology in Disease and Drug Interactions**

   Explain core concepts in genetics, pharmacogenetics, and pharmacodynamics as they relate to immune response, CNS function, and endocrine regulation. Discuss the action and application of drugs on the central nervous system and endocrine system, with emphasis on the interplay between genetic factors and drug efficacy.

9. **Apply Forensic Medicine Principles in Medico-legal and Clinical Practice** Describe the essential aspects of forensic obstetrics, sexual offenses, personal identity, and toxicology. Integrate these principles in clinical practice to effectively address medico-legal cases, ensuring adherence to ethical and legal standards in forensic investigations.

Objectives

197. Discuss clinical presentation and laboratory diagnosis of cutaneous and subcutaneous mycoses.
198. Discuss clinical presentation and laboratory diagnosis of opportunistic mycoses.
199. Classify parasites on the basis of different morphological structures and their site of infection
200. Describe etiology, mode of transmission, control and preventive strategies of Entamoeba Histolytica.
201. Describe the etiology, mode of transmission, control and preventive strategies of giardialamblia, cryptosporidium, trichomonas vaginalis.
202. Describe etiology, mode of transmission, lab diagnosis and preventive measures oftoxoplasmosis and pneumocystis.
203. Describe the etiology, mode of transmission, lab diagnosis and preventive measures of plasmodium.
204. Describe etiology, mode of transmission, lab diagnosis and preventive measures of leishmania.
205. Describe the etiology, mode of transmission, lab diagnosis and preventive measures of Cestodes (Taenia).
206. Describe the etiology, mode of transmission, control and preventive strategies of Diphyllobothrium latum and Echinococcus Granulosis.
207. Describe the etiology, mode of transmission, control and preventive strategies Trematodes (Schistosoma).

208. Describe the etiology, mode of transmission, control and preventive strategies for parasitic diseases of public health importance: Ankylostoma duodenale, Ascaris lumbricoides, entrobius,strongyloides.
209. Describe the etiology transmission, control and preventive strategies of trichinella andTrichuris.
210. Differentiate between the drug treatment of different types of Helminthic infections
211. Compare the different patterns of inheritance of single gene disorders, (i.e. autosomaldominant, autosomal recessive, X-linked dominant/recessive and Y- linked disorders)
212. Differentiate between single gene disorders with atypical patterns of inheritance andMendelian disorders based on characteristics of inheritance
213. Explain chromosomal disorders, involving autosomes and sex chromosomes, as regards tothe underlying chromosomal abnormality, risk factors and clinical features
214. Interpret normal and abnormal karyotypes and describe them using shorthand system ofnotation.
215. Comprehend the significance of molecular and cytogenetic analysis (PCR, southern blot,FISH) for diagnosing genetic disorders
216. Describe the impact of genetic makeup on variation in drug responsiveness
217. Discuss the diagnosis of epilepsy and seizures
218. Describe the mechanism, actions, clinical uses, adverse effects of sedative and hypnotic drugs
219. Describe the drug treatment of convulsions and fits
220. Describe the drugs used for producing general and local anesthesia
221. Describe the mechanism, uses and adverse effects of skeletal muscle relaxants
222. Discuss the sign and symptoms, and examination of Parkinsonism patients Distinguish between the signs of upper and lower motor neuron defects
223. Describe the clinical features and diagnosis of bipolar disorders.
224. Describe the clinical features and diagnosis of Schizophrenia.
225. Describe the clinical features and types of depression. Describe drugs used for the treatment of depression
226. Describe the drug treatment of Parkinsonism
227. Describe drugs that have abusive or stimulant effects on the brain
228. Describe the drugs used for treating psychosis and mania
229. Discuss the drugs producing insanity.
230. Differentiate true and feigned insanity.
231. Describe the procedure of diagnosis and admission of a mentally sick person.
232. Explain limitations of civil and criminal responsibilities towards a mentally sick person.
233. Describe the clinical features and medico legal aspect of Neurotics (opium, dhatura, cannabis indica, alcohol, barbiturates poisoning).
234. Differentiate between food poisoning and mechanical poisoning
235. Discuss different types of addiction including prevention and rehabilitation of cases
236. Illustrate the immune responses with the help of flow diagram
237. Describe the role of antibodies and complement system in immune responses.
238. Discuss the role of MHC in transplant rejection
239. Relate the loss of central and peripheral tolerance to the development of different autoimmune diseases and the subsequent clinical effects
240. Classify the immunodeficiency disorders based on deficiency of major immunecomponents and clinical consequences
241. Differentiate between hypersensitivity reactions (type I, type II, type III, and type IV) on thebasis

of underlying mechanism along with relevant examples.

242. Describe the drugs that modulate immune system (Immunosuppressants & Immunomodulators)
243. Describe the drug treatment of hypothyroidism and hyperthyroidism
244. Describe the mechanism of action, clinical uses, adverse effects and contraindications of sex hormonal agents
245. Describe the mechanism of action, clinical uses and adverse effects of drugs affecting uterine motility
246. Discuss the medico-legal aspects of impotence, virginity, pregnancy, delivery and criminal abortion
247. Describe the signs of pregnancy, recent and remote delivery
248. Describe criminal abortion, its methods and complications
249. Classify diabetes mellitus on the basis of WHO criteria
250. Describe the oral and parenteral drug treatment of diabetes mellitus
251. Describe clinical uses and adverse effects of parathyroid hormonal preparations.
252. Describe the methods of identification and establishing race, age and sex
253. Describe the role of fingerprints, foot prints, DNA fingerprinting and Bertillon systems in identification of individual
254. Describe the method of identification of mutilated, decomposed, burnt bodies and skeletal and fragmentary remains
255. Determine stature/height from skeletal/bony/ fragmentary remains
256. Describe sexual offences and their punishment
257. Describe the examination protocol for the rape victim and the accused (Zina-bil-jabr)
258. Describe the examination procedure of active and passive agents (habitual/non habitual) of sodomy
259. Explain the method of collection, preservation of specimens, preparation of slides and swabs in sexual offences in forensic science laboratory.
260. Describe the common sexual perversions including definition and causes.
261. Differentiate amongst the different types of contraceptives
262. Describe the indications, contraindications and side-effects of different contraceptives

Bioethics

263. Define abortion
264. Explore the pro and anti-arguments for abortion
265. Discuss the religious views on abortion

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CHS

roduction to Research (what & why)
nopsis writing including identifying a topic
scussing the topic
erature search
scussion on literature search
search questions and identifying variables
search questions and identifying variables
jective writing

266. Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent
267. Perceive change and think critically about obstacles to change
268. Fulfill responsibilities as a learner and a colleague

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PLOs	CLO	Subject	Pathology	Pharmacology	Forensic Med	Com/ LS/Pr & Eth	Assessment	
		ectures	2, 4, 7, 8, 1,12,	1, 202, 3, 204, 208, 218, 219, 220, 221, 227, 228, 229, 243, 245, 250, 251	35, 29, 33, 35, 37, 50, 52, 56, 60, 63,		MCQs/Seq	OSPE
							2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 39, 40, 42, 7, 20, 21, 25, 30, 31, 45, 46, 52, 37, 38, 39, 63, 64, 73,	2, 3, 4, 5, 6, 7, 8, 12, 15, 38, 42, 5, 6, 8, 20, 31, 33, 34, 36, 51, 56, 57, 28, 46, 66, 58, 59, 60, 62
		Interactiv e Lectures/	6, 13	201, 202, 204, 210, 242, 244	34, 36, 38, 39, 52, 61, 63,			
		-	10, 41	226, 225	,			

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LAB SKILLS / PRACTICALS MODULE – 9

Pharmacology

By the end of this module, every student should be able to:

a. Interpret the effect of lignocaine and procaine on the legs of frog
b. Identify the slides and write the treatment of the causative Helminths / Protozoa
c. Identify the characteristics of pharmacognosy specimens --10 specimens
d. Identify the effect of strychnine and picrotoxin on the CNS of frog
e. Identify the parts of prescription order
f. Write a prescription for the following common diseases in Pakistan:

Type I diabetes, Type II diabetes, Bronchial asthma, Diarrhea, Pulmonary tuberculosis, Hypertension, Peptic ulcer, Malaria, Arthritis (OA, RA), Amoebiasis, Hypothyroidism, Hyperthyroidism, Helminthic infestations, Urinary tract infection, Sore throat, pneumonia etc.

Pathology:

Identify the gross morphological features of following:

1. Follicular adenoma (thyroid)
2. Fibroadenoma (Breast)
3. Dermoid cyst
4. Teratoma (Testis)
5. Carcinoma-uterus
6. Carcinoma-Breast
7. Carcinoma -Cervix
8. Seminoma
9. Retinoblastoma
10. Giant cell tumor of hand

Identify the microscopic features of following:

1. Keloid
2. Granulation tissue
3. Thrombus
4. Lieomyoma (uterus)
5. Fibroadenoma (breast)
6. Follicular adenoma (thyroid)
7. Leiomyosarcoma (uterus)
8. Breast carcinoma

Microbiology

1. To isolate and observe candida.
2. To observe Entamoeba Histolytica and Giardia Lamblia eggs in stool

examination.

3. To observe Ascaris lumbricoides, Trichuris Trichuria eggs in stool examination.
4. To observe Taenia and Ankylostoma duodenaleeggs in stool examination.
5. To observe different stages of plasmodium microscopically.
6. To study different biohazards in Lab.

Forensic Medicine

By the end of this module, every student should be able to:

1. Determine the age of an individual by means of examination of teeth
2. Determine the age of an individual by means of X-Rays (ossification of bones)
3. Examine the different types of fingerprints
4. Determine the sex of an individual by examination of bones/skeleton
5. Determine the fetal age
6. Prepare medico legal report of a rape victim
7. Prepare medico legal report of a passive agent of sodomy
8. Prepare medicolegal report on a case of drunken person
9. Identify *Nux Vomica* by visual, olfactory, tactile means
10. Identify *Aconite* by physical and chemical means

Community Health Sciences

1. Develop the skill to select a good research topic
2. Generate the synopsis according to the research guidelines
3. Clarify the indicators and measurement of concepts in study.
4. Utilize the required extent of literature search within a reasonable time and cost frame.
5. Develop research questions & Identifying Variables
6. Define Sample &different methods of Sample Size Calculation
7. Create a technique of developing a Questionnaire
8. Differentiate various data collection methods & Presentation
9. Format the source of information as a recommended style of references at the end of the research proposal
10. Identify the ethical principles in general or in application of specialized knowledge, results of research, creative expression, or design processes.

Field visits help in the conversion of theoretical concepts into its practical application ofPublic 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.

Teaching Strategies	Assessment Tools
scussion IS D	signment iizzes Qs and SEQs port proposal writing

The presentation of research proposal will be organized on the last day of the session.

Communication Leadership and Professionalism

Learning objectives	Instructional strategies
• Appreciate the role of patient's nonverbal behaviors and voice tone in effective communication. • Communicate using a patient-centered approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion • Understand role of leadership in health care system • Discuss different strategies to manage time and resources effectively • Develop a comprehensive set of practical skills and tools to rely on like time management, agenda setting, group dynamics, and team building • Work cooperatively in groups, share ideas and take part in discussion • Practice honesty and integrity in all interactions • Advocate for the needs and wellbeing of patients, learners and peers	• Small group discussion video presentation with multiple scenarios • Role play • Demonstration on Standardized patients • Small group exercises • Student presentations. • PBL, PSIL, Journal club

PAPERWISE DISTRIBUTION OF TOPICS FOR INTEGRATED ASSESSMENT

MODULE VII, VIII & IX

Paper	Subject	Module VII	Module VIII	Module IX
per- I	armacology	tacoids, NSAIDs, Opioids, Rheumatoid Arthritis, Gout, Migraine	nicillin, Cephalosporin, Tetracycline, Aminoglycosides, Macrolides, Chloramphenicol, Sulfonamides, Fluoroquinolones, t tuberculous drugs, tiviral drugs, Anticancer	ti-thyroid drugs, Drug treatment of Hypothyroidism, Female sex hormones, ale sex hormones, Oral hypoglycemic, Insulin
	thology	llular Adaptation, Reversible and irreversible injury, Mechanism of cell injury, Necrosis, Apoptosis, Intracellular accumulations, Pathological calcification roduction to Microbiology, Structure of Bacteria. Pathogenesis, Growth Cycle. netics, Normal Flora	rombosis, Embolism, Congestion, Edema, Hyperemia, Infarction, Shock, E. coli, Klebsiella Gram negative rods related to respiratory tract, Gram negative rods related to zoonotic, Vibrio Cholera, eudomonas Aeruginosa, proteus Salmonella and shigella	mune response Cells of immune system, Hypersensitivity reactions, Antibodies and complement system, immune deficiency disorders, Introduction to Mycology, Cutaneous and sub cutaneous mycosis, Opportunistic Mycosis, Systemic Mycosis Introduction of Parasitology, tamoeba Histolytica
	rensic Medicine	gal Aspects, Injuries, Legal procedure, ws in relation to a medical man, Regional injuries, Transportation injuries, MDC	anatology, ath from starvation, cold, heat, electricity opioid poisoning Sedatives and hypnotics Electrocution	rsonal identity, Animal poisons (snakes), Kerosene oil poisoning

Paper	Subject	Module VII	Module VIII	Module IX
	armacology	olinoceptor activating drugs, Cholinoceptor blocking drugs , Adrenoceptor activating drugs, Drug treatment of asthma Adrenoceptor blocking drugs	tihypertensive drugs Diuretics, Drugs for CCF, Antiarrhythmic drugs, Antianginal drugs, Thrombolytics/Antiplatelets, Oral Anticoagulants, Parenteral Anticoagulants	nzodiazepines, Barbiturates, Antiepileptic drugs, General anesthetic, Local anesthetic, Anti-Parkinsonian, Antipsychotic drugs, Lithium tidepressant drugs, Alcohol
per- II	**thology**	ute Inflammation, Chemical mediators of Inflammation, Sterilization and disinfection, Classification of bacteria, st Defenses, Laboratory diagnostics, Mechanism and Resistance of Antimicrobial Drugs, Bacterial Vaccines	ycobacterium, Mycobacterium leprae and atypical mycobacterium, Spirochetes, Actinomycetes, nocardia mycoplasma, Rickettsiae And Chlamydia ucture and replication of virus, Pathogenesis of virus, Genetics and gene therapy of virus, Classification and lab diagnosis of virus, Viral vaccines, Nomenclature of neoplasia, Characteristics of nign and malignant tumors, Tumor Markers	mune tolerance Autoimmune disorders, MHC and Transplant rejection. Giardia, Cryptosporidium, Trichomonas, Toxoplasmosis, Pneumocystis, Minor protozoa Acanthamoeba, Naegleria, Babesia, Balantidium, Microsporidia, Cyclspora, Plasmodium
	rensic Medicine	neral toxicology, Traumatology, Firearm, Qisas and Diyat, cohol, Corrosives	phyxial deaths, Metallic, nonmetallic poisons, Asphyxiants, Environmental trauma ecial trauma (bombs and missiles)	xual offences, Cardiac poisons, Spinal poison, Aspirin and etaminophen toxicity

Paper	Subject	Module VII	Module VIII	Module IX
per- III	armacology	ug discovery & development, Pharmacokinetic principles, Pharmacodynamics Principles, ug interactions, Preclinical clinical trials of drugs, tional use of drugs	ietics and Antiemetics, D & Prokinetics, Drugs used in acid peptic disease, Laxatives/purgatives/ anti diarrheal drugs, Anti-anemic drugs, Antihyperlipidemic	armacogenetic, Antifungal drugs, Anti-malarial, Anti-amoebic drugs, Anthelmintics
	thology	orphological patterns/outcomes of acute inflammation, stemic effects of inflammation, Chronic inflammation- taneous wound healing, Pathological aspects of repair, am positive Cocci: Staphylococcus, Gram positive Cocci: Streptococcus, am negative Cocci: Neisseria meningitis, and Neisseria Gonorrhea, Spore Forming Gram positive rods:(Clostridium, Botulinum) n-Spore Forming Gram positive rods:(Corynebacterium Diphtheria, listeria, rdnerella Vaginalis	rcinogenesis (Molecular), Tumor immunity, Clinical aspects of neoplasia, Grading/Staging, Herpes Simplex 1 d 2 Cytomegalo And stein Barr Virus, Kaposi sarcoma, Influenza virus Measeles, Mumps and rubella Adenovirus and coronavirus lio, Rota Rabies and Ebola Virus Hepatitis A, B, C, D, E thogenesis and lab diagnosis of HIV	man genetic architecture and mutations, Genetic disorders (Single gene disorder I– II), Single gene disorders with atypical pattern of inheritance, Cytogenetic/molecular analysis, Leishmania, Cestodes, Diphylobothrium latum and Echinococcus/ H. nana/Dipylidium Caninum, Trematodes, Intestinal Nematodes, Tissue nematodes
	rensic Medicine	liriants, Organophosphates, Autopsy and Exhumation, Collection and preservation of viscera, ermal injuries	anity, Forensic biology and serology IS stimulants (ICE, Cocaine), Vegetable poisons	egnancy, delivery, abortion. Infanticide, Battered baby

LEARNING RESOURCES:

Books:

1. Lazo JS &Parker KL. Goodman and Gillman`s The Pharmacological basis of therapeutics 12th edition McGraw Hill Company, USA 2011
2. Katzung BG, Masters SB & Trevor AJ. Basic and Clinical Pharmacology-Katzung. 13th editionTATA McGraw Hill Education Private Ltd, New Delhi 2010
3. Finkel R Cubeddu L X, Clark MA, Harvey R &Champe P. Lippincott's Illustrated Reviews Pharmacology. 7th edition, Wolters Kluwer-Lippincott Williams & Wilkins New Delhi 2015
4. Peter D. Turnpenny, Emery's Elements of Medical Genetics (14thed.). New York: ChurchillLivingstone. 2011
5. Cotran RS, Kumar V and Collins T. Robbin's Pathologic Basis of Disease (8thed.). Philadelphia: W.B. Saunders. 2010
6. Walter JB and Talbot IC. Walter and Israel's General Pathology (7thed.). New York: ChurchillLivingstone. 1996
7. Kumar V, Cotran RS, and Robbins SL. Basic Pathology (8thed.). Philadelphia: W.B. Saunders.2007
8. Rubin E, Pathology (4thed.) Philadelphia: Lippincott-Raven. 2005
9. Ivan Roitt. Riott's Essential Immunology (11thed.). New Delhi:I.K. International Pvt. Ltd. 2007
10. Harsh Mohan. Textbook of pathology. 6th ed. Jaypee broth. 2010
11. Wheater P et al. Basic Histopathology: A Color Atlas and Text (2nded.). Edinburgh: ChurchillLivingstone. 1990
12. Harsh Mohan. Pathology practical book. 2nd ed. Jaypee broth. 2007
13. Parikh. C. K. Parikh's Textbook of Medical Jurisprudence. Forensic Medicine and Toxicology6th ed. 1999
14. Nasib R Awan. Principles and practice of Forensic Medicine 1st ed. 2002
15. Prof. Dr. Umar Khan. Forensic Medicine and Toxicology
16. KrishanVij. Textbook of Forensic Medicine and Toxicology, Principles and practice. 3rd ed.2005
17. Rao Atlas of Forensic Medicine.
18. Govindiah Color Atlas of Forensic medicine. 1999
19. Richard A Harvey. Microbiology Lippincotts Illustrated Review 3rd edition. Taylor's principles and practice of medical jurisprudence 1984
20. Park's Textbook of Preventive and Social Medicine- K.Park 20th Edition
21. Public Health In Community Medicine by Mohammad Iliyas- Iliyas.Shah.Ansari
22. Jawetz. Medical Microbiology. Lange/McGrawHill (latest edition)
23. Levinson W. Microbiology and Immunology: Review. (latest edition)
24. Michael J Pelczar. M i c r o b i o l o g y .6th ed. Tata McGraw

Websites:

1. www.studentconsult.com
2. www.drugs.com
3. www.pharmacology.com
4. www.medicalstudent.com
5. www.asm.com
6. www.forensicmedicine.co.uk
7. Lecture notes on Forensic Medicine
8. Atlas of Forensic Medicine

FRONTIER MEDICAL COLLEGE
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Frontier Medical and Dental College Abbottabad

Academic Calender 2026-2027

MONTHS, WEEK DAYS & DATES								SCHEDULED ACADEMIC & CO CURRICULAR EVENTS	PUBLIC HOLIDAYS/ HEALTH & AWARENESS DAYS
	SUN	MON	TUE	WED	THU	FRI	SAT	MBBS	
Jan-26					1	2	3	WINTER BREAK	
	4	5	6	7	8	9	10		
	11	12	13	14	15	16	17		
	18	19	20	21	22	23	24		
	25	26	27	28	29	30	31		World Leprosy Day 26th Jan
Feb-26	1	2	3	4	5	6	7		World Cancer Day 4th Feb
	8	9	10	11	12	13	14	Commencement of Modules IV, VII, X, XIII	Kashmir Solidarity Day 5th Feb
	15	16	17	18	19	20	21		
	22	23	24	25	26	27	28		Intl's Women's Day 8th Mar
Mar-26	1	2	3	4	5	6	7	Commencement of Module I Orientation Week	World Kidney Day 12th Mar
	8	9	10	11	12	13	14		World Disabled Day 15th Mar
	15	16	17	18	19	20	21		Eid ul Fitr 21st - 23rd March
	22	23	24	25	26	27	28		Pakistan Day 23rd March
	29	30	31						World Tuberculosis Day 24th Mar
Apr-26				1	2	3	4		Oral Cancer Awareness 1st April
	5	6	7	8	9	10	11		World Health Day 7th Apr
	12	13	14	15	16	17	18		Hemophilia Day 17th Apr
	19	20	21	22	23	24	25		World Liver Day 19th Apr
	26	27	28	29	30			End of Module IV, VII, X, XIII Exams	
May-26						1	2		Labour Day 1st May
	3	4	5	6	7	8	9	Commencement of Modules V, VIII, XI, XIV	Thalassemia Day 8th May
	10	11	12	13	14	15	16		
	17	18	19	20	21	22	23	End of Module I	Eid ul Azha 26th-28th May
	24	25	26	27	28	29	30	Commencement of Module II	Youme Takbeer 28th May
	31								World Tobacco Day 31st May
		1	2	3	4	5	6	Summer Break	
Jun-26	7	8	9	10	11	12	13		World Brain Tumor Day 8th Jun
	14	15	16	17	18	19	20		World Blood Donation Day 14th June
	21	22	23	24	25	26	27		Ashura Days 25th-26th June
	28	29	30					Extracurricural Activities/ Sports Week	
Jul-26				1	2	3	4		National Doctor's Day 1st July
	5	6	7	8	9	10	11		
	12	13	14	15	16	17	18		
	19	20	21	22	23	24	25		
	26	27	28	29	30	31			World Hepatitis Day 28th July
Aug-26							1		1st August Oral Hygiene Day
	2	3	4	5	6	7	8	End Moodular Exam V, VIII, XI,IV Exams	
	9	10	11	12	13	14	15	Commencement of Modules VI, IX, XII, XV	Independence day 14th Aug
	16	17	18	19	20	21	22		
	23	24	25	26	27	28	29	End Moodular Exam II	Eid Milad un-Nabi 25th August
	30	31						Commencement of Module III	
Sep-26			1	2	3	4	5		Defence Day 6th Sep
	6	7	8	9	10	11	12		Research Competition Sep
	13	14	15	16	17	18	19		World Patient Safety Day 17th sept
	20	21	22	23	24	25	26		World Alzeheimer's Day 21st Sep
	27	28	29	30					World Heart Day 28th Sep
Oct-26					1	2	3		Breast Cancer Month-October
	4	5	6	7	8	9	10		Intl Teacher's Day 5th Oct
	11	12	13	14	15	16	17		World Mental Health Day 10th Oct
	18	19	20	21	22	23	24		World Food Day 16th Oct
	25	26	27	28	29	30	31	End of Modules VI, IX, XII, XV Exams	World Osteoporosis Day 20th Oct
									World Polio Day 24th Oct
Nov-26	1	2	3	4	5	6	7		
	8	9	10	11	12	13	14		Iqbal Day 9th Nov
	15	16	17	18	19	20	21	Tentaive Date of MBBS Professional Exam End of Module III	World Immunization Day 10th Nov
	22	23	24	25	26	27	28		World Diabetes Day 14th Nov
	29	30							
									World AIDS Day 1st Dec
Dec-26			1	2	3	4	5		National Pollution Day 2nd Dec
	6	7	8	9	10	11	12	Tentaive Date of MBBS 1ST Professional Exam	Intl Universal Health Coverage Day 12
	13	14	15	16	17	18	19		

	20	21	22	23	24	25	26	Quaid's Day / Christmas Day 25 Dec
	27	28	29	30	31			

		Public Holidays
		Health & Awareness Days
		Modules & College Vocations

Prepared By: DME

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