

**BY-LAWS, REGULATIONS AND CURRICULUM OF THE BACHELOR  
OF UNANI MEDICINE AND SURGERY (BUMS) DEGREE PROGRAMME  
(NEW SYLLABUS)**



**2019**

**INSTITUTE OF INDIGENOUS MEDICINE  
UNIVERSITY OF COLOMBO**

## **By-Laws of the Bachelor of Unani Medicine and Surgery (BUMS) Degree Programme (Proposed New Syllabus)**

By-Laws made by the Council of the University of Colombo under section 135 of the Universities Act No.16 of 1978 as amended and read with the Institute of Indigenous Medicine Ordinance No. 7 of 1979 and its subsequent amendments.

### **By-Laws**

1. These By-Laws may be cited as the Degree of Bachelor of Unani Medicine and Surgery By-Laws No 26/2019.
2. These By- Laws shall be deemed to have come into operation with effect from .... as determined by the Council of University of Colombo.

### **Part I - General**

3. Subject to these By-Laws, a student may be awarded the Degree of Bachelor of Unani Medicine and Surgery of the University of Colombo (hereafter referred to as the “University”), if she<sup>1</sup> has
  - a) been admitted to the Institute of Indigenous Medicine (hereinafter sometime referred to as the “Institute”) of the University as a student under section 15 (v) of the Universities Act No. 16 of 1978 as amended;
  - b) been a duly registered student of the University for the period prescribed by these By-Laws;
  - c) thereafter pursued the programme of study in the Institute to the satisfaction of the Director of the Institute as prescribed by these By-Laws and other By-Laws, Regulations and Rules of the University and the Institute;
  - d) satisfied the examiners at the prescribed written examinations, viva voce examinations, practical cum viva voce examinations, continuous assessments, and research project approved by the Institute and the University;
  - e) paid such fees as may have been prescribed by the University and any other dues as may be payable to the Institute and/or the University; and,
  - f) fulfilled all other requirements prescribed by these By-Laws and other By-Laws, Regulations and Rules of the University and the Institute.

#### **4. Admission Requirements**

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<sup>1</sup> Please note that the use of female pronoun here and elsewhere in these By-Laws refers to both male and female genders.

- a) No person shall be eligible to be admitted to the Programme of Study leading to the Degree of Bachelor of Unani Medicine and Surgery (hereinafter sometime referred to as the “Degree Programme” or “Programme”) unless she has passed the G. C. E. (Advanced Level) in Bio-Science Stream and satisfied the criteria recommended by the University Grants Commission for the admission to undertake the Programme in the Institute.
  - b) An applicant who wishes to join the Degree Programme shall be a fit and proper persons who is able to undertake the Programme and shall not suffer from any mental and/or physical disability that may hamper the effective undertaking of the Programme and/or hinder the effective performance of duties and/or discharge the obligations of the medical practice and profession. Applicants shall be required to prove themselves as physically and mentally fit by a medical examination. The medical examination will be conducted by the University.
  - c) Applications of a limited number of foreign students may be accepted for the Degree Programme subject to the guidelines of the University Grants Commission and/or the availability of places.
5. (1) Subject to these By-laws, the minimum period of study of the Degree Programme shall be five academic years and one further year of internship.
- (2) The maximum period of study within which a student shall complete the Degree Programme is ten academic years from the date of first registration for the Programme, unless the Senate has, on the recommendation of the Institute, granted permission to extend the registration for valid reasons.
- (3) Selected students shall register initially for the Programme by completing the registration procedure as instructed by the Institute, including paying the relevant fees to the Institute. The initial registration shall be deemed to be the registration for the First Professional Stage of the Degree Programme and be valid for the three Semesters of the Stage.
- (4) Subject to these By-Laws and other By-Laws, Regulations and Rules of the University and the Board of Management of the Institute (hereinafter sometime referred to as the “Board”), the registration for a Professional Stage of the Programme shall be valid for those number of Semesters as the case may be and the registration shall lapse at the end of the period of its validity.
- (5) It shall be the responsibility of a student to keep her registration valid by renewing it at the end of the period of its validity, provided she is eligible to renew the registration.
- (6) The medium of instruction and examination of the Degree Programme shall be English and wherever possible, Tamil/Sinhala may be used.

## 6. Administration of the Programme

- a) Subject to the general and/or special directions of the University, the Institute shall be in charge of the administration and general direction of the Degree Programme.
- b) The Director of the Institute shall function, ex officio, as the Director of the Programme. She may enlist the assistance of any member of the academic and/or administrative staff towards the administration of the Degree Programme.
- c) The Director may refer, where she thinks it desirable, any issue or question relating to the administration of the Degree Programme to the Board and/or the Senate for its/their guidance and/or recommendation and/or direction.

## **Part II – Academic Programme**

7. (1) There shall be three Stages of the Degree Programme which shall comprise of a minimum of five years of study exclusive of one year of internship. The three Stages shall be known as the First Professional Bachelor of Unani Medicine and Surgery (which is sometime referred to as the “First Professional BUMS”), the Second Professional Bachelor of Unani Medicine and Surgery (which is sometime referred to as the “Second Professional BUMS”) and the Final Professional Bachelor of Unani Medicine and Surgery (which is sometime referred to as the “Final Professional BUMS”).
- (2) The First Professional BUMS, which is known as the Pre-Clinical Stage, shall consist of three Semesters, the Second Professional BUMS, which is known as the Para-Clinical Stage, shall consist of three Semesters and the Final Professional BUMS, which is known as the Clinical Stage, shall consist of four Semesters. The study duration of a Semester shall be fifteen weeks, unless otherwise decided by the Senate on the recommendation of the Board.
- (3) The Senate, on the recommendation of the Board, shall prescribe by Regulations the curriculum of the Degree Programme, the names and number of subjects, their syllabi, the number of papers of each subject, maximum marks carried by each subject, methods of assessment of the subjects, criteria of computation of results, etc. of the Programme.
- (4) The Senate shall have the power, on the recommendation of Board of Management, to change, amend, add to or delete from the names and number of Subjects, their syllabi, the number of papers, maximum marks carried by each subject, methods of assessment of the subjects and criteria of computation of results, etc. of the Programme. The Institute shall cause due notice is given to the students of any such amendments, changes, additions or deletions of the curriculum.

(5) The Institute shall conduct lectures, practicals, tutorials, field visits, research, guided reading and other relevant academic and learning activities of the Degree Programme on a Semester basis.

### **Part III – Assessment & Examination**

8. (1) The examinations leading to the Degree of BUMS shall take the forms of Formative Assessment - Continuous Assessments (CAs) – and Summative Assessment - three Professional Examinations.  
  
(2) The examinations leading to the Degree shall be -
  - b. First Professional BUMS Examination,
  - c. Second Professional BUMS Examination, and
  - d. Final Professional BUMS Examination.
9. The award of the Degree shall be based on the successful completion of the above examinations and satisfactory completion of one year internship as laid down in the Regulations.
10. Each of the Examinations prescribed by these By-Laws and the Regulations thereunder shall be conducted by a Board of Examiners constituted by the Board and approved by the Senate for the conduct of that Examination.
11. A student shall not be permitted to sit for an Examination unless the Head of the Department of Study in Unani (hereinafter sometime referred to as the “Head”) has certified that she has satisfactorily completed the prescribed subject/s for that Examination, fulfilled the attendance requirements and any other requirements as may be specified by these By-Laws and/or Regulations.
12. A student must have a minimum 75% of attendance at lectures and practical classes in each subject to be eligible to sit for the corresponding examination. A student with attendance ranging between 65% - 74% may be permitted to be eligible to sit for the examination only in exceptional circumstances due to medical and/or valid and acceptable grounds. A student with attendance ranging between 65% - 74% without valid and acceptable ground shall sit for the examination in the next scheduled examination as a re-sit candidate. A student with attendance of less than 65% shall complete the required attendance with the immediate junior batch in order to sit for the examination.
13. A candidate shall take each Examination leading to the Degree on the very first occasion on which the Examination is held after the completion of the course of study for that

Examination, unless the Senate, based on a valid and acceptable reason, permits, on the recommendation of the Board, the candidate to take the Examination on the next occasion on which the examination is held.

14. Where a candidate does not take an Examination on the very first occasion on which the Examination is held after the completion of the course of study for that Examination, the candidate shall be deemed, unless the Senate determines otherwise, to be deemed to have taken the Examination on the first occasion, which shall be taken into account when computing the total number of attempts on which an Examination may be taken by a candidate. Any subsequent attempt at the Examination must be taken at the very next available Examination, subject to the provision in respect of a valid excuse accepted by the Senate.
15. (1) The reasons for granting valid excuse by the senate may include -
  - a. illness of the candidate
  - b. personal problem involving an immediate family member of the candidate
  - c. candidate's participation in a University or national level activity for which prior permission has been obtained from the Senate, or
  - d. any other cause such as a natural disaster clearly precluding a candidate from sitting the Examination.(2) In all these instances the candidate must follow accepted University procedures (eg. submission of medical certificate, other documentary evidence, etc.) and the Senate may request further documents for authentication.  
(3) The Senate reserves the right to grant or deny a request for excuse at an Examination.
16. In the event that a candidate is unable to appear for a viva voce, clinical/practical cum viva voce component of an ongoing examination due to a reason acceptable as a valid excuse by the Senate (e.g. a candidate being admitted to hospital), upon request by the candidate, the Head and the Director may consider re-scheduling that component enabling the candidate to take that component of the examination. This privilege is entirely at the discretion of the Head and the Director. However, this privilege shall not be applied to written examinations.
17. (1) A candidate who does not successfully pass an Examination after the completion of the course of study for that Examination shall re-take the entire Examination or those subjects as informed by the Institute, at the very next occasion on which the relevant Examination is held.  
(2) Where the candidate does not take that Examination or subject/s, as the case may be, at that occasion the candidate shall be deemed, unless the Senate determines otherwise, to have taken the Examination or the subject/s at that occasion, which shall be taken into

account when computing the total number of attempts on which an Examination and/or subject/s may be taken by a candidate.

18. (1) Students shall have to apply on prescribed form, through the Head, to register for each Professional BUMS Examination of the Degree Programme that they become eligible to take, when application for registration of the Professional BUMS Examinations is called for by the Institute.  
  
(2) The Institute shall have authority not to register an applicant for an Examination or subject/s when she has not satisfactorily completed the requirements to be eligible to appear for that Examination and/or for any other valid reason notwithstanding that a candidate may have completed all the academic requirements to be eligible to appear for an Examination. Valid reason may include, but not restricted to, student indiscipline, misconduct, offensive or abusive behaviour, conduct unbecoming of a medical student, lack of medical professionalism (for example, where the attitudinal aspects of the student and/or the doctor-patient interaction are found to be deficient) as Unani Medicine is a discipline where humane and compassionate approaches are of paramount importance.
19. Appearing at an Examination denotes taking all the required components of the subjects of the Examination needed for completion of the Examination. Candidates shall take all the required components of the subjects of the Examination at one and the same sitting except where the Institute permits a student to re-take some of the subjects of the Examination when she is, or is deemed to be, a repeat candidate.
20. When a candidate appears for an examination in the subsequent attempt the marks obtained for subject/s in the Continuous Assessment will not be added to the final marks for the subject/s when computing.
21. (1) All regulations relating to examination procedure, offences and punishment contained in the Examination Procedure, Offences and Punishment Regulation No.1 of 1986 shall *mutatis mutandis*, apply to and in relation to all assessments/examinations of the Degree Programme.  
(2) Without prejudice to the generality of the Regulation No. 1 of 1986, rules relating to different components of the Formative Assessment may be formulated and implemented by the Head and any matters relating to such components may be decided by the Board on the recommendation of the Director and the Head.  
  
(3) Rules relating to viva voce assessments, assignments, practicals cum viva voce assessment, research project etc. may be announced, from time to time, by the Head in consultation with the relevant teachers and such rules shall not be changed or revoked unless otherwise decided by the Board. Provided there shall at least three examiners be present and mark the performance of candidates when conducting viva voce assessment or any oral assessment (with or without written component).

#### **Part IV – FIRST PROFESSIONAL BUMS - PRE CLINICAL STAGE**

22. The First Professional BUMS – Pre-Clinical Stage - shall commence in the first semester with the initial registration, and the duration of it shall be three Semesters. The curriculum of the First Professional BUMS Course of study shall be those prescribed by these By-Laws and the Regulations made by the Senate on the recommendation of the Board. The academic and learning activities of it shall include, among others, lectures, practical, tutorials, guided reading and educational field visits.
23. The First Professional BUMS Course of study shall consist of the following subjects as more fully described by Regulations of the Senate:
  - a. Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology and History of Medicine)
  - b. Urdu va Arabic
  - c. Al Umoor Al Taba'iyya (Principles of Human Physis)
  - d. Tashreeh e Badan (Anatomy)
  - e. Manafi ul Aza (Physiology and Biochemistry)
  - f. Kulliyat e Advia (Unani Pharmacology -1)
  - g. English and IT
24. There shall be three Continuous Assessments (CAs) for each subject in each semester during the First Professional BUMS Course of study which shall contribute towards the final marks in the First Professional BUMS Examination.
25. A candidate for the First Professional BUMS Examination shall have followed, to the satisfaction of the Head, the prescribed Course of study in each of the prescribed subjects. A candidate shall be eligible to appear for all the subjects of the examination before the candidate is registered for that particular Examination. Candidates shall not be allowed to register for a separate subject at a particular Examination unless the candidate has previously appeared for that subject and had been referred or failed in that subject.
26. A candidate appearing for the First Professional BUMS Examination shall take all the components of the Examination relating to each subject and obtain a minimum % mark from the allocated marks for each component. This minimum pass mark shall be 40 % for theory component (MCQs, SEQs and EQs) and 40% for the practical cum *viva voce* examination and there are no minimum pass marks for CA components and *viva voce* examination. While fulfilling this minimum requirement for each component, the pass mark for each subject will be 50% from the 100 marks allocated for each subject in the final calculation. Only candidates who gain pass marks in each component and gain minimum 50 % of total 100 will be able to pass that subject.



27. (1) A candidate shall be deemed to have passed the First Professional BUMS Examination if the candidate has at one and the same Examination satisfied the Board of Examiners by passing all the six Unani subjects of the Examination as prescribed by these By-Laws and/or Regulations made by the Senate and has sat for the IT and English subjects at the same Examination.
- (2) A candidate may be referred in one or more subjects at the First Professional BUMS Examination, when the candidate does not obtain the minimum pass mark (50%). Such candidates shall be deemed to have passed the First Professional BUMS Examination when they passed the referred subject/s at a subsequent First Professional BUMS Examination.
28. A candidate shall take the theory component and *viva voce*, practical cum *viva voce* component of any subject at one and the same Examination. No candidate shall take the theory component of any subject in one Examination and the *viva voce*, practical cum *viva voce* component of the subject in a different Examination. Such attempts shall be deemed to be invalid. The candidate shall take and complete all the components of a subject in one sitting.
29. A candidate following the First Professional BUMS Course may be absent from a component of the CA of any subject provided she submits within the prescribed period an approved medical certificate or any other reason accepted by the Senate. In such a case, a make-up component of the CA may be designed by the concerned Department of study to be taken by her. If a candidate does not sit for a component of the CA without any valid excuse acceptable to the Senate to cover the absence, she shall be given a “0” mark for the particular component of the CA.
30. In the case of candidates who are registered for the First Professional BUMS Examination, but who could not sit for all or any of the subjects of this Examination (due to sickness or any other valid reason acceptable to the Senate), the results pertaining to the subjects which have been completed shall be conveyed to the candidate. Such candidates shall have to appear for the subjects that the candidate could not complete, at the next occasion that the examination is held. This appearance will be considered as the first attempt of this candidate at this examination provided the candidate has passed the subjects where she completed all the components and the results were conveyed to her. Otherwise they shall not become eligible for Honours.
31. In the case of candidates who are registered for the First Professional BUMS Examination but were unable to complete all the components of this examination and did not submit valid reasons for the absence or the tendered reasons are not accepted by the Senate, the results of the subject where they have completed all the components will be considered in terms of

section 27 (2) above. They shall not pass the subject/s where they have not completed all the components. Whether such candidates shall get referred or failed in the subject/s shall be decided by the amount of marks that they have obtained in the components that they have been present. A cumulative mark below 50% shall be considered as failed. Such candidates shall not be eligible for Honours.

32. The following examination procedures shall be applicable where a subject consists of two Parts (Part I and Part II) :
  - a. A candidate who obtains a minimum of 50 % for each of Part I and Part II of the subject shall be considered as passed the subject.
  - b. If a candidate has obtained not less than 50% of the total marks of a Part and less than 50% but not less than 25% for the other Part, she shall take that Part in which she has received less than 50% but not less than 25% at the following occasion as being referred in that Part of the subject.
  - c. If a candidate has obtained less than 25% for any Part/s of a subject shall be considered as failed the subject. Such candidate shall repeat the subject at the following occasion provided she is eligible to take the examination.
  - d. Such candidates (b and c) shall not be eligible for Honours.
  
33. A candidate who does not pass all the 06 Unani subjects of the First Professional BUMS Examination by the fourth scheduled/successive attempt shall not be allowed to continue her registration in the BUMS Programme. Such a candidate shall cease to be a registered student of the BUMS Programme and her registration with the Institute and the University shall be deemed to have been terminated.
  
34. A candidate who does not register for a scheduled examination without a valid reason acceptable to the Board/Senate shall be considered to have exhausted that attempt, and that attempt shall be counted towards the four attempts cited in section 33 above.
  
35. The First Professional BUMS Examination is a Bar Examination. A candidate must pass all 06 Unani subjects of this Examination to proceed on to the Second Professional BUMS Stage.
  
36. English and IT are not credited for the Degree Programme. However, candidates should appear for the English and IT Examination. Certificates will be awarded for English and IT upon successful completion. The successful completion of English and IT will be considered in awarding Honours, though the actual marks obtained will not be taken into account for the computation of final marks.

37. The mark obtained by a candidate in the First Professional BUMS Examination will form a component of the Cumulative BUMS result as prescribed by Regulations made by the Senate.

**Part V – SECOND PROFESSIONAL BUMS - PARA CLINICAL STAGE**

38. (1) The Second Professional BUMS - Para Clinical Stage – shall commence at the beginning of the 4<sup>th</sup> Semester but only after the successful completion of the First Professional BUMS Examination.
- (2) Candidates who have passed the First Professional BUMS Examination shall be eligible to register for the Second Professional BUMS Course of study and follow the same.
- (3) The curriculum of the Second Professional BUMS Course of study shall be those prescribed by these By-Laws and the Regulations made by the Senate on the recommendation of the Board. The academic and learning activities of it shall include, among others, lectures, practical, tutorials, guided reading and educational field visits.
- (4) The duration of the Second Professional BUMS Course of study shall be three Semesters.
39. The Second Professional BUMS - Para Clinical Stage shall consist of the following subjects as specified by Regulations approved by the Senate:
- a. Mufrad Advia (Unani Pharmacology -II)
  - b. Dawa Sazi (Unani Pharmaceuticals)
  - c. Kushta Sazi (Alchemy)
  - d. Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)
  - e. Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)
  - f. Research Methodology and Medical Statistics
  - g. Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology)
  - h. Kulliyat e Ilaj (Fundamentals of Therapeutics)
  - i. Pathology
40. There shall be three Continuous Assessments (CAs) for each subject in each semester during the Second Professional BUMS Course of study which shall contribute towards the final marks in the Second Professional BUMS Examination.
41. A candidate for the Second Professional BUMS Examination shall have followed, to the satisfaction of the Head, the prescribed Course of study in each of the prescribed subjects. A

candidate shall be eligible to appear for all the subjects of the examination before the candidate is registered for that particular Examination. Candidates shall not be allowed to register for a separate subject at a particular Examination unless the candidate has previously appeared for that subject and had been referred or failed in that subject.

42. A candidate appearing for the Second Professional BUMS Examination shall take all the components of the Examination relating to each subject and obtain a minimum % mark from the allocated marks for each component. This minimum pass mark shall be 40 % for theory component (MCQs, SEQs and EQs) and 40% for the practical cum *viva voce* examination and there is no minimum pass mark for CA components. While fulfilling this minimum requirement for each component, the pass mark for each subject will be 50% from the 100 marks allocated for each subject in the final calculation. Only candidates who gain pass marks in each component and gain minimum 50 % of total 100 will be able to pass that subject.
43. (1) A candidate shall be deemed to have passed the Second Professional BUMS Examination if the candidate has at one and the same Examination satisfied the Board of Examiners by passing all the nine subjects of the Examination as prescribed by these By-Laws and/or Regulations made by the Senate.  
  
(2) A candidate may be referred in one or more subjects at the Second Professional BUMS Examination, when the candidate does not obtain a minimum pass mark (50%) but has obtained not less than 25% of the mark for that subject/s. Such candidates shall be deemed to have passed the Second Professional BUMS Examination when they passed the referred subject/s at a subsequent Second Professional BUMS Examination.
44. A candidate shall take the theory component and *viva voce*, practical cum *viva voce* component of any subject at one and the same Examination. No candidate shall take the theory component of any subject in one Examination and the *viva voce*, practical cum *viva voce* component of the subject in a different Examination. Such attempts shall be deemed to be invalid. The candidate shall take and complete all the components of a subject in one sitting
45. A candidate following the Second Professional BUMS Course may be absent from a component of the CA of any subject provided she submits within the prescribed period an approved medical certificate or any other reason accepted by the Senate. In such a case, a make-up component of the CA may be designed by the concerned Department of study to be taken by her. If a candidate does not sit for a component of the CA without any valid excuse acceptable to the Senate to cover the absence, she shall be given a “0” mark for the particular component of the CA.

46. In the case of candidates who are registered for the Second Professional BUMS Examination, but who could not sit for all or any of the subjects of this Examination (due to sickness or any other valid reason acceptable to the Senate), the results pertaining to the subjects which have been completed shall be conveyed to the candidate. Such candidates shall have to appear for the subjects that the candidate could not complete, at the next occasion that the examination is held. This appearance will be considered as the first attempt of this candidate at this examination provided the candidate has passed the subjects where she completed all the components and the results were conveyed to her. Otherwise they shall not become eligible for Honours.
47. In the case of candidates who are registered for the Second Professional BUMS Examination but were unable to complete all the components of this examination and did not submit valid reasons for the absence or the tendered reasons are not accepted by the Senate, the results of the subject where they have completed all the components will be considered in terms of section 43 (2) above. They shall not pass the subject/s where they have not completed all the components. Whether such candidates shall get referred or failed in the subject/s shall be decided by the amount of marks that they have obtained in the components that they have been present. A cumulative mark below 50% shall be considered as failed. Such candidates shall not be eligible for Honours.
48. The following examination procedures shall be applicable where a subject consists of two Parts (Part I and Part II) :
  - a. A candidate who obtains a minimum of 50 % for each of Part I and Part II of the subject shall be considered as passed the subject.
  - b. If a candidate has obtained not less than 50% of the total marks of a Part and less than 50% but not less than 25% for the other Part, she shall take that Part in which she has received less than 50% but not less than 25% at the following occasion as being referred in that Part of the subject.
  - c. If a candidate has obtained less than 25% for any Part/s of a subject shall be considered as failed the subject. Such candidate shall repeat the subject at the following occasion provided she is eligible to take the examination.
  - d. Such candidates (b and c) shall not be eligible for Honours.
49. A candidate who does not pass all the 09 subjects of the Second Professional BUMS Examination by the fourth scheduled/successive attempt shall not be allowed to continue her registration in the BUMS Programme. Such a candidate shall cease to be a registered student of the BUMS Programme and her registration with the Institute and the University shall be deemed to have been terminated.

50. A candidate who does not register for a scheduled examination without a valid reason acceptable to the Board/Senate shall be considered to have exhausted that attempt, and that attempt shall be counted towards the four attempts cited in section 49 above.
51. The Second Professional BUMS Examination is a Bar Examination. A candidate must pass all 09 subjects of this Examination to proceed on to the Final Professional BUMS Stage.
52. The marks obtained by a candidate in the Second Professional BUMS examination shall form a component of the cumulative BUMS result, as prescribed by Regulations approved by the Senate.

### **Part VI – FINAL PROFESSIONAL BUMS - CLINICAL STAGE**

53. (1) The Final Professional BUMS - Clinical Stage – shall commence from the beginning of the 7<sup>th</sup> Semester only after the successful completion of the Second Professional BUMS Examination.
  - (2) Candidates who have passed the Second Professional BUMS Examination shall be eligible to register for the Final Professional BUMS Course of study and follow the same.
  - (3) The curriculum of the Final Professional BUMS Course of study shall be those prescribed by these By-Laws and the Regulations made by the Senate on the recommendation of the Board. The academic and learning activities of it shall include, among others, lectures, practical, tutorials, guided reading and educational field visits.
  - (4) The duration of the Final Professional BUMS Course of study shall be four Semesters.
54. The Final Professional BUMS - Clinical Stage shall consist of the following subjects as specified by Regulations approved by the Senate:
  - a. Moalejat (General Medicine)
  - b. Ilmu Jarahat (General Surgery)
  - c. Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry)
  - d. Amraz e Niswan va Qabalat (Gynaecology and Obstetrics)
  - e. Ilmu Atfal (Paediatrics)
  - f. Deshi Ilaj (Indigenous Medicine)
  - g. Research Project

55. (1) The student assessment of the Clinical Stage shall comprise of Continuous Assessments (CA) and Final Professional BUMS Examination.
- (2) There shall be four Continuous Assessments (CA) for each subject in each semester during the Final Professional BUMS which shall contribute towards the final marks in the Final Professional BUMS examination.
- (3) If a candidate does not appear for the CA due to medical or any other valid reason, the particular Department of study will arrange a make-up CA. If a candidate is unable to sit for any component of the CA without any valid excuse acceptable to the Senate to cover the absence, she will be given a “0” mark for the particular assessment/s.
56. The Final Professional BUMS examination shall comprise of separate assessment of 06 Unani subjects and research project. The format of the examination shall take the form of written and clinical cum *viva-voce* examinations.
57. Research Project shall commence at the beginning of the first Semester of the Second Professional BUMS – Para Clinical Stage and shall extend up to the end of third Semester of the Final Professional BUMS – Clinical Stage. A candidate shall obtain a mark of not less than 50% for the completion of the research project successfully.
58. To be eligible to appear for the Final Professional BUMS Examination a candidate shall have -
- (i) completed all the clinical appointments to the satisfaction of the Head; and,
  - (ii) passed the Second Professional BUMS examination as specified by the Regulations made by the Senate.
59. A candidate appearing at the Final Professional BUMS Examination for the first time must register and appear for all the 06 Unani subjects of this Examination and also complete the research project. Appearance at an Examination denotes taking all the components of the Examination needed for completion of the Examination at one and the same examination.
60. A candidate shall take the theory component and clinical cum *viva voce* component of any subject at one and the same Examination. No candidate shall take the theory component of any subject in one Examination and the clinical cum *viva voce* component of the subject in a different Examination. Such attempts shall be deemed to be invalid. The candidate shall take and complete all the components of a subject in one sitting. The candidate will not be allowed to register for a separate subject at a particular examination unless the candidate has previously appeared for that subject and had been referred or failed in that subject.
61. A candidate appearing for each subject of the Final Professional BUMS Examination must obtain a minimum % mark from the allocated marks for each component. This minimum

pass marks will be 50% for the clinical cum *viva voce* component, 45% for theory component (MCQs, SEQs and EQs) and no minimum pass mark for CAs. The marks allocated for each component of the subject shall be specified in Regulations. While fulfilling these minimum requirements for each component, the pass marks for each subject shall be 50% from the 100 marks allocated for each subject in the final calculation. Only candidates who gain pass marks in each component and gain minimum 50 % of total 100 will be able to pass that subject.

62. (1) A candidate shall be deemed to have passed the Final Professional BUMS Examination if the candidate has at one and the same Examination satisfied the Board of Examiners by passing all the o6 Unani subjects of the Examination and research report as prescribed by these By-Laws and/or Regulations made by the Senate.
- (2) A candidate may be referred in one or more Unani subjects at the Final Professional BUMS Examination, when the candidate does not obtain a minimum pass mark (50%) for that subject/s and/or the research report, but has obtained not less than 25% of the mark for that subject/s and/or the research report. Such candidates shall be deemed to have passed the Final Professional BUMS Examination when they passed the referred subject/s and the research report at a subsequent Final Professional BUMS Examination
63. In the case of candidates who are registered for the Final Professional BUMS Examination, but who could not sit for all or any of the subjects of this Examination (due to sickness or any other valid reason acceptable to the Senate), the results pertaining to the subjects which have been completed shall be conveyed to the candidate. Such candidates shall have to appear for the subjects that the candidate could not complete, at the next occasion that the examination is held. This appearance will be considered as the first attempt of this candidate at this examination provided the candidate has passed the subjects where she completed all the components and the results were conveyed to her. Otherwise they shall not become eligible for Honours.
64. In the case of candidates who are registered for the Final Professional BUMS Examination but were unable to complete all the components of this examination and did not submit valid reasons for the absence or the tendered reasons are not accepted by the Senate, the results of the subject where they have completed all the components will be considered in terms of section 62 (2) above. They shall not pass the subject/s where they have not completed all the components. Whether such candidates shall get referred or failed in the subject/s shall be decided by the amount of marks that they have obtained in the components that they have been present. A cumulative mark below 50% shall be considered as failed. Such candidates shall not be eligible for Honours.



65. The following examination procedures shall be applicable where a subject consists of two Parts (Part I and Part II) :
- a. A candidate who obtains a minimum of 50 % for each of Part I and Part II of the subject shall be considered as passed the subject.
  - b. If a candidate has obtained not less than 50% of the total marks of a Part and less than 50% but not less than 25% for the other Part, she shall take that Part in which she has received less than 50% but not less than 25% at the following occasion as being referred in that Part of the subject.
  - c. If a candidate has obtained less than 25% for any Part/s of a subject shall be considered as failed the subject. Such candidate shall repeat the subject at the following occasion provided she is eligible to take the examination.
  - d. Such candidates (b and c) shall not be eligible for Honours.
66. A candidate who does not pass all the 06 Unani subjects and/or the research project of the Final Professional BUMS Examination by the fourth scheduled/successive attempt shall not be allowed to continue her registration in the BUMS Programme. Such a candidate shall cease to be a registered student of the BUMS Programme and her registration with the Institute and the University shall be deemed to have been terminated.
67. (1) Notwithstanding the fact that a candidate may be otherwise eligible, such a candidate would not be permitted to appear for the Final Professional BUMS Examination or any component of it or submit the research project if a period of 10 academic years has elapsed since this candidate registered as a student of the Degree Programme. The registration of such candidate shall be deemed to have expired at the end this period.
- (2) Provided all periods of exemption granted by the Senate shall be excluded when computing the period of ten academic years. Exemptions that shall be considered for extension of this period shall be those periods where the academic work of the Institute was interrupted or disrupted due to unforeseen circumstances, and any period of illness of the candidate which is supported by the recommendation of a Medical Board duly approved by the Senate. The period of exemption shall be added to the above period of ten academic years when computing the maximum period of registration that shall be allowed to such candidates.

#### **Part VII – Cumulative BUMS Results**

68. The cumulative BUMS results shall be computed from marks of all three Stages in proportions specified by the Regulations made by the Senate.
69. The cumulative BUMS results shall appear in the academic transcript of each candidate.

### **Part VIII – Honours, Distinctions and Medals**

70. (1) Honours (Classes) shall be awarded in the;
- (a) First Professional BUMS – Pre Clinical Stage
  - (b) Second Professional BUMS – Para clinical Stage
  - (c) Final Professional BUMS – Clinical Stage
  - (d) Cumulative BUMS Results
- (2) The Honours awarded may include First Class Honours, Second Class (Upper Division) Honours and Second Class (Lower Division) Honours.
71. With the exception of the Cumulative BUMS Results, a candidate is eligible for Honours in paragraphs (a), (b) and (c) of subsection of section 70 above, provided the candidate has passed all components of the Professional Examinations in the relevant Stage in the first scheduled attempt, unless the Senate for some specified reason permitted the candidate to take the examination at the next occasion on which the examination was held. The marks of the relevant subjects will be considered when computing the total marks on which the Honours shall be decided. The following criteria shall be used in deciding on the Honours.
- 70% and above – First Class Honours
  - 65% to 69% – Second Class (Upper Division) Honours
  - 60% to 64 % – Second Class (Lower Division) Honours
72. When deciding on Honours in the Cumulative BUMS Results the same criteria given above shall be applied.
73. A candidate may be awarded subject based Distinctions or Medals. The eligibility and criteria of award shall be specified by the Regulations made by the Senate.

### **Part IX- Internship**

74. (1) Notwithstanding the above provisions, no undergraduate shall be eligible to be conferred the Degree of Bachelor of Unani Medicine and Surgery unless she has successfully completed an Internship programme of one year duration after successfully completing the First Professional BUMS Examination, the Second Professional BUMS Examination and the Final Professional BUMS Examination within a maximum period of ten academic years.
- (2) The objective and purpose of the Internship programme is to equip the undergraduate with necessary knowledge, skills and attitudes required to practice as a competent Unani Medical professional and practitioner.
- (3) The successful completion of the Internship is a pre-requisite for registration as an Ayurveda Medical Practitioner with the Sri Lanka Ayurveda Medical Council (As per Ayurveda Act 31 of 1961).

(4) The Internship Programme shall consist of (i) nine months of training at selected Ayurveda Hospitals under the supervision of a Specialist Grade Doctor / Senior Medical Officer, and (ii) three months under a Traditional Physician in a specialized subject.

(5) The Institute shall ensure that the selected Ayurveda Hospitals and the Specialist Grade Doctor / Senior Medical Officer as well as Traditional Physician are of acceptable standing to be recognized to provide the required knowledge, skills and attitudes to practice as a competent Unani Medical Practitioner.

(6) The undergraduate shall produce monthly progress report and at the end of the Internship period an Internship Completion Certificate issued by the Commissioner of Ayurveda to the Director of the Institute. The Certificate shall certify that the undergraduate has successfully completed the Internship.

(7) The Board of Management of the Institute shall recommend to the Senate of the University that she is eligible to be conferred the Degree of Bachelor of Unani Medicine and Surgery when the undergraduate submits the Internship Completion Certificate.

(8) Where an undergraduate is unable to complete the Internship successfully due to any reason, she shall undergo again a fresh Internship programme and complete it successfully to be eligible to the award of the Degree of Bachelor of Unani Medicine and Surgery.

(9) No undergraduate shall be permitted to undertake the Internship programme in more than a maximum of three occasions to complete the requirement successfully. A failure to successfully complete the Internship programme within three occasions shall result in the undergraduate not being entitled to the award of the Degree of Bachelor of Unani Medicine and Surgery.

#### **Part X- Special Provisions**

75. The Vice Chancellor shall have authority, on the recommendation of the Director of the Institute, to take such action or give such direction not inconsistent with the principles underpinning the provisions of these By-Laws, as appeared to her to be necessary or expedient for the purpose of removing any difficulties that may arise in relation to academic issues pertaining to any batches of student or individual student.

#### **Part XI- Interpretation**

76. In these By-Laws unless the context otherwise requires,

“Board of Management” means the Board of Management of the Institute of Indigenous Medicine of the University of Colombo constituted by the Ordinance No. 7 of 1979 as amended subsequently.

“Council” means the Council of the University of Colombo constituted by the Universities Act No.16 of 1978 and its subsequent amendments.

“Institute” means the Institute of Indigenous Medicine of the University of Colombo constituted by the Ordinance No. 7 of 1979 as amended subsequently.

“Senate” means the Senate of the University of Colombo constituted by the Universities Act No.16 of 1978 and its subsequent amendments.

77. Any questions regarding the interpretation of these By-Laws shall be referred to the Council, whose decision thereon shall be final.

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## **REGULATIONS AND THE CURRICULUM OF UNANI MEDICINE AND SURGERY (BUMS) DEGREE PROGRAMME**

These Regulations are made by the Senate of the University of Colombo under the section 136 of Universities Act No.16 of 1978 and may be cited as the Bachelor of Unani Medicine and Surgery (BUMS) Degree Regulation No... of 2019. These Regulations must be read concurrently with the Bachelor of Unani Medicine and Surgery (BUMS) Degree By-Laws No. ....of 2019.

The Institute of Indigenous Medicine (IIM) of the University of Colombo conducts the BUMS Degree programme. It is a comprehensive, integrated professional course imparting the trainees with the knowledge, skills and attitudes that are necessary to function as a Unani Graduate Doctor. The programme is of six years duration including one year internship. The programme is conducted at the Institute of Indigenous Medicine, Rajagiriya and the clinical and other training is conducted at the National Ayurveda Teaching Hospital, Colombo 08 and other selected training centers.

The academic activities of the BUMS degree programme are organized as three (03) Stages.

1. First Professional BUMS – Pre Clinical Stage
2. Second Professional BUMS – Para Clinical Stage
3. Final Professional BUMS – Clinical Stage

### **1. First Professional BUMS – Pre Clinical Stage**

The First Professional BUMS - Pre clinical Stage is designed to give an understanding of the structure and functions of the human body as per Unani as well as modern medical basis, Unani fundamentals, History of Unani Medicine and Mufrad Advia / Unani Pharmacology to the newly enrolled Unani medical students. Since the authentic text books of Unani are in Urdu and Arabic, comprehensive knowledge in Urdu and Arabic also given in BUMS programme. The academic activities and the examinations of the First Professional BUMS are organized in a subject based manner. Yet the sequencing of the teaching activities is such that the student is given an integrated knowledge of the content areas. The First Professional BUMS Degree programme commences from first semester and extends to the end of third Semester.

The content areas of pre clinical Stage are covered by a series of subject based lectures, practical, field visits, problem based teaching/learning activities etc. These activities cover relevant basic knowledge, practical skills and their clinical applications in relation to the core topics of the subjects.

At the beginning of each subject, the student will be informed about the details of the training programme and about the Continuous Assessments and other examinations.

An introduction to the content areas and examinations of the First Professional BUMS is given below.

### **1.1. The Academic Programme – Pre Clinical Stage**

- 1.1.1. Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioral Sciences)
- 1.1.2. Urdu va Arabic
- 1.1.3. Al Umoor Al Taba'iyya (Principles of Human Physis)
- 1.1.4. Tashreeh e Badan (Anatomy)
- 1.1.5. Manafi ul Aza (Physiology and Biochemistry)
- 1.1.6. Kulliyat e Advia (Unani Pharmacology -1)
- 1.1.7. English and Information Technology (IT)

#### **1.1.1. Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioral Sciences)**

##### **1.1.1. 1. Core Topics**

##### **Part I – Falsafa (Ontology)**

Introduction to *Falsafa*, Classification of *Ilm* and its Application to health. Physical and non-physical entities and its relationship to physical, mental and spiritual well being. Introduction to Moral, Spiritual, Somatoform and Psychosomatic diseases.

Definition of *Tibbi Rooh* and other similar subtle energies, Spiritual therapy including medicine and Meditation and Tibbi Nabavi, Analytical Study of Unani concepts.

Nafs; Knowledge of *Nafs* and its classification, *Nafs* related to *Quwa* and other systems.

Analytical Studies/ *Bahas*

Traditional terminologies in relation to *Bahas*, and scientific way of *Bahas*.

##### **Part II Tareekh e Tibb va Akhlaqiyya (History of Unani Medicine and Behavioral Sciences)**

History of changes in disease concept from primitive culture to modern times. Origin and development of medicine special reference to Unani medicine. Greek, Roman and Arabic Unani scholars and their contributions towards the development of Unani medicine. Unani Medicine in India, Pakistan and Sri Lanka. Acts related to Indigenous medical system and its applications for indigenous practices and institution. Historical background and awareness of basic principles of traditional system and supportive systems. Medical Ethics.

Understanding Individual Difference, Enhancing Individual Character, Positive Thinking and Negotiation, Stress Management, Time Management, Communication Skills, Conflict Management And Leadership. Introduction to behavioural changes and abnormal psychology; introduction to counselling therapy.

**Teaching and Learning Methods:** Lectures, Small group activities, Discussions, Presentations, Demonstrations.

**Practical training:** Field visits and Museum Visit (02)

**Duration:** 180 Hours

**Recommended reading:**

1. Abdullah AA. Healing with the medicine of the prophet : Darussalam Publishers and distributors: Riyadh, Edl; 1999.
2. Ahmad YA. The Islamic guideline on medicine: Darussalam, Edl; 2010.
3. Alavi S. Islam and Healing Loss and Recovery of an Indo-Muslim Medical Tradition 1600-1900: permanent black: Ranikhet, Edl; 2008.
4. Al-Jauziyah Imam Ibn Al-Qaiyim. Healing with the medicine of the prophet: Darussalam Publishers and distributors: Riyadh, Edl; 1999.
5. Department of Philosophy of Medicine and Science. Theories and Philosophies of Medicine: Institute of history of medicine and medical research: New delhi, Edl; 1973.
6. Ibn Sina. Al Qanoon fil Tibb. (Urdu translation by Kantoori GH). Vol.3. Part 2. New Delhi: Idarakitabus Shifa.
7. Ibn-e-Sina. (1993) Al Qanoon-fil-Tibb (English translation by department of Islamic studies Jamia Hamdard), Vol.1 & 2. New Delhi.
8. Mohommed S. The prophetic medicine science: Millat book centre: New delhi.
9. Nafis Burhanuddin, Kulliyat-e-Nafisi, Idara Kitabus Shifa, New Delhi, 1954.
10. Rizvi AA. Muslim tradition in psychotherapy and modern trends: Institute of Islamic culture: Lahore Pakistan.
11. Zaidi I.H., Zulkifle M, Ahmad S.N. (1999) Temperamentology: A Scientific Appraisal of Human Temperament. Iqtidarul Hasan Zaidi.

## **1.1.2 Urdu va Arabic**

### **1.1.2.1. Core topics:**

Urdu:

Alphabets, vowels & other signs, Nouns, Prepositions, Interrogatives (Possessive pronouns), Adjectives, Pronouns, Gender, Number, Cases (Demonstrative pronouns), Tenses, Degree of comparison (Relative pronouns), Adverbs, Conjunctions, Writing style (Ilmussarf), Transitive & intransitive verbs, Conditional Tenses, Verbal Noun, Direct speech and Reported speech, Continues tenses, Intensive verbs, Ordinal & fractional Nouns, Letter writing, Writing paragraphs & essays.

Arabic:

Alphabets, Diacritics, Germination, Pronunciation and articulation, Definiteness and indefiniteness, Demonstrative pronouns, Personal pronouns, parts of speech, Gender, Adjectives, Past tense verb conjugation, Broken plurals, Adverbs, Colors and numbers, Prepositions and Interrogatives, Writing practice.

**Teaching and Learning Methods:** Lectures, Group works, Discussions, Presentations, Demonstrations

**Duration:** 240 hours (Theory - 240 hours)

**Recommended readings:**

- i. Al Kitaab fil Ta'allum al- Arabiyya, with DVDs, a text book for Beginning Arabic, part one, Second Edition.
- ii. Brustad, K., Al-Batal, M., Al-Tonsi, A. (2010). Alif Baa: Introduction to Arabic Letters and Sounds (3rd edition).
- iii. Muqthar ISA. Teaching Arabic Language for the Academic purposes in the Medical faculty: International Islamic University Malaysia: Kuala Lumpur, Ed1; 2006.

**1.1.3. Al Umoor Al Taba'iyya (Principles of Human Physis)**

**1.1.3.1. Core topics:**

Concept of Arkan e Arba and Mizaj:

Definition and description of *Al Umoor Al Taba'iyya*, Definition of *Arkan*, *Kaifiyyath e Arba* in relation to *Arkan*, *Arkan e Arba* theory and General disorders with *Arkan*. *Mizaj* in detail. *Mizaj e Motadil and Ghairmotadil*

Akhlat and Aza:

Definition and classification of *Akhlat*. History of humoral theory and generation of humors, scientific merit and modern aspect of humoral theory. Classification of humors. Description of *Taba'i and Ghair e Taba'i Akhlath: Damavi, Bulgham, Safra, Sawda*. Scientific merit and modern aspect of *Akhlat*. Function of *Akhlat* and importance in relation to maintain health.

*Aza e Mufrada*: its definition, varieties and their description, functions. *Aza e Murakkaba*: its definition, subdivisions, their description, and functions etc

Arwah, Quwa, Af'al:

Definition of *Ruh* with its various interpretations and classification, Concept of *Ruh* (Pneuma) according to different Unani Scholars, Functions of *Ruh* and its routes, Vitality of the organs and *ruh*, Definition and classification of *Af'aal* (Functions) according to *Quwa* (Powers)

*Nabz*:

*Nabz*: its definition, Method of finding the *Nabz*, description of parameters of *Nabz*.

*Tabiat*

*Tabiyat*: its definition, function, importance in maintain health. Varieties of *Tabiat*. *Tabiat* related to modern aspect. *Fuzlatal Badan*: the diagnostic parameters of *bole*, *baraz*, its physiological variation. *Sith-e-zarooriya*: its role in maintaining health. *Hararat al Badan* and *Rutubat al Badan*:



its importance, function in maintaining health. Effects of *Hararat-e-ghareebi*, *Hararat Muqassirah* and *Rutubat-e-Ghareebi*

**Teaching and Learning Methods:** Lectures, Small group activities, Discussions, Presentations, Demonstrations

**Practical Training:** Data collection / information for Mizaj Analysis, Categorize the given population according to the Mizaj concept, Application of diet and life style changes according to Mizaj concept for the health promotion, Recognize Unani diagnostic tools: bole, baraz and Nabz, Nabz examination, Basic laboratory analysis of blood constituents related with akhlat concept, Mizaj.

**Duration:** 240 hours (Theory - 180 hours, Practical- 60)

**Recommended reading:**

1. Ibn Nafees. SharahTashreeh e Qanoon. Haiatul Misriya; 1998
2. Ibn rushad. Kitab ul kulliyat.2nd ed. New Delhi: CCRUM; 1987.
3. Ibn Sina. Al Qanoon Fil Tib (Urdu trans. by Kantoori GH). New Delhi: IdaraeKitabusshifa; 2000
4. Zaidi I.H., Zulkifle M, Ahmad S.N. (1999) Temperamentology: A Scientific Appraisal of Human Temperament. Iqtidarul Hasan Zaidi.

#### **1.1.4. Tashreeh e Badan (Anatomy)**

##### **1.1.4.1. Core topics:**

Introduction, embryology, upper limb: arm, forearm, hand, pectoral region, axilla, thorax: thoracic wall, cavity and its contents, bronchial tree and lung, esophagus, thoracic duct, mediastinum, heart, sympathetic trunk, diaphragm, lower limb: thigh, gluteal region, leg, foot, abdomen pelvis and perineum: bones, joints, muscles, blood supply, venous and lymphatic drainage, nerve supply, peritoneum, abdominal viscera , pelvic viscera, male and female reproductive organs, head, neck and brain: bones, joints, muscles, blood supply, venous, lymphatic drainage, nerve supply, face, orbit, mouth, tongue, pharynx, larynx, ear, nose, cranial cavity, cerebrum, brain stem and cerebellum, cranial nerves, along with applied and clinical anatomy

**Teaching and Learning Methods:** Lectures, Presentations, Demonstrations, Small group discussions, Interactive Class Room Activities

**Practical Training:** Cadaver dissection, Anatomical model demonstration, Interactive based software, diagrams, and living anatomy practical sessions.

**Duration:** 255 hours (Theory - 105 hours, Practical- 150)

**Recommended reading:**

1. Chaurasia BD. Human Anatomy. 5<sup>th</sup> ed. CBS publishers and distributors-New delhi. 2010; Vol I, II & III

2. Ellis H. Clinical Anatomy (A revision and applied anatomy for clinical students). 11<sup>th</sup> d. Oxford Blackwell Scientific Publication. 2006
3. Moore KL, Dalley AF. Clinically Oriented Anatomy. 4<sup>th</sup> ed. Lippincott Williams & Wilkins –Philadelphia.1999
4. Netter FH. Atlas of Human Anatomy. 7<sup>th</sup> ed. Elsevier. 2006
5. Singh I, Pal GP. Human Embryology. 8<sup>th</sup> ed. Macmillan –New Delhi.
6. Singh I. Textbook of Anatomy with Colour Atlas. 5<sup>th</sup> ed. Jaypee Bros. 1996; Vol I, II & III
7. Tortora GJ, Derrickson B. Principles of Anatomy and Physiology. 13<sup>th</sup> ed. John Wiley & Sons (Asia) Pvt Ltd. 2011.Vol I

### **1.1.5. Manafi ul Aza (Physiology and Biochemistry)**

#### **1.1.5.1. Core topics:**

Homeostasis, body fluid, hematology, jaundice, blood groups, plasma protein, immunity, respiratory system: mechanism of respiration, respiratory adaptation, and artificial respiration, cardiovascular system- ECG, cardiac cycle, heart sound, murmurs, heart rate and regulation, arterial pulse, systemic arterial blood pressure and regulation, gastro intestinal system: digestion, movements of gut, urinary system: urine formation, composition of urine, micturition, renin – angiotensin mechanism, skin: functions, endocrine system: secretions, functions, and abnormal consequences, reproductive system: physiology of male and female reproductive system, menstrual cycle, nervous system: nerve impulse, cerebral cortical areas, csf, motor and sensory pathways, cerebellum, cranial nerves and autonomic nervous system, biochemistry: cell, carbohydrate, protein and lipid metabolism and clinical conditions, enzymes, nucleic acid and vitamins, introduction to genetic engineering and biotechnology, applied and clinical aspects of physiology and biochemistry

**Teaching and Learning Methods:** Lectures, practical, small group discussion, demonstration, Case discussion

**Practical Training:** Laboratory Training, Hospital visit, Demonstration of interactive based software, CD sessions on practical.

**Duration:** 240 Hours (Theory - 120, Practical- 120)

#### **Recommended reading:**

1. Allison LA. Fundamentals of Molecular Biology. 2<sup>nd</sup> ed. Collage of William and Mary. Williamsburg. USA
2. Barrett KE, Barman SM, Boitano S, Brooks HL. Ganong’s review of medical physiology. 24<sup>th</sup> ed. Tata McGraw Hill Education Private Limited. 2012
3. Champe, Pamela C, Harrey, Richard A, Denise RF. Lippincott’s illustrated reviews: Biochemistry. 6<sup>th</sup> ed. Two Commerce Square-Philadelphia. 2005

4. Ghai CL. Textbook of Practical Physiology. 8<sup>th</sup> ed. Jaypee Brothers Medical Publishers.
5. Hall JE. Guyton and Hall Text Book of Medical physiology. 13<sup>th</sup> ed. Elsevier
6. Victor W, Rodwell, Bender D, Kathleen MB, Kennelly PJ, Weil PA. *Harpers Illustrated Biochemistry*. 29th ed. The McGraw – Hill Companies. 2012

## 1.1.6 Kulliyat e Advia (Unani Pharmacology -1)

### 1.1.6.1. Core topics:

Introduction to *Ilmul Adviya*, History of *Ilmul Advia*, The importance and application of *Ilmul Adviya* in day to day life, *Maakhaz e Advia* (source of drugs) Definition and application of *Dawa, Ghiza, Dawa e Ghiza and Ghiza e Dawa, Zulkhasa, Mizaj e Adviya* (Temperament of drugs, *Darjat e Mizaj e Adviya* (Degree of temperamental qualities), Important of *Mizaj* in the study of drugs, *Istikhraj e Mizaj* (Assessment of *Mizaj* of a Unani compound formulation), *Dawa ke Ajza e Tarkeeba* (Composition of drugs), *Jauhar e Fial* (Active principles), *Dawa ki Taba'i Khusoosiyat* (Special properties of drugs), *Abdal e Advia* (Principles and importance of Substitutess), *Asrar va Aslah e Advia* (Adverse effect of the drugs and its correction), *Ashkal e Advia* (Forms of drugs) *Masalik e Adviya* (Routes of administration of drugs), *Miqdar e khurak* (Dosage), *Ghair Ma'roof Adviya ke Asrat Ma'loom Karne ke Farai* (Identification of unknown drugs):, *Qiyas Va Tajruba* (Ancient empirical methods of induction and experimentation for the assessment of medicinal effects of unknown drugs), Detail description of important Unani medical terminologies used in Unani system of medicine.

*Nau'iyat e Amal* (various actions) of Unani drugs on different organs and systems of human body, Nervous system, Locomoto system, Cardio vascular system (Heart, blood and blood vessels), Digestive system (Stomach, intestine, liver), Respiratory system, Genito-urinary system (Male and female), Sensory organs (Eye, ear, nose, tongue and skin), Pharmacognosy – Important chemical constituents of medicinal plants, Conservation and Husool va tahaffuz wal umur e advia (Principles of collection and preservation and ages of raw drugs, Principles of standardization and quality control of raw drugs)

Detail study of *Dawa e Ghiza* and *Ghiza e Dawa* found in Sri Lanka.

**Teaching and Learning Methods:** Interactive lectures, team-based learning, and other small group activities.

**Practical Training:** Identification of morphological features of the medicinal plants, Cultivation and propagation of medicinal plants.

**Duration:** 180 hours (Theory - 90 hours, Practical- 90 hours)

### Recommended reading:

1. Abdul Latif, Tauzihat e Kulliyat e Advia, Aligarh, New Delhi, india, Ibn Sina Academy of Medieval Medicine & Sciences, 2010.
2. Ghani N. Khazainul Advia. New Delhi: Idara Kitabul Shifa; 2010
3. Ibn Baitar. Al Jamiul Mufradat al Advia wal Aghzia. Vol I and II. New Delhi: CCRUM; 1999:
4. Ibn Sina. Al Qanoon Fil Tib (Urdu trans. by Kantoori GH). New Delhi: Idara Kitabul Shifa; 2000
5. Kabeeruddin M. Makhzanul Mufradat. New Delhi: Idara Kitabul Shifa; 2007

## **1.1.7 English and Information Technology (IT)**

### **1.1.7.1. Core topics:**

English: Grammar, Speaking and listening, Reading and writing

IT: introduction to computers, information systems, computer hardware, computer software and basic file management, communication networks, internet and World Wide Web (WWW), Legal and environmental issues; computer and networks security, internet security, health issues, legal and ethical issues, ict applications; real world applications and trends and new concepts in the information communication technology.

**Teaching and Learning Methods:** Lectures, activity-based learning, self- study

**Practical Training:** ICT laboratory training

**Duration:** 90 hours (English – 60 hours and IT – 30 hours)

1. Balagurusamy E. Fundamentals of Computers: Tata McGraw-Hill Education; 2009.
2. Doyle BS. Understanding Information and Communication Technology: For AS Level.
3. Erich Auerbach, Mimesis: The Representation of Reality in Western Literature, trans. Willard R. Trask (Princeton: Princeton University Press, 1953)
4. Mieke Bal, Narratology: Introduction to the Theory of Narrative, 2nd edn (Toronto: University of Toronto Press, 1997)
5. Peter Barry, Beginning Theory: An Introduction to Literary and Cultural Theory, 3rd edn (Manchester: Manchester University Press, 2009)
6. Recommended reading: Parker DM&CS. Understanding Computers: Today and Tomorrow. 15th ed.
7. Revels MC&M. Introduction to Healthcare Information Technology. First Edition ed.
8. Richard Lanham, A Handlist of Rhetorical Terms, 2nd edn (Berkeley, CA: University of California Press, 1991)

## **1.2. Examinations of the First Professional BUMS - Pre Clinical Stage**

### **1.2.1. Examination in Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences)**

The examination in Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of the first semester MCQ - 30 questions (60 minutes)
- ii. End of the second semester OSPE – 20 stations (60 minutes)
- iii. End of the third semester OSPE – 20 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Falsafa, Tareekh e Tibb va Akhlaqiyya professional examination.

### **Professional Examination**

This examination has (1) a theory component and (2) a *viva voce* examination.

1. The theory component: There are two (2) question papers namely part I -Falsafa (Ontology) and part II - Tareekh e Tibb va Akhlaqiyya (History of Unani Medicine and Behavioural Sciences). Each question paper consists of
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. *Viva voce* Examination - 20 marks (5 minutes per student)

### **Criteria for passing Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences)**

To pass the subject Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences).
  - There is no minimum pass mark for CA component and *viva voce* examination.
  - 20% of marks allocated for the CA component will be added to the final mark of Falsafa, Tareekh e Tibb va Akhlaqiyya (Ontology, History of Unani Medicine and Behavioural Sciences) only in the first attempt.

### **1.2.2. Examination in Urdu va Arabic**

The examination in Urdu va Arabic includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester - SEQ – 4 questions (60 minutes)
- ii. End of second semester - SEQ – 4 questions (60 minutes)

iii. End of third semester - SEQ – 4 questions (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CA will contribute to 20% of marks of Urdu va Arabic professional examination.

### **Professional Examination**

This examination has (1) a theory component, (2) a *viva voce* examination.

1. The theory component consist of;

- |                                      |                     |
|--------------------------------------|---------------------|
| i. MCQ – 20 questions (30 minutes)   | - 20 marks (1 x 20) |
| ii. SEQ – 5 questions (90 minutes)   | - 40 marks (8 x 5)  |
| iii. Essay– 2 questions (60 minutes) | - 40 marks (20 x 2) |

Total mark for the theory component is 100 marks

2. *Viva voce* component - 20 marks (5 minutes per student)

### **Criteria for passing Urdu va Arabic**

To pass the subject of Urdu va Arabic a candidate must

- iii. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and
- iv. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Urdu va Arabic.
  - There is no minimum pass mark for CA components and *viva voce* examination.
  - 20% of marks allocated for the CA component will be added to the final mark of Urdu va Arabic only in the first attempt.

### **1.2.3. Examination in Al Umoor Al Taba'iyya (Principles of Human Physis)**

The examination in Al Umoor Al Taba'iyya (Principles of Human Physis) includes Continuous Assessments (CA) and Professional examination.

### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- |                                 |                            |
|---------------------------------|----------------------------|
| i. End of first semester        | -Assignment                |
| ii. End of second semester OSPE | -20 stations (60 minutes)  |
| iii. End of third semester OSPE | - 20 stations (60 minutes) |

Each CA will get 20 marks and the total 20 marks of three CA will contribute to 20% of marks of Al Umoor Al Taba'iyya (Principles of Human Physis) professional Examination.

### **Professional Examination**

This examination has (1) a theory component, and (2) a Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The practical cum *Viva voce* examination - OSPE – 20 stations (60 minutes)

Total mark for the practical cum *Viva voce* examination is 100.

### **Criteria for passing Al Umoor Al Taba'iyya (Principles of Human Physis)**

To pass the subject Al Umoor Al Taba'iyya (Principles of Human Physis), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40%
- ii. out of 100 marks) and the practical cum *Viva voce* component (40% out of 100 marks) and
- iii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Al Umoor Al Taba'iyya (Principles of Human Physis).
  - There is no minimum pass mark for CA component
  - 20% of marks allocated for the CA component will be added to the final mark of Al Umoor Al Taba'iyya (Principles of Human Physis) only in the first attempt.

### **1.2.4. Examination in Tashreeh e Badan (Anatomy)**

The examination in Tashreeh e Badan (Anatomy) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessment (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester                      MCQ– 20 questions, SEQ – 2 questions, (60 minutes)
- ii. End of second semester                      MCQ– 20 questions, SEQ – 2 questions, (60 minutes)
- iii. End of third semester                      OSPE – 20 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CA will contribute to 20% of marks of Tashreeh e Badan (Anatomy) professional Examination.

#### **Professional Examination**

This examination has (1) a theory component, (2) a Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical cum *viva voce* component consists OSPE 20 stations (60 minutes)  
Total mark for the practical cum *viva voce* component is 100.

### **Criteria for passing Tashreeh e Badan (Anatomy)**

To pass the subject of Tashreeh e Badan (Anatomy) a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Tashreeh e Badan (Anatomy).
  - There is no minimum pass mark for CA components.
  - 20% of marks allocated for the CA component will be added to the final mark of Tashreeh e Badan (Anatomy) only in the first attempt.

### **1.2.5. Examination in Manafi ul Aza (Physiology and Biochemistry)**

The examination in Manafi ul Aza (Physiology and Biochemistry) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessment (CA)**

Students are evaluated at the end of each semester by the following assessments.

- |                            |                                                    |
|----------------------------|----------------------------------------------------|
| i. End of first semester   | MCQ– 20 questions, SEQ – 2 questions, (60 minutes) |
| ii. End of second semester | MCQ– 20 questions, SEQ – 2 questions, (60 minutes) |
| iii. End of third semester | OSPE – 20 stations (60 minutes)                    |

Each CA will get 20 marks and the total 20 marks of three CA will contribute to 20% of marks of Manafi ul Aza (Physiology and Biochemistry) professional Examination.

#### **Professional Examination**

This examination has (1) a theory component, (2) a Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;
  - i. MCQ– 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.



2. The practical cum *viva voce* component consists of OSPE 20 stations (60 minutes)  
Total mark for the practical cum *viva voce* component is 100.

### **Criteria for passing Manafi ul Aza (Physiology and Biochemistry)**

To pass the subject of Manafi ul Aza (Physiology and Biochemistry), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Manafi ul Aza (Physiology and Biochemistry).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Manafi ul Aza (Physiology and Biochemistry) only in the first attempt.

### **1.2.6. Examination in Kulliyat e Advia (Unani Pharmacology I)**

The examination in Kulliyat e Advia (Unani Pharmacology I) include Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessment (CA)**

Students are evaluated at the end of each semester by the following assessments.

- |                            |                                 |
|----------------------------|---------------------------------|
| i. End of first semester   | MCQ – 40 questions (60 minutes) |
| ii. End of second semester | OSPE – 20 stations (60 minutes) |
| iii. End of third semester | SEQ – 4 questions (60 minutes)  |

Each CA will get 20 marks and the total 20 marks of three CA will contribute to 20% of marks of Kulliyat e Advia (Unani Pharmacology I) professional examination.

#### **Professional Examination**

This examination has (1) a theory component, and (2) a practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical cum *viva voce* component consists of OSPE – 20 stations (60 minutes).  
Total mark for the practical cum *viva voce* component is 100.

## **Criteria for passing Kulliyat e Advia (Unani Pharmacology I)**

To pass the subject of Kulliyat e Advia (Unani Pharmacology), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Kulliyat e Advia (Unani Pharmacology I).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Kulliyat e Advia (Unani Pharmacology I) only in the first attempt.

### **1.2.7. Examination in English and IT**

This examination has (1) a theory component (English), and (2) a practical examination (IT).

1. The theory component: There is one question paper consists of
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical component of IT consists of computer based practical examination – (30 minutes)

Total mark for the practical component is 100.

### **1.3 Criteria for passing the First Professional BUMS examination**

A candidate is deemed to have passed the First professional BUMS examination if the candidate has at one and the same examination passed each of 06 subjects of this examination as prescribed by By-Laws made by the Council; while fulfilling the minimum requirement for the separate components of the 06 subjects, the pass marks for each subject is 50% ; provided that a candidate may be referred in one or more subjects at the First professional BUMS examination when the candidate has not obtained the minimum pass mark (50%) for the particular subject. Such candidates shall be deemed to have passed the First professional BUMS examination when they pass the referred subject (s) at a subsequent First professional BUMS examination.

A candidate who obtains less than 50% in all six subjects or less than 25% in any three of the 06 subjects shall be considered to have failed the entire First Professional BUMS examination. Such candidates shall be deemed to have passed the examination when they pass the six subjects at a subsequent First Professional BUMS examination.

### **1.4. Calculation of marks for award of classes in the First professional BUMS examination**

Only candidates who have passed the First professional BUMS examination at the first attempt are considered eligible for award of classes. The % of marks obtained by the candidate at first attempt for each of 6 subjects are added up and divided by 6 to get the mean cumulative % mark. This mark is called the % mean cumulative First professional BUMS examination mark and used in awarding classes. The classes are decided according to the classification of marks described in the By-Laws.

### **1.5. Award of Distinction**

A candidate, who has obtained at least 75%, shall be awarded a Distinction in the relevant subject.

### **1.6. Contribution to the Cumulative BUMS result**

The First Professional BUMS Examination will contribute 30% to the 100 marks of the Cumulative BUMS result.

## **2. Second Professional BUMS – Para-Clinical Stage**

The Second Professional BUMS Degree programme starts from 4<sup>th</sup> semester and extends to the end of 6<sup>th</sup> Semester which consists of three (03) Semesters. The subjects of Second Professional BUMS –Para clinical Stage bridges the preclinical and Clinical Stages of the BUMS Degree programme.

The content areas of Para clinical Stage are covered by a series of subject based lectures, practical, clinical, tutorials and other teaching/learning activities. These activities cover relevant basic knowledge, practical skills and their clinical applications in relation to the core topics of the subjects.

At the beginning of each subject, the student will be informed about the details of the training programme and about the Continuous Assessments and other examinations.

An introduction to the content areas and examinations of the Second Professional BUMS is given below.

### **2.1. The Academic Programme – Para Clinical Stage**

2.1.1. Mufrad Advia (Unani Pharmacology II),

2.1.2. Dawa Sazi (Unani Pharmaceuticals),

2.1.3. Kushta Sazi (Alchemy),

2.1.4. Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine),

2.1.5. Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine),

- 2.1.6. Research Methodology and Medical Statistics,
- 2.1.7. Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology),
- 2.1.8. Kulliyat e Ilaj (Fundamentals of Therapeutics)
- 2.1.9. Pathology

## **2.1.1. Mufrad Advia (Unani Pharmacology II)**

### **2.1.1.1. Core Topics**

#### **Part – A Mufrad Advia (Unani Pharmacology II)**

Introduction, Detail study of medicinal plants used in Unani medicine under :*Tibbi* name of plants, Botanical name, Natural order/Family, Synonyms - English, Tamil, Sinhalese, Arabic, Sanskrit, *Mahiyat*(Habitat and Description),*Ajza e isti'mal* (Parts used in medicine),*Mizaj* (Temperament), *Kemiya e ajza* (Chemical constituents), *Naf 'e Khas* (Actions according to Unani concept), *Muzir* (Side effect), *Muslih* (Corrective), *Badal*(Substitute), *Afal e Khawas* (Usage), *Miqdar e Khurak* (Dosage)

#### **Part B - Modern Pharmacology**

Fundamental of Pharmacology, principles and actions of Modern drugs on different systems of the body, Efficacy of drugs, Therapeutic application of drugs on different diseased conditions, Modern drugs from plant origin, Nomenclature of modern drugs, Pharmacokinetics, Pharmacodynamics, Toxicity, adverse drug reaction and drug interactions, The legal aspects of drug regulation, The ethical aspects and responsibilities of therapy and experiments, Importance of vitamins and minerals

#### **Teaching and Learning Methods:**

Interactive lectures, small group activities, student presentations.

**Practical Training:** Practical record book, preparation of herbarium sheets (30), practicals in laboratory settings, field visits (03) – Nawinna Herbal Garden, Haldummulla and Pattipola, Peradeniya National Herbarium, presentations.

**Duration:** 180 hours (theory 90 hours, practical 90 hours)

Theory - 90 hours (Mufrad Advia – 75, Modern Pharmacology II – 15)

Practical - 90 hours (Mufrad Advia – 90)

#### **Recommended reading:**

1. Ibn Baitar. Al Jamiul Mufradat al Advia wal Aghzia. Vol I and II. New Delhi: CCRUM; 1999:

2. Ibn Sina. Al Qanoon Fil Tib (Urdu trans. by Kantoori GH).Vol. II New Delhi: IdaraeKitabusshifa; 2000.
3. Kabeeruddin M. Makhzanul Mufradat. New Delhi: Idara Kitabus Shifa; 2007
4. Najmul Ghani, Khazainul Advia, New Delhi: Idara Kitabus Shifa; YNM

## **2.1.2. Dawa Sazi (Unani Pharmaceuticals)**

### **2.1.2.1. Core Topics:**

Introduction to the subject, *Aqsam e Dawa Sazi* (Types of Pharmacy), *Qarabardeen* (Pharmacopoeias) and their authors, Good manufacturing practices for Unani medicines Weight and measures used in Pharmacy *Qadeem* and *Jadeed* (Ancient and modern) and comparative study of them Importance of making compound preparations (*Adviaka Murakkab Karneki Zaroorat*), Dosage forms of internal and external preparations, terminology and processes of making compound preparations (*Istelahat Va Ahmal e Dawa Sazi*), Purification and detoxification of single drugs (*Dawaonka Saf Karna Va Tadbeer Karna*) General method of preparation and storage conditions of *Arq*, *Joshanda*, *Kaisanda* (Distilled medical preparation, Decoction, Infusion), Process of making different types of and storage, *Maa*, *Sat*, *Ushara*, *Sheera* and *Murawwaq* (Medicinal waters and Extracts) , General method of preparation and storage conditions of *Safoof* (Medicinal powders) General method of preparation and storage conditions of *Hab* and *Qurs* (Pills and Tablets) General method of preparation and storage conditions of *Sharbat*, *Sikanjanbeen* (Syrups, Vinegar syrup) , General method of preparation and storage conditions of *Murabba*, *Gulqand* (Preserves, Sugared flowers), General method of preparation of and storage conditions confections (*Itrifal*, *Majoon*, *Jawarish*, *Khameera*, *Laboob*, *Halva*) General method of preparation and storage conditions of *Roghan*, *Marham*, *Zimad* (Medicated oils, Ointments, Poultices), Vivid knowledge about Siddha and Ayurveda preparations.

Murakkabat acting on various systems of the body with their ingredients, dosage, indications and contraindications, Method of writing *Nuskha* (Prescription), Rules and regulations on the usage of drugs, Introduction to quality control methods for compound medicines, and Contemporary developments of Unani Pharmaceutical preparations.

Introduction and establishment of herbal drug industry, Factors of GMP and GACP, standardization of raw materials, herbal formulation, standardization of finish products, and packaging, legal procedures in establishing a drug industry, Exposure in large scale manufacturing industries.

### **Teaching and Learning Methods:**

Interactive lectures, small group activities, student presentations.

**Practical Training:** Drug preparation, Practical record book, Factory visits (02) (Ayurveda Drug Cooperation, Link Naturals Company)

**Duration:** 180 hours ( Theory -90hours, Practical 90 hours)

## Recommended readings:

1. Hakeem Zillur Rahman, Jadeed Unani Dawa Sazi, Idara Kitabus Shifa; 2009
2. Kabeeruddin M. Bayaz Kabeer. Hyderabad: Hikmat book depot; 1921
3. National Formulary of Unani Medicine. New Delhi: Government of India;1993
4. Physicochemical Standards of Unani Formulations vol: I-V, Central Council for research in Unani Medicine, Department of Ayush, India, 2006
5. Ustadul Hakeem Muhammad Abdullah, Kanzul Murakkabat, Eijaz Publishing House, 1998.

### 2.1.3. Kushta Sazi (Alchemy)

#### 2.1.3.1. Core Topics:

Introduction to the subject and relevant books on *Kushta*, Definition of *Kushta*, origin and development of *IlmulKeemiya*, (Knowledge of chemistry), *Istilahat* used in *KushtaSazi*, Equipment used in *KushtaSazi*(*Putt, Jantar*),Method of making *Gil e Hikmat*, Introduction of new technology in the preparation of *Kushta*,Factors to be observed in the preparation of *Kushta* and, other relevant details, Proper preparation of *Kushta*, Method for increasing the potency of *Kushta*, Identification of *Kham Kushta* to ascertain the proper preparation of *Kushta*, General and specific tests for completely prepared *Kushta*, , Detail study of *Ma'dani* and *HaiwaniAdvia* with following information - Chemical Name, Scientific name, Synonyms,Purification, Method of preparation of compound preparations containing *Ma'dani* and *HaiwaniAdvia*,*Miqdar e Khurak*, *Iste'mal e Afal e Khawas* and *Badraqa*, Side effects of *Kushta*.

#### Teaching and Learning Methods:

Interactive lectures, small group activities, student presentations.

**Practical Training:** preparation of Kushtha drugs, practical record book, factory visits (02)- (Ayurveda Drug Cooperation and Link Naturals Company), workshops.

**Duration:** 165 hours (Theory - 75 hours, Practical- 90 hours)

#### Recommended reading:

1. Kabeeruddin H.M., Kitabul Taklees. New Delhi: Central Council of Research in Unani Medicine, Kabeeruddin H.M. ynm
6. Kabeeruddin, Makhzanul Murakkabat, Idara Kitabus Shifa; 2009
2. Mahdihassan S. Indian Alchemy. 2<sup>nd</sup> ed. Delhi: Motilal Banarsidass;1991
3. Nadkarni KM. Indian Materia Medica.VolI., India: Saurab Printers; 2009.
4. Vohora S B, Khan S Y. Animal origin drugs used in Unani medicine:Vikar Publishing;1979

## 2.1.4. Tahaffuzi wa Samaji Tibb (Preventive and Social Medicine),

### 2.1.4.1. Core topics:

#### Part A -Tahaffuzi wa Samaji Tibb:

Introduction to *Tahaffuzi wa Samaji Tibb, Tareekh e Hifzan e Sehat* (History of *Hifzan e Sehat*), Various concepts of *Sehat* and *Hifzan e Sehat* and signs of *Sehat*.

Introduction to *Asbab* and *Asbab e Sitt e Zarooriya* (Six essential factors), *Al hawa e muhit / Atmospheric Air*, fresh air and its effect on health, sources of air pollution, effects of polluted air, ventilation and factors promoting natural ventilation. *Hawa ki kaifiyat aur asarat* (Qualities of *hawa* and its effects)

Introduction to *Makoolat wa Mashroobat* (Food and drink), *Mashroobat aur pani, aqsam e pani*, (types of water), *Mahfooz wa Qabil Isti'mal Pani ki Khusoosiyat / Characteristics of safe water*, sources of water, water pollution, water borne diseases, *Pani ki safayi / methods of purification of water* and *Pani ka Imtihan/ test for water quality*.

*MaSoolat wa Mashroobat aur Sehat, Aqsam e Ghiza* (types of food), *Mutawazin e Ghiza* (balanced diet); Role of balanced diet on *Sehat*, effects of diet on health, *Ilaj bil Taghziya* (dieto therapy), Types and general guidelines of dieto therapy, Values of Traditional food. Introduction to *Harakat wa Sukun e Badan* (Bodily movements and repose), *Aqsam e harakat* and its effects, *Riyazat* (exercise); *Aqsam e riyazat*, Beneficial effects of *riyazat*, Limitation of *riyazat*, *Shara'it e riyazat, Tadabeer e Kasrat e Riyazat*.

Introduction to *Harakat wa Sukun e Nafsani* (psychic movements and repose), and *Aqsam e Harkat wa Sukun e Nafsani, Quwat e Nafsaniya aur Sehat*, Stress management.

Introduction to *Naum wa yaqza / Neend Va Bedari* (sleep and wakefulness), stages of sleep, importance of *tabayee Naum aur Sehat*. Health hazards of *Kasrat e Naum wa Yaqza, Bekhawabi aur hidayat* (Insomnia and its prevention and advices)

Introduction to *Istifragh wa Ihtibas* (Evacuation and Retention) *Aqsam e Istifaragh wa Ihtibas, Asbab e ghair tabayee Ihtibas aur asarat*, *Asbab ghair tabayee Istifaragh aur asarat*, Role of *Istifaragh e Sanaee* and restoration of health (natural urges, suppression of natural urges and its effects on health), Applied aspect of *Asbab e Sitt e Zarooriya* in maintaining *Sehat*

Introduction to *Asbab e Ghair Zarooriya, Al Bilad* (Geographical conditions and related matters), *Maholiyati Asarat* (effects of environment and habitat) *Ilm e Mosamiyat* (Meteorological environment), *Asarat e Mosam wa awariz* (Effects of Seasons and its complications), seasonal abnormalities and their effects on the body, prevalence of seasonal diseases, management of temperamental abnormalities, *Al Masakin / Residentail conditions and related matters*, healthful housing, *Ziyaa e Fuzlat / disposal of waste and excreta disposal, As Sena'at / Occupation and related matters, Al Adat / Habits and related matters, Al Asnan / Age and related matters, Maintenance of balanced temperaments under various conditions of life, Applied aspects in primary health care on infancy, child hood, adults, Amraz e Kuhoooliyat / Geriatrics. Al Ajnas / Gender and related matters, Umoor Al Muzadat e Tabi'at / factors antagonistic to nature and bodily health, Applied aspect of *Asbab e Ghair Zarooriya* in maintaining *Sehat**

*Hifzan wa taraqqi Karna e Sehat* (Preservation and promotion of health), *Jismani Safayiyya* /Personal hygiene, Care of organs, Importance of personal hygiene, Routine methods one should practice to maintain health with special reference to tradition, faith, and culture, *Ilm e wabayee*, Concept of *Waba*, *Ta'dia*, *Asbab*, *Alamat* and *Hifz e Mataqaddam of Muta'addi amraz*  
*Hifz e Mataqaddam of ghair e Muta'ddi amraz*

Introduction to *Hammam*, *Aqsam*, Beneficial effects of *Hammam*, Indications and contraindications of *Hammam*

*Dalak*, *Aqsam* , Preventive aspects of *Dalak*

**Part B: Preventive and Social Medicine:** Definitions of health, determinants of health, spectrum of disease, health education, disease prevention, health promotion, health indicators, vital statistics, demographic transition, epidemiological triad, terminology and definitions in epidemiology, dynamics of disease transmission, prevention and control of communicable and non-communicable diseases, immunization, environmental pollution and human health, family planning, port health.

### **Teaching and Learning Methods:**

Interactive lectures, team-based learning, and other small group activities, practical classes (OPD) Preventive and social medicine Museum sessions, Student presentations, Assignments and projects, small group learning activities.

### **Practical Training:**

1. Community based health awareness programmes /Medical camps
2. Health Promotive Clinics at OPD; measuring status of *Sehat*, Identifying the clinical manifestations of communicable and non-communicable diseases and applying appropriate preventive strategies.
3. Field visits: Water treatment plant at Labugama/Ambatal/Kalatuwawa, Port Health, Slaughter house
4. Preventive and Social Medicine Museum sessions, role play, Students' presentations, Assignments and projects, small group learning activities

**Duration:** 180 Hours (Theory - 90 hours, Practical 90 hours)

Theory - 90 hours (Tahaffuzi wa Samaji Tibb -60, Preventive and Social Medicine - 30)

Practical - 90 hours (Tahaffuzi wa Samaji Tibb – 90)

### **Recommended reading:**

1. Grunner O Cameron. A treatise on the canon of Medicine of Avicenna. London: Luzac and Co; 1930.



2. Ibn Sina. *Al Qanoon fit Tib* (English Translation of the critical Arabic text). Book 1. Jamia Hamdard, New Delhi; 1993.
3. Ibn Sina. *Al Qanoon fit Tib* (Urdu translation by Kantoori GH). Vol-II. New Delhi: Idara Kitabush Shifa; 2007.
4. Mazhar H Shah. *The General Principle Avicenna's Canon of Medicine*. New Delhi: Idara Kitabush Shifa; 2007.
5. Mohammad bin Zakariya Razi. *Kitabul Hawi fit Tib*. Vol 1-23. New Delhi: Idara Kitabush Shifa; 2010.
6. Park K. *Text Book of Preventive and Social Medicine*. 23<sup>rd</sup> ed. Jabalpur: Banarasidas Bhanot; 2015.

### 2.1.5. Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)

#### 2.1.5.1. Core Topics:

##### Part I - Ilmus Sumoom

Introduction to *Ilmus Sumoom*: Definition of *Sum*, Historical aspects, *Aqsam e Sum*, Physical form of chemicals, routes and sites of exposure to toxic agents, Types of exposure, Duration and frequency of exposure [*shadeed* (acute and subacute) and (*muzmin*-chronic and subchronic)] ,factors modifying the actions of poisoning, General management of poisoning, First aid measures and special management.

*Sumoom wa Tiriyaq* and antidotes:*Thriyaq e Mufradha* ,*murakkaba* and household antidotes (*manzele Thriyaq*)

**Nabathi Zahar:** *Nabathi Zahar and its Alamat, Alamat e Tashkheesa, Miqdar e Mumeet, Miqdar e Arza, Anjam wa Usool e Ilaj : Afiyoon, Bhang, Datura, Jamalgota, Kuchla, Bachnak, Foxglove, Madar, Seethraj, Ajwain khurasani, Bilawa, Yebrooj, Tambago, Muleem, Kaner(Nerium odorem, Thevetia peruviana), Kafoor, Adenia palmate.Badanjeer ,cocaine, diya kaduru, divi kaduru*

**Haiwani Zahar:** *Haiwani Zahar(Animal toxins and venoms) and its Miqdar e Sum, Alamat, Alamat e Tashkheesa, Miqdar e Mumeet, Miqdar e Arza, Anjam wa Usool e Ilaj: Poisonous snakes, Domestic pets and dog, Insect bites: scorpion, Centipede, Spider ,Bee/Wasp/hornet and Marine animals.*

**Madani Zahar:** *Madani Zahar and its Miqdar e Sum, Alamat, Alamat e Tashkheesa, Miqdar e Mumeet, Miqdar e Arza, Anjam wa Usool e Ilaj:Para, Sankiya, Surb,thoothiya, phosphorus, Sulphur*

**Occupational and industrial toxins:** physical, chemical and other types of toxic agents in the working environment, route of entry and their effects on health, general principles of prevention for the protection of workers.

Chemicals (solvents, gases and metals)

Solvents: Chloroform, Ether, Phenol and Chloral hydrate, benzene

Alcohol: Ethyl alcohol, Methyl alcohol and Isopropyl alcohol

Gases: Carbon dioxide, Carbon monoxide, hydrogen sulphide, ammonia, chlorine, sulphur dioxide

Acids: Carboic acid, Hydrochloric acid, Sulphuric acid, Nitric acids, Hydrocyanic acid, Citric acid, Acetic acid and Oxalic acids.

Petroleum products: Kerosene, Petrol, Naphthalene, Vaseline and Paraffin.

**Agrochemicals:** classification (organic and inorganic) and their effects on health, First Aid measures and management

Drugs of Abuse: definition of drug, drugs of Abuse, Drug addictions, drug habituation, classification of drugs of abuse, complications and drug withdrawal symptoms, dangers of drug dependence and measures for prevention,

*Tasammume Ghiza:* Food contaminants, Food Additives, Natural Toxins, Nutritional Hazards and Food borne Hazards / Microbiological origin

Prevention and control of health hazards caused by the poisonings: Accidental, occupational, environmental, food related poisonings and substance abuses

Laws and Legislations in Toxicology: PODD, Duty of a medical practitioner in a case of suspected poisoning

**Part II - Forensic Medicine:** Introduction to medico legal system in Sri Lanka, medical ethics, medical evidence, medical negligence, mechanical injuries, injuries due to physical agents, firearm injuries, head injuries, legal classification of injuries, road traffic accidents, introduction to DNA technology and finger printing, changes after death, estimation of time since death, certification of death, domestic violence, sexual offences, child abuse, criminal abortion, infanticide, asphyxia, inquest and inquirers into sudden death.

### **Teaching and Learning Methods:**

Lectures, Assignments, Small group activities, presentations, Problem based learning.

### **Practical Training:**

Identification of *Nabathi Zahar, Haiwani Zahar wa Ma'dani Zahar*

*Ilmus Sumoom* Museum sessions, Students' presentations, Assignments and project reports, Case studies and Educational field visits: National Zoological Garden, Traditional *Sarpavisha Vedakama* practicing places, Drugs and Alcohol Rehabilitation centers.

**Duration:** 180 hours (Theory - 105 hours, Practical- 75)

Theory - 105 hours (Ilmus Sumoom – 60, Forensic Medicine - 45)

Practical - 75 hours (Ilmus Sumoom – 60, Forensic Medicine - 15)

## Recommended reading:

1. Allison LA. Fundamentals of Molecular Biology. 2<sup>nd</sup> ed. Collage of William and Mary. Williamsburg. USA
2. Henry Methew A, A H Lawson, Treatment of acute poisoning
3. Ibnu Sina. Al Qanun Fit Tib (Urdu translation by Hakeem Sayyed Ghulam Husnain Kanturi). Vol. II and III. New Delhi; Idara Kitab –us – Shifa;
4. Knight, Bernard. Legal Aspect of Medical Practice. Edinburgh: Churchill Livingstone; 1976
5. Mohammad kabeeruddeen. Makhzanul Mufradat. New Delhi: Idara Kitabu Shifa; 2010
6. Pillay VV. Modern Medical Toxicology. 3<sup>rd</sup> edition. New Delhi; Jaypee Brothers. 2005.
7. Raveendra Fernando. Management Poisoning. NPIC, NHSL. 2002.
8. Shepherd, Richard. Simpson's Forensic Medicine. 12<sup>th</sup> ed. London: Arnold; 2003
9. Victor W, Rodwell, Bender D, Kathleen MB, Kennelly PJ, Weil PA. *Harpers Illustrated Biochemistry*. 29<sup>th</sup> ed. The McGraw – Hill Companies. 2012
10. W.D.S. Maclay, Clinical Forensic Medicine,

## 2.1.6. Research Methodology and Medical Statistics

### 2.1.6.1. Core Topics:

**Research Methodology:** Types of health system research: Literary research, Clinical research, Experimental research, Observation and field studies. Research problems: Definition, selection and sources of research problems. Hypothesis: Types; Null and alternate hypothesis, Types of Research designs, Controls in research designs: Selection criteria, Placebo and plain control, Randomization, Factors effecting research results, Tools and techniques in research; Interview, questionnaire, inventories, Protocols for research and report writing; Protocols for experimental, clinical and community based research, Writing research report, References in research report. Guidelines for Research and research ethics: WHO, ICMR and CPCSEA

**Bio-Statistics:** Introduction to medical statistics, Descriptive Statistics: Analysis of Data, Data collection, tabulation and presentation of data, Measure of central tendency; Mean, Median and Mode, Measures of dispersion; Range, quartile deviation, standard deviation, Probability; Definition and laws of probability, Types of probability distribution, Sampling, Types and sample size, Randomized samples

Inferential Statistics: Correlation and linear regression, Karl Pearson correlation coefficient, Linear regression equations, Test of significance; 't' test, 'z' test, Test of variance; ANOVA one way, ANOVA two way,  $X^2$ , Non-parametric tests; Median test, Mann Whitney U test, Kruskal Wallis

test, Fried test. Vital Statistics; Rate and Ratios, Standardization of population and Risk factors, Computer programmes used in research; SPSS, Minitab and G Pad.

**Teaching and Learning Methods:**

Interactive lectures, small group activities, Student presentations, Assignments and practical classes (data analysis)

**Duration:** Theory- 45 Hours

**Recommended reading:**

1. Bhaskara Rao T. Research Methodology. Paras Medical Publisher: 3<sup>rd</sup> edition Hyderabad; 2010.
2. Kothari C R. Research Methodology: Methods and Techniques. 3<sup>rd</sup> edition. New age International (p) limited, publishers: 2004.
3. Bhaskara Rao T. Methods of Bio statistics. Paras Medical Publisher: Hyderabad; 2010.

**2.1.7. Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology)**

**2.1.7.1 Core Topics:**

Introduction to the subject, History taking, Basic introduction to general examination and commonly used instruments, Ilmu Halat e Badan (States of body), Ajnas e Amraz (Classification of Diseases), Darjat e Amraz (Stages of disease), Ilmul Asbab (Aetiology), Ilmul Alamat (Symptomatology), Alamat e Mizaj (Features of Temperament), and Significance of Bole (Urine), Baraz (Faeces), Nabz (Pulse), Khoon (Blood) and Busaq (Sputum) in diagnosis.

History taking and analysis of symptoms, Examination of patients by inspection, palpation, percussion and auscultation related to all systems highlighting and correlating the Unani and modern medical concepts.

**Teaching and Learning Methods:**

Interactive lectures, team-based learning, and other small group activities, case presentations, assignments, small group learning activities, audio video presentations.

**Practical Training:** IPD and OPD Training, Clinical appointments, Medical camps, Health awareness programmes.

**Duration:** 180 Hours (Theory 90 hours, Practical 90 hours)

**Recommended reading:**

1. Ibn Nafees. KulliyateNafeesi (Urdu trans. byKabeeruddin M) New Delhi:
2. Ibn Rushd. KitabulKulliyat. 2nd ed. New Delhi:CCRUM; 1987.
3. Ibn Sina. Al Qanoon Fil Tib (Arabic). Lebanon: DAR al-KOTOB al-ILMIYAH; 1999.

4. Ibn Sina. Al Qanoon fit Tib. (Urdu translation by Kantoori GH). Vol.3. Part 2. New Delhi: IdarakitabusShifa.
5. Majoosi ABA. Kamilus Sanaa (Urdu trans. by Kantoori GH) Vol I & II. New
6. Michael S, Stuart Mason. Hutchison's Clinical methods. 18th ed. East Sussex:
7. Bates Guide to Physical Examination
8. Graham D et al. MacLeod's Clinical Examination. 11th ed. Edinburgh:

### **2.1.8. Kulliyat e Ilaj (Fundamentals of Therapeutics)**

#### **2.1.9.1 Core Topics:**

##### **Anwa ul Ilaj**

Fundamentals of treatments and the objectives, Factors to be observed in Ilaj , Classification of Ilaj and their descriptions, Ilaj bil Taghziya (Dieto therapy), Ilaj Bil Advia (Pharmaco therapy), Ilaj Bil Tadbeer (Regimenal therapy) and their principles of application

##### **Qawaneen ul Ilaj**

Qanoon e Nuzj (Coction), Qanoon e Is'hal (Principles of Inducing Therapeutic Purgation), Qanoon e Huqna (Principles of Enema), Qanoon e Muqayyat (Principles of Inducing Emesis), Qanoon e Ta'reeq (Principles of Inducing Perspirations), Qanoon e Idrar (Principles of Inducing Flow)

*Qanoon e Tanfees* (Principles of Inducing Expectoration), *Qanoon e Imala* (Principles of Diversion), *Qanoon e Nutool* (Principles of Irrigation), *Qanoon e Su'oot* (Principles of Errhine Therapy), *Qanoon e Kai* (Principles of Cauterization), *Qanoon e Dalak* (Principles of Massage), *Qanoon e Hijamat* (Principles of Cupping), *Qanoon e Fasd* (Principles of Venesection), *Qanoon Irsal e Alaq* (Principles of Leeching), *Usool Ilaj* (Principles of therapeutics) of common diseases, mud therapy, aroma therapy.

#### **Teaching and Learning Methods:**

Interactive lectures, team-based learning, and other small group activities, student presentations, assignments and projects, small group learning activities.

**Practical Training:** IPD and OPD Training, Clinical appointments, Medical camps, Health awareness programmes.

**Duration:** 210 hours (Theory - 90 hours, Practical- 120)

#### **Recommended reading:**

1. Ibn Nafees. Kulliyate Nafeesi (Urdu trans. by Kabeeruddin M) New Delhi:
2. Ibn Rushd. Kitabul Kulliyat. 2nd ed. New Delhi: CCRUM; 1987.
3. Ibn Sina. Al Qanoon Fil Tib (Arabic). Lebanon: DAR al-KOTOB al-ILMIYAH; 1999.

4. Ibn Sina. Al Qanoon fit Tib. (Urdu translation by Kantoori GH). Vol.3. Part 2. New Delhi: IdarakitabusShifa.

5. Majoosi ABA. Kamilus Sanaa (Urdu trans. by Kantoori GH) Vol I & II. New

6. Michael S, Stuart Mason. Hutchison's Clinical methods. 18th ed. East Sussex:

7. Bates Guide to Physical Examination

8. Graham D et al. MacLeod's Clinical Examination. 11th ed. Edinburgh:

BailliereTindall; 1985

Delhi: IdaraKitab-us- Shifa; 2010.

Elsevier; 2005

Idara Kitab-us-Shifa; 1934.

## **2.1.9. Pathology**

### **2.1.9.1. Core topics**

Introduction, cell injury, cellular adaptations and ageing, immunopathology: amyloidosis, derangements of homeostasis and haemodynamics, inflammation and healing, infectious and parasitic diseases, neoplasia, environmental and nutritional diseases, haematopoietic system and disorders of erythroid series, disorders of platelets, leucocytes and lympho reticular tissues, bleeding disorders, pathology of: cardiovascular, respiratory, gastro intestinal, liver and biliary tract, pancreas, urinary tract, female and male genital tract, nervous, musculoskeletal, endocrine systems, breast: diseases and tumours, selected dermatoses, parasitology, medical microbiology, sterilization and disinfections.

**Teaching and Learning methods:** Lectures, Practical, Case studies, Group Discussions, Presentations.

**Practical training:** Laboratory Training, Demonstration of Pathological specimen, interactive based software, interpretation of pathological reports

**Duration:** 150 hours (Theory - 90 hours, Practical- 60)

### **Recommended Readings**

1. Anderson, W.A.D, Kissane, J.M. Pathology. (7th ed.). Saint Louis: CVMosby; 1977.
2. Bogitsh, B, Carter, C, Oeltmann, T, Roitt, I, Wakelin, D. Human Parasitology. (5th ed.): Elsevier ; 2018.
3. Govan, A.D.T, Macfarlane, P.S, Callander, R. Pathology Illustrated. (4th ed.). London: Churchill Livingstone; 1994.

4. Greenwood, D, Slack, R, Peutherer, J, Barer, M. Medical Microbiology. (17th ed.): Churchill Livingstone Elsevier; 2007.
5. Levison, D.A, Reid, R, Harrison, D.J, Fleming, S, Burt, A.D. Muir's Textbook of Pathology. (14th ed.). London: Hodder Arnold Publication; 2008.
6. Mims, C, Dockrell, H.M, Goering, R.V, Roitt, I, Wakelin, D. Medical Microbiology. (3rd ed.): Elsevier Mosby; 2004.
7. Mohan, H. Textbook of Pathology. (5th ed.). New Delhi: Jaypee Brothers; 2005.
8. Walter, J.B, Talbot, I.C. General Pathology. (7th ed.). London: Churchill Livingstone; 2004.

## **2.2 Examinations of the Second Professional BUMS - Para Clinical Stage**

### **2.2.1. Examination in Mufrad Advia (Unani Pharmacology II)**

The examination in Mufrad Advia (Unani Pharmacology II) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- iv. End of first semester MCQ– 20 questions, SEQ – 2 questions - (60 minutes)
- v. End of second semester OSPE– 30 stations - (60 minutes)
- vi. End of third semester SEQ – 4 questions - (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Mufrad Advia (Unani Pharmacology II) professional examination.

#### **Professional Examination**

This examination has (1) a theory component, and (2) a Practical cum *viva voce* examination.

2. The theory component: There is one question paper consists of;
  - iv. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - v. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - vi. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)
 Total mark for the theory component is 100.
3. The practical cum *Viva voce* component consists of;
  - OSPE – 40 stations (60 minutes)
 Total mark for the practical cum *Viva voce* examination is 100.

#### **Criteria for passing Mufrad Advia (Unani Pharmacology II)**

To pass the subject Mufrad Advia (Unani Pharmacology II), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and
- ii. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Mufrad Advia (Unani Pharmacology II)
  - There is no minimum pass mark for CA components.
  - 20% of marks allocated for the CA component will be added to the final mark of Mufrad Advia (Unani Pharmacology II) only in the first attempt.

### **2.2.2. Examination in Dawa Sazi (Unani Pharmaceuticals)**

The examination in Dawa Sazi (Unani Pharmaceuticals) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester MCQ– 20 questions, SEQ – 2 questions (60 minutes)
- ii. End of second semester OSPE – 4 Station (60 minutes)
- iii. End of third semester SEQ – 4 questions (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Dawa Sazi (Unani Pharmaceuticals) professional examination.

#### **Professional Examination**

This examination has (1) a theory component, (2) a practical cum *viva voce* examination.

1. The theory component consist of;

- iv. MCQ – 20 questions (30 minutes)- 20 marks (1 x 20)
  - v. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - vi. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)
- Total mark for the theory component is 100.

2. The practical cum *Viva voce* component consists of;

- i. OSPE – 30 stations (60 minutes) - (1X30) 30 Marks
- ii. Pharmacy based practical examination – (60 Minutes) -70 marks

Total mark for the practical cum *Viva voce* component is 100.

#### **Criteria for passing Dawa Sazi (Unani Pharmaceuticals)**

To pass the subject Dawa Sazi (Unani Pharmaceuticals), a candidate must



- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and for the practical cum *viva voce* component (40% out of 100 marks) and
- ii. obtain a minimum pass mark of 50% from the 100 marks allocated for the subject Dawa Sazi (Unani Pharmaceuticals).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Dawa Sazi (Unani Pharmaceuticals) only in the first attempt.

### **2.2.3. Examination in Kushta Sazi (Alchemy)**

The examination in Kushta Sazi (Alchemy) includes Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester MCQ– 20 questions, SEQ – 2 questions, (60 minutes)
- ii. End of second semester OSPE 30 Stations (60 minutes)
- iii. End of third semester SEQ 4 Question (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Kushta Sazi (Alchemy) professional examination.

#### **Professional Examination**

This examination has (1) a theory component, and (2) a Practical cum *viva voce* examination.

1. The theory component consists of;

- i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The practical cum *Viva voce* component consists of;

- i. OSPE – 30 stations (60 minutes) 30 Marks  
Pharmacy based practical examination – (60 Minutes) -70 marks

Total mark for the practical cum *Viva voce* examination is 100.

#### **Criteria for passing Kushta Sazi**

To pass the subject Kushta Sazi (Alchemy), a candidate must have

- i. obtained a minimum % of mark from the marks allocated for the theory component (40% out of 100 marks) and for the practical cum *viva voce* component (40% out of 100 marks) and

- ii. obtained a minimum pass marks of 50% from the 100 marks allocated for the subject Kushta Sazi (Alchemy).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Kushta Sazi (Alchemy) only in the first attempt.

#### **2.2.4. Examination in Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)**

The examinations in Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine) includes Continuous Assessments (CA) and Professional Examination.

##### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester SEQ – 4 questions (60 minutes)
- ii. End of second semester MCQ– 20 questions, SEQ – 2 questions (60 minutes)
- iii. End of third semester OSPE – 15 Station (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine) professional examination.

##### **Professional Examination**

This examination has (1) a theory component, (2) a practical cum *viva voce* examination.

1. The theory component consist of;

- I. MCQ – 20 questions -(30 minutes)- 20 marks (1 x 20)
- II. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- III. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical component Cum *Viva voce* consists of;

- ii. OSPE – 10 stations (20 minutes)- 40 Marks
- iii. OSCE – 10 stations (40minutes) – 60 Marks

Total mark for the practical cum *viva voce* component is 100.

##### **Criteria for passing Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)**

In order to pass the subject of Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and

- ii. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine).
  - There is no minimum pass mark for CA components.
  - 20% of marks allocated for the CA component will be added to the final mark of Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine) only in the first attempt.

### **2.2.5. Examination in Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)**

The examinations in *Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)* include Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester SEQ – 4 questions (60 minutes)
- ii. End of second semester MCQ– 20 questions, SEQ -2 (60 minutes)
- iii. End of third semester OSPE – 20 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of *Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)* professional examination

#### **Professional examination**

This examination consists of (1) a theory component, (2) a practical cum *viva voce* component.

1. The theory component consist of two (02) papers; part-I Ilmus Sumoom (Toxicology) and part-II Tibbe Qanoon (Forensic Medicine). Each question paper consists of

- i. MCQ– 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical cum *viva voce* Examination consists of two parts; part -I Ilmus Sumoom (Toxicology) and part-II Tibbe Qanoon (Forensic Medicine)- Each part consists of

OSPE 20 stations (30 minutes) – 50 marks

Total mark for the practical cum *viva voce* component 100

#### **Criteria for passing Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine)**

To pass the subject of Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine) , a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical cum *viva voce* component (40% out of 100 marks) and
- ii. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine) .
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component in the first attempt will be added to the final mark of the subject Ilmus Sumoom va Tibbe Qanoon (Toxicology and Forensic Medicine) .

## **2.2.6 Research Methodology and Medical Statistics**

### **2.2.6.1. Examination in Research Methodology and Medical Statistics**

The examination in Research Methodology and Medical Statistics includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- I. End of first semester SEQ – 4 questions, (60 minutes)
- II. End of second semester MCQ– 20 questions, SEQ – 2 questions, (60 minutes)
- III. End of third semester - Assignment

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of in Research Methodology and Medical Statistics professional examination.

#### **Professional Examination**

This examination consists of theory component only,

The theory component: There is one question paper consists of;

- i. MCQ– 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

### **Criteria for passing Research Methodology and Medical Statistics**

To pass the subject of Research Methodology and Medical Statistics a candidate must

- i. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Research Methodology and Medical Statistics
  - There is no minimum pass mark for CA component.

- 20% of marks allocated for the CA component in the first attempt will be added to the final mark of the subject Research Methodology and Medical Statistics.

### **2.2.7. Examination in Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology)**

The examination Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology) includes Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

End of first semester SEQ – 4 questions, (60 minutes)

End of second semester OSCE- 10 (60 minutes)

End of second semester OSCE- 10 (60 minutes)

The total 20 marks of three CAs will contribute to 20% of marks of Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology) professional examination.

#### **Professional Examination**

This examination has (1) a theory component, and (2) a Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;

MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)

SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)

Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The Practical cum *viva voce* component consists of;

OSCE – a long case (60 minutes)

Total mark for the practical cum *Viva voce* component is 100.

#### **Criteria for passing Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology)**

To pass the subject of Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology), a candidate must have

- obtained a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and for the practical cum *viva voce* component (40% out of 100 marks) and
- obtained a minimum pass marks of 50% from the 100 marks allocated for the subject Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology).
- There is no minimum pass mark for CA component.
- 20% of marks allocated for the CA component in the first attempt will be added to the final mark of the subject Usool e Tashkhees, Sareeriyat va Ilmul Amraz (Unani Pathology)

### **2.2.8. Examination in Kulliyat e Ilaj (Fundamentals of Therapeutics)**

The examination Kulliyat e Ilaj (Fundamentals of Therapeutics) includes Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CAs)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester SEQ 4 questions, (60 minutes)
- ii. End of second semester OSCE 10, (60 minutes)
- iii. End of second semester OSCE 10, (60 minutes)

The total 20 marks of three CAs will contribute to 20% of marks of Fundamentals of Therapeutics professional examination.

#### **Professional Examination**

This examination has (1) theory component, and (2) Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;
  - i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
  - ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
  - iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100.

2. The practical cum *viva voce* component consists of;

OSCE – a long case (60 minutes)

Total mark for the practical cum *Viva voce* component is 100

#### **Criteria for passing Kulliyat e Ilaj (Fundamentals of Therapeutics)**

To pass the subject of Kulliyat e Ilaj (Fundamentals of Therapeutics), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and for the practical cum *viva voce* component (40% out of 100 marks) and
- ii. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Kulliyat e Ilaj (Fundamentals of Therapeutics)
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of the subject Kulliyat e Ilaj (Fundamentals of Therapeutics) only in the first attempt.

### **2.2.9. Examinations in Pathology**

The examinations in Pathology include Continuous Assessments (CA) and Professional examination.

## **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester SEQ – 4 questions (60 minutes)
- ii. End of second semester OSPE –20 stations (60 minutes)
- iii. End of third semester OSPE – 20 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Pathology professional examination.

## **Professional examination**

This examination consists of (1) a theory component, (2) a practical cum *viva voce* component.

1. The theory component consist of

- i. MCQ– 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The practical cum *viva voce* component consists of

OSPE - 20 stations (60 minutes)

Total mark for the practical cum *viva voce* component is 100

## **Criteria for passing Pathology**

To pass the subject Pathology a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (40% out of 100 marks) and the practical component (40% out of 100 marks) and
  - ii. obtain a minimum pass marks of 50% from the 100 marks allocated for the subject Pathology
- There is no minimum pass mark for CA components.
  - 20% of marks allocated for the CA component will be added to the final mark of Pathology only in the first attempt

## **2.3. Criteria for passing the Second Professional BUMS examination**

A candidate is deemed to have passed the Second professional BUMS examination if the candidate has at one and the same examination passed each of 09 subjects of this examination as prescribed

by By-Laws made by the Council; while fulfilling the minimum requirement for the separate components of the 09 subjects, the pass marks for each subject is 50%; provided that a candidate may be referred in one or more subjects at the Second professional BUMS examination, when the candidate has not obtained the minimum pass mark (50%) for the particular subject. Such candidates shall be deemed to have passed the Second professional BUMS examination when they pass the referred subject(s) at a subsequent Second professional BUMS examination.

A candidate who obtains less than 50% in all nine subjects or less than 25% in any four of the 09 subjects shall be considered to have failed the entire Second Professional BUMS examination. Such candidates shall be deemed to have passed the examination when they pass the nine subjects at a subsequent Second Professional BUMS examination.

#### **2.4 Calculation of marks for award of classes in the Second Professional BUMS examination**

- Only candidate who have passed the Second Professional BUMS examination at the first attempt is considered eligible for award of classes.
- The % of marks obtained by the candidate at first attempt for each of 09 subjects is added up and divided by 09 to get the cumulative % mark for the 09 subjects.
- This mark is called the % cumulative Second Professional BUMS examination mark and used for awarding classes.
- The classes are decided according to the classification of marks described in the By-Laws.

#### **2.5. Award of Distinction**

A candidate, who has obtained at least 75% of marks, shall be awarded a Distinction in the relevant subject.

#### **2.6. Contribution to the Cumulative BUMS result**

The Second Professional BUMS Examination will contribute 30% to the 100 marks of the Cumulative BUMS result.

### **3. Final Professional BUMS –Clinical Stage**

Final Professional BUMS – Clinical Stage commences after successful completion of Second Professional BUMS – para clinical Stage. Final Professional BUMS extends from the beginning of seventh semester to the end of the tenth semester. From first semester of Second Professional BUMS onward up to the end of the Final Professional BUMS, the students go to the wards and go through a series of training appointments with consultants in the National Ayurveda Teaching



Hospital, Colombo and other selected training centers. While the hospital training is taking place, theoretical inputs are given in the IIM.

The principle learning methods in the OPD and IPD include clinical appointments, ward classes on patients with different disease conditions, case discussions, clinical lecture demonstrations, skill demonstrations and minor operative settings.

At the beginning of clinical appointment of each subject, the student will be informed about the details of the training programme and about the Continuous Assessments and other examinations.

An introduction to the content areas and examinations of the Final Professional BUMS is given below.

### **3.1. The Academic Programme –Clinical Stage**

3.1.1 Moalejat (General Medicine)

3.1.2. Ilmul Jarahat (General Surgery)

3.1.3 Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and..... neckENT, Ophthalmology and Orthodontology)

3.1.4. Amraz e Niswan va Qabalat (Gynecology and Obstetrics.)

3.1.5. Ilmul Atfal (Paediatrics)

3.1.6. Deshi Ilaj (Indigenous Medicine)

3.1.7 Research Project

#### **3.1.1. Moalejat (General Medicine)**

##### **Moalejat -I(General Medicine-I)**

##### **Core Topics**

##### **Part A- Moalejat**

Hummiyat (Fevers), Amraz e Kulya Vo Masana (Diseases of Urinary System), Amraz e Jigar, Mirrara Vo Tihal (Diseases of Liver and Biliary System and Spleen)

*Amraz e Mafasil Va Azlat* (Diseases of Joints and Muscles), *Amraz e Mari, Me'ada and Am'a* (Diseases of Alimentary Tract)

Amraz e Nizam e Tanaffus (Diseases of Respiratory System), Amraz e A'za Nasla Mardana (Diseases of Male Genital Organs), Amraz e Jild (Diseases of Skin), Sartan (Malignancies), Amraz e Nafsaniya (Psychological Disorders)

Amraz e Dimagh Va A'sab (Diseases of Nervous System), Amraz e Qalb (Diseases of Heart)

##### **Part B – General Medicine**

Principles of Medicine, Cardiovascular disorders: heart diseases, vascular disorders, Blood disorders, Diseases of the Respiratory system: Upper and lower respiratory tract disorders, obstructive pulmonary disorders, and tuberculosis, Alimentary Tract disorders: Oesophagial, Gastric, intestinal, and anal disorders, Hepato biliary disorders, pancreatic disorders, genito - urinary disorders, Muscular-skeletal disorders: Connective tissue diseases: Skin disorders,

Endocrine Diseases: diabetes mellitus, obesity, Neurological disorders, Psychiatric disorders, Malignancies, Special investigations: ECG, interpretation of medical imaging, and laboratory tests.

### **Teaching and Learning Methods:**

Interactive lectures, team-based learning, and other small group activities, student presentations, case studies.

**Practical Training:** practical classes (OPD and IPD), Clinical appointments, Community based medical camps and health awareness Programmes.

**Duration:** 660 hours (Theory - 300 hours, Practical- 360)

Theory - 300 hours (Moalejat– 210, General Medicine - 90)

Practical - 360 hours (Moalejat – 300, General Medicine - 60)

### **Recommended reading:**

Delhi:IdaraKitab-us- Shifa; 2010.

1. Ibn Sina, Al Qanoon Fit Tib. (Urdu trans. by Kantoori GH) Vol III.
2. Ibn Sina. Al Qanoon Fil Tib (Arabic). Lebanon: DAR al-KOTOB al-ILMIYAH; 1999.
3. Majoosi ABA. Kamilus Sanaa (Urdu trans. by Kantoori GH) Vol I & II. New Delhi:Idara Kitab-us- Shifa. Publication;2002.
4. Razi ABZ. Al Hawi Fil Tib (Arabic). Lebanon: DAR al-KOTOB al-ILMIYAH; 2000.
5. Razi ABZ. Al Hawi Fil Tib (Urdu). New Delhi: CCRUM
6. Tabri AR. FirdausulHikmat. (Urdu trans. by Hakeem MA Shah). Deoband: Faisal
7. Cecil Text Book Medicine-Robin Reid, Fiona Roberts
8. Davidsons Principles and Practice of Medicine
9. Harrison's Internal Medicine
10. Kumar and Clark Clinical Medicine

### **3.1.2. Ilmu Jarahat (General Surgery),**

#### **Core Topics**

#### **Part A**

Introduction to *Ilmul Jarahat*, Three stages of surgery: Pre-operative, operative, and post operative management of patients, *Iltihab* (inflammation), *Varm* (abnormal swelling), Surgical conditions due to “*Garam Varm*”, “*Barid Varm*”, *Varm-e- Mae*, *Varm-e-Reehi* and their management, *Jarahat* (Wound) and its management, *Qurooh* (Ulcer) and its management, *Nasoor/ Majri* (Fistula/sinus) and its Management, *Jiryah-ud-Dam* (Haemorrhage) and its management, *Sadma* (Shock) and its management, *Haraq-ul-Naar va Salaq* (Burns and scalds) and its management, *Khala va Moonch*.

Fataq (Hernia), Amal-e-Kai (cauterization), Hijamah (Cupping), Fasd (Venesection), Irsal Alaq (Leech application) in surgical conditions. Bawaseer, Inshiqaqul miq'ad, Anorectal abscess and other peri-anal conditions, Khuroojul miq'ad, Sang-e-Gurda Va Masana, Azm Ghuda-e-Mazzi, Bol-ud- Dam, Qeel mae, Khatna, Qurookh-e-Me'dda va Ama, Varm-e-Zaida, Sudda-e-Ama, Pohda va Sartan-e-Kabid, Hassatul Mirrara, Varm-e-Mirara, Amraaz-e-Urookh, Amraaz-e-Ghudoodi.

## **Part B - General Surgery**

Surgical Infection, Sterilization, Anaesthesia, Shock, Fluid, Electrolyte, Acid Base Balance and Nutrition, Wounds, Inflammation, Tissue repair and scarring, Cysts, Tumours, Ulcers, Sinuses and fistulae, Trauma, Burns, Neoplasia, Disorders of bones and joints, Disorders of thorax, Disorders of breast and endocrine glands, Disorders of upper and lower gastrointestinal tract, Disorders of biliary tract and pancreas, Disorders of urinary tract, Disorders of male and female Genital tract, Disorders of neonate, Infant and child; Disorders of arterial, venous and lymphatic system.

**Teaching and Learning methods:** Lectures, Practical, Case studies, Group Discussions, Presentations

**Practical Training:** IPD and OPD Training, Clinical appointments, Practical in Skill laboratory, Clinical Trainings at selected training centers

**Duration:** 300 hours (Theory - 120 hours, Practical- 180 hours)

Theory - 120 hours (Ilmul Jarahat - 90, General Surgery - 30)

Practical - 180 hours (Ilmul Jarahat - 180)

### **Recommended reading:**

- i. Abul Cassim Zahravi, Al-Tashreef
- ii. Al-Razi, Kitab al Mansoori
- iii. Aminuddaula Abu Ibn AL-Quf Masihi, Kitabul Umda fil Jarahat
- iv. Clinical Surgery Alfred Cuscicri, David I Rowley, Pierce A. Grace
- v. Principles & Practice of Surgery A.P.M. Forrest, D.C.Carter, I.B.Macled

## **3.1.3 Amraz e Ain, Anf, Uzn, va Halq (ENT, Ophthalmology and Orthodontology)**

### **Core Topics**

#### **Part A - Amraz e Ain, Anf, Uzn, va Halq**

Amraaz e Ain

Introduction to the subject, Ain ka Tashreeh va Af'al – Anatomy of eye, clinical examination of the Ain, Minor injuries of the eye, Amraaz-e-Ajfan, Amraaz-e- Multahima, Amraaz-e-Qarnia, Amraaz-e-Anbia, Amraaz-e-sulbiya, Amraaz-e-Rutubat-e-Jalidiya, Amraaz-e-Rutubat-e-Baiziya, Amraaz-e-Basarat, Amraaz-e-Shabkiya, Amraaz-e-Uzn (Ear Disease), Amraaz-e-Anf -Disease of the Nose

Tashreeh-Va-Af'al-e-Uzn (Anatomy & Physiology of Ear), Voja ul-Uzn, Varm-e-Gosh, Sailan-e-Uzn, Behrapen, Saql sama't, Sailan-e-peep, Taneen, Jism ghareeb, Kanpeid

Amraaz-e-Anf (Disease of the Nose)

Tashreeh-va-Af'al-e-Anf (Anatomy & Physiology of Nose), Fasad-e-sham, Nakseer, Khasham, Buzurul Anf, Iltihab-e-Tajaveef-ul-Anf, Jism ghareeb in nose

Amraaz-e-Halq -Disease of the Throat

Suqutulihat, Khunnaq, Varm e Halq, Intibaq e mari, Bahaut e saut, Varm e Mari, Sartan

Amraaz-e-Jawf-e-Fam (Disease of the Oral Cavity)

Amraaz e Lisan, Varm e lisan, Fasad e zawk, Qila e lisan, Shiqaqul lisan, Hikkatul lisan, Luab ki kasarar, Luknat, Azmul lisan, Amraaz e Isnan, Voje ul Isnan, Taharruk ul Isnan

## **Part B: Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry**

Ophthalmology: Refractive errors, conjunctival diseases, glaucoma, strabismus, corneal diseases, diseases of the sclera, staphyloma, iridocyclitis, panophthalmitis, cataract, vascular retinopathies, retinal detachment, optic nerve diseases, intraocular tumours, dacryocystitis, diseases of the eye lids, ocular trauma, Diseases of ear: otalgia, tinnitus, otosclerosis, Meniere's disease, deafness, tumours of the ear, Diseases of nose: diseases of external nose, congenital deformities, tumours, rhinitis, nasal polyps, epistaxis, diseases of paranasal sinuses, Diseases of throat: Pharyngitis, laryngitis, adenoiditis, tonsillitis, abscesses in pharynx, Oral Medicine and Dentistry: Periodontal diseases, gingivitis, pericoronitis, odontogenic and non-odontogenic tumours, pre-malignant conditions, oral cavity carcinomas, dental caries, dental hard tissue disorders, glossitis, oral mucosal lesions, and stomatitis.

**Teaching and Learning methods:** Lectures, Practical, Case studies, Group Discussions, Presentations

**Practical Training:** IPD and OPD Training, Clinical appointments, Practical in Skill Laboratory Clinical Trainings at selected training centers

**Duration:** 300 hours (Theory - 120 hours, Practical- 180 hours)

Theory - 120 hours (Amraz e Ain, Anf, Uzn, va Halq - 90, Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry - 30)

Practical - 180 hours (Amraz e Ain, Anf, Uzn, va Halq - 180)

### **Recommended reading:**

#### **3.1.4. Amraz e Niswan va Qabalat (Gynaecology & Obstetrics.)**

Core Topics

##### **Part I- Amraz e Niswan va Qabalat**

*Tashreeh e Tatbeeqi e A'za e Thanasuliya Va Afal e A'za e Zanana* (Applied aspect of anatomy and physiology of female genital organs), History taking and examination related to gynaecology, *Khilqi Amraz* (Congenital Disorders)

*Futurat e Haiz* (Menstrual Disorders), *Amraz e Farj* (Diseases of Vulva), *Amraz e Mehbāl* (Diseases of Vagina), *Amraz e Unuqur Rehm* (Diseases of Cervix), *Amraz e Rehm* (Diseases of Uterus), *Amraz e Qazif* (Diseases of Fallopian tube). *Amraz e Khussiyatur Rehm* (Diseases of Ovary), *Ikhtinaqur Rehm Va Ta'alluk Amraz* (Hysteria and related diseases)  
*Uqr* (Sub fertility), *Amraz e Sadiyan* (Diseases of Breast) Importance of family health and contraceptive practices, *Sin e Ya's* (Menopause) *Sartan e Az'a e Tanasuliya e Zannana* (Genital Tract Malignancy, *Marz Akyas Tehrizi Hauzi* (Pelvic Inflammatory Disease), *Atishak and Sozak* (Syphilis and Gonorrhoea), *amraze naumoolat* (neonatal disease)

*Tashreeh Va Manafi e A'za e Tanasuliya Zanana* (Anatomy and physiology of pregnancy), *Kaifiyat e Istiqrar e Hamal* (Embryology), *Hamal ki Tashkhees Va Tafreeqi Tashkhees* (Diagnosis of pregnancy and Differential Diagnosis), *Hamila ki Naghidashat* (Antenatal care), *Amraz e Hawamil* (Disorders in pregnancy), *Tabayee Waza' e Hamal* (Normal labour), *Ghair Tabayee Wa'za e Hamal* (Abnormal labour), *Zaman e Nifas Va Awarizat* (Puerperium and complications), *Naw Janeen* (Foetus) management

## **Part II – Gynaecology and Obstetrics**

**Gynaecology:** Congenital malformation of female genital organs, puberty, disorders of menstrual cycle, menopause, subfertility, pelvic infections, displacement of uterus, benign and malignancies in gynaecology, endometriosis and adenomyosis, sexual transmitted disorders, urinary problem in gynaecology and imaging studies.

**Obstetrics:** embryology, placenta, amniotic cavity, amnion and amniotic fluid, examination and diagnosis of pregnancy, physiological changes during pregnancy, antenatal care, disorders during pregnancy, multiple pregnancy, hydramnios, abnormalities of placenta and cord, antepartum haemorrhage, medical and surgical conditions complicating pregnancy, normal labour and management, induction of labour, pre-term labour, post maturity, intra uterine fetal death, premature rupture of membranes, abnormal uterine action, malposition and mal-presentation, complications of the third stage of labour, normal puerperium and management, abnormalities of the puerperium, contraceptive methods, current knowledge on investigations used in obstetrics.

**Teaching and Learning methods:** Lectures, Practical, Case studies, Group Discussions, Presentations and Field surveys

**Practical Training:** Clinical appointments in Gynaecology and Obstetrics, Practical in Skill laboratory, Clinical Trainings at selected training centers

**Duration:** 240 hours (Theory - 120 hours, Practical- 120)

Theory - 120 hours (Amraz e Niswan va Qabalat 75- Gynaecology & Obstetrics - 45)

Practical - 120 hours (Amraz e Niswan va Qabalat 75- Gynaecology & Obstetrics - 45)

### **Recommended reading:**

1. Dutta D. C. Text Book of Gynaecology.5<sup>th</sup> ed. India: New Central Books;2008

2. Ibn Sina, Al Qanoon Fit Tib. Vol III
3. Jurjani I. Zakheerae Khawarzaam Shahi (Urdu trans. by Khan AH). Vol II. New Delhi: Idara Kitab-us-shifa; 2010.
4. Razi ABZ. Al Hawi Fil Tib. Vol IX. New Delhi: CCRUM; 2001.

### 3.1.5. Ilmul Atfal (Paediatrics)

#### Core Topics

#### Part A - Ilmul Atfal

Introduction to the subject and classification of age, Art of history taking, *Naumooladat ki Naghidasht* (Features of healthy newborn), Neonatal care, examination and care of infant, high risk infant, Breast feeding, Breast milk, Wet nurse and Milk substitute, Weaning (*Fithham*) *Ma'alim* (Normal growth and development) *Irqan e Naushateen*, *Asphyxia Neonatarum*, *Ophthalmic Neonatarum*, *Khilqi Amraz* (Congenital abnormalities),

*Naqz e Taqziya*. *Amraz e Kulliya vo Tanasuliya* (Diseases related to genito- urinary tract); *Ilthihab e Gurda Va Masana*, *Ilthihab e Majariul Boal* , *Amraz e Meda Va Ama* (Diseases of gastro intestinal tract) ; *Ishal e Atfal*, *Kirm e Shikam*, *Qai e Atfal*, *Qabz*, *Warm e Jigar*, *Zof e Ishthiha*, *Amraz e Tanaffus* (Diseases of upper and lower respiratory tract); *Zatur Riya*, *Zeequn nafs*, *Kansi e Atfal*, *Nazla Va Zukam*, *Ilthihab e Lawzatain*, *Amraz e Qalb* (Diseases related to Cardio vascular system); *Marz e Qalb e Judari*, *Zof e Qalb*

*Amraz e Aasab Va Dimagh* (Diseases of Nervous System): *Ma ur Ra 's*, *Falij e Dimagh*, *Falij e Atfal*, *Ummus sibiyan*, *Sara' e Atfal*, *Dard e Sar*, *Tanaqqusul Leham*, *Warm e Ghisha e Dimaghi*, *Zof e Dimagh*, *Amraz e Jild* (Skin diseases) : *Jarb*, *Aabla*, *Qooba*, *Garam dana*, *Nar e Farsi*, *Amraz e Vobayee* (Epidemic diseases): *Khasra*, *Chaichak*, *Khunnaq*, *Kanphad*, *Kali Kansi*, *Amraz e Ain Va Uzun* (Diseases of eye and ear): *Kan Ka mai*, *Warm e Uzun Barid*, *Ramaad* , *Dard e chikkam Huzaz*, *Faquruddam in Atfal* , *Bole e Bistary* , *Limping child*, *Humma in Atfal*, Preventive measures in Paediatrics

#### Part B (Paediatrics)

Importance of child health, perinatal/neonatal/infant mortality in Sri Lanka, examination and care of new born, pre term and small for date babies, growth and development, anthropometric measurements, birth asphyxia and neonatal resuscitation, acute gastro enteritis, chronic diarrhoea, upper and lower respiratory tract disorders, anemia, nutritional deficiency, worm infestation, thalassemia, congenital heart diseases, heart failure in infancy and childhood, fever, febrile convulsion/epilepsy, rheumatic fever, paediatric emergencies, urinary tract disorders, neurological disorders, hereditary diseases, myopathy, juvenile diabetes.

**Teaching and Learning methods:** Lectures, Practical, Case studies, Group Discussions, Presentations

**Practical Training:** IPD and OPD Training, Clinical appointments, Practical in Skill laboratory, Clinical Trainings at selected training centers

**Duration:** 210 hours (Theory - 90 hours, Practical- 120hours)

Theory - 90 hours (Ilmul Atfal - 75, Paediatrics - 15)

Practical - 120 hours (Ilmul Atfal - 120)

**Recommended reading:**

1. Al Razi, Al Hawi Fit Tibb
2. Ali Ibn Sina. Al Qanoon Fit Tibb
3. The Illustration Textbook of Paediatrics by T.Lissauer, G.Clayden

**3.1.6. Deshi Ilaj (Indigenous/Traditional Medicine)**

**Core Topics**

Traditional primary health care knowledge will be imparted in the following Deshi ilaj disciplines. Introduction to Indigenous Medicine of Sri Lanka, Traditional treatment for Watha roghum; Parisa Vatham, Uraha vatham Moottu Vatham; Aama watham, Sandhi watham, Sakana watham, Narith thalai watham, Nadukka watham, Sarma Rogam; Kiranthi, Sivappu, Karappan, Cracked heels, Udaivu Murivu, Kattikal, Erikayam, Vishakkadi, Nayana Rogham, Suwasa Noikhal, Moola Roham, Siruneeraha Noihaal, Mana Noihaal,

Traditional treatment for Peenas rogham, Kabala kuththu, Maandam, Waitrottam, Iraththam Kutthi eduthal, Maanabi maruththuwaam, Noi thaduppu muraikal, Penn Noihaal, Paaliyal Noihaal and Baala Roham.

**Teaching and Learning Methods:**

Interactive lectures, team-based learning, and other small group activities, student presentations, assignments, small group learning activities,

**Practical Training:** Practical classes (OPD and IPD),

**Duration:** 180 hours (Theory 60 Hours, Practical 120 hours)

**Recommended reading:**

1. Ettu Maruthuvam. Department of Ayurveda: Colombo;
2. Hamarneh, Sami Khalaf. Yunani (Unani), Arabic and Islamic Medicine and Pharmacy: Hamdard Foundation: Pakistan; 1997.
3. Haroon M A. Thirukkuran Iyatkaai Maruthuvam.6<sup>th</sup> edition:Abu pathippakka:Chennai ;2009.
4. Higuchi, Machiko. Traditional Health Practice in Sri Lanka. Amsterdam: Netherlands: VU University; 2002.
5. John C A. Outline of Fracture. 8th ed: Churchill Livingstone New York;1983.
6. Kathiresan A. Noiyyinri Vaazhka.1<sup>st</sup> ed: Pavai publication: Chennai:2004.
7. Shiffa M S M., Fahamiya N. Ilaj Bit Tadbeer: Regimenal Therapy in Unani Medicine. Islamic Book House: Colombo ;2017.
8. Tibbun nabavi-Ibnul Qayyim (English)

9. WHO Traditional Medicine Strategy 2002 – 2005: Geneva: WHO;2002. Abeysekera S. A. Chandra. Traditional Medicine in Sri Lanka and Neighboring Countries. 2nd ed. Mathtegoda; 2007.



### 3.1.7. Research Project

Research project is a partial fulfilment of the BUMS degree which reflects the student's effort and creativity of the subject. This research project will be carried out under Supervised Independent Study.

Supervised Independent Study has been planned to offer a more in - depth study of a precise topic than that is available in the classroom experience under the supervision of an academician with expertise in the field. Student would be able to study how to conduct research, use various research methodologies and arrive at significant conclusions. The content and requirements of the study will be worked out between the supervisor and the student.

## 3.2 Examinations of the Final Professional BUMS - Clinical Stage

### 3.2.1. Examinations in Moalejat (General Medicine)

The examination in Moalejat (General Medicine) include Continuous Assessments (CA) and Professional examination.

#### Continuous Assessments (CA)

Students are evaluated at the end of each semester by the following assessments.

- |      |                        |                                 |
|------|------------------------|---------------------------------|
| i.   | End of first semester  | OSPE – 20 stations (60 minutes) |
| ii.  | End of second semester | OSCE – 5 stations (60 minutes)  |
| iii. | End of third semester  | OSPE – 20 stations (60 minutes) |
| iv.  | End of fourth semester | OSCE – 5 stations (60 minutes)  |

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Moalejat (General Medicine) professional examination.

#### Professional examination

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

1. The theory component: There are two (2) question papers, each question paper consists of Part A - Moalejat and Part B - General Medicine. Each question paper consists of

- |      |                                 |                     |
|------|---------------------------------|---------------------|
| i.   | MCQ – 20 questions (30 minutes) | - 20 marks (1 x 20) |
| ii.  | SEQ – 5 questions (90 minutes)  | - 40 marks (8 x 5)  |
| iii. | Essay– 2 questions (60 minutes) | - 40 marks (20 x 2) |

Total mark for the theory component is 100

1. The clinical cum *viva voce* component of Part A - Moalejat consists of;

- |     |                                        |            |
|-----|----------------------------------------|------------|
| i.  | A long case (60 minutes)               | -60 marks  |
| ii. | Short cases – 4 cases (4 X 10 minutes) | - 40 marks |

Total mark for the clinical cum *viva voce* component Part A – Moalejat is 100

The clinical cum *viva voce* component of Part B - General Medicine consists of;

- i. A long case (60 minutes)

Total mark for the clinical cum *viva voce* component Part B - General Medicine is 100

Cumulative mark for the clinical cum *viva voce* components of Part A - Moalejat and Part B - General Medicine is 100.

### **Criteria for passing Moalejat (General Medicine)**

To pass the subject Moalejat (General Medicine), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and from the clinical cum *viva voce* component (50% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Moalejat (General Medicine).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Moalejat (General Medicine) only in the first attempt.

### **3.2.2. Examinations in Ilmu Jarahat (General Surgery)**

The examination in Ilmu Jarahat (General Surgery) includes Continuous Assessments (CA) and Professional Examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- |      |                        |                                      |
|------|------------------------|--------------------------------------|
| i.   | End of first semester  | OSPE – 4 stations (60 minutes)       |
| ii.  | End of second semester | Spot test – 20 stations (60 minutes) |
| iii. | End of third semester  | OSCE – 4 stations (60 minutes)       |
| iv.  | End of fourth semester | OSCE – 4 stations (60 minutes)       |

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Ilmu Jarahat (General Surgery) Professional Examination.

#### **Professional examination**

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

1. The theory component: There is one question paper consists of part A - Ilmu Jarahat and part B - General Surgery.

Question paper consist of

- |     |                                 |                     |
|-----|---------------------------------|---------------------|
| i.  | MCQ – 20 questions (30 minutes) | - 20 marks (1 x 20) |
| ii. | SEQ – 5 questions (90 minutes)  | - 40 marks (8 x 5)  |

- iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The clinical cum *viva voce* component consists of

- i. A long case (60 minutes) - 60 marks
- ii. Short cases – 4 cases (4 X 10 minutes) - 40 marks

Total mark for the clinical cum *viva voce* component is 100.

### **Criteria for passing Ilmu Jarahat (General Surgery)**

To pass the subject Ilmu Jarahat (General Surgery), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and the clinical cum *viva voce* component (50% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Ilmu Jarahat (General Surgery).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Ilmu Jarahat (General Medicine) only in the first attempt.

### **3.2.3 Examination in Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry)**

The examination in Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry) includes Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester OSPE – 4 stations (60 minutes)
- ii. End of second semester Spot test – 20 stations (60 minutes)
- iii. End of third semester OSCE – 4 stations (60 minutes)
- iv. End of fourth semester OSCE – 4 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry) Professional Examination.

#### **Professional examination**

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

1. The theory component: There is one question paper consists of part A and part B. Question paper consist of

- i. MCQ – 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay – 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. The clinical cum *viva voce* component consists of

- i. A long case (60 minutes) - 60 marks
- ii. Short cases – 4 cases (4 X 10 minutes) - 40 marks

Total mark for the clinical cum *viva voce* component is 100

### **Criteria for passing Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry)**

To pass the subject of Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry) candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and for the clinical cum *viva voce* component (50% out of 100 marks) and
  - ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry).
- There is no minimum pass mark for CA components.
  - 20% of marks allocated for the CA component will be added to the final mark of Amraz e Ain, Anf, Uzn, va Halq (Diseases of Head and Neck including Ophthalmology, Ear, Nose, Throat and Dentistry) only in the first attempt.

### **3.2.4 Examinations in Amraz e Niswan va Qabalat (Gynaecology and Obstetrics)**

The examination in Amraz e Niswan va Qabalat (Gynaecology and Obstetrics) includes Continuous Assessments (CA) and Professional examination.

#### **Continuous Assessments (CA)**

Students are evaluated at the end of each semester by the following assessments.

- i. End of first semester OSPE – 10 stations (60 minutes)
- ii. End of second semester OSCE – 10 stations (60 minutes)
- iii. End of third semester OSPE – 10 stations (60 minutes)

iv. End of fourth semester OSCE – 10 stations (60 minutes)

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Amraz e Niswan va Qabalat (Gynaecology and Obstetrics) Professional Examination.

### **Professional examination**

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

1. The theory component: There are two (2) question papers namely part I (Amraz e Niswan va Qabalat) and part II (Gynaecology and Obstetrics). Each question paper consists of

- i. MCQ– 20 questions (30 minutes) - 20 marks (1 x 20)
- ii. SEQ – 5 questions (90 minutes) - 40 marks (8 x 5)
- iii. Essay– 2 questions (60 minutes) - 40 marks (20 x 2)

Total mark for the theory component is 100

2. There will be two clinical cum *viva voce* component for Part I Amraz e Niswan va Qabalat and Part II Gynaecology and Obstetrics separately.

Part I -Amraz e Niswan va Qabalat consist of

- i. A long case – (60 minutes) - 80 marks
- ii. 02 short cases – (2 X10 minutes) - 20 marks

Mark for the Part I Amraz e Niswan va Qabalat clinical cum *viva voce* component is 100

Part II - Gynaecology and Obstetrics consist of

- i. A long case – (60 minutes)

Mark for the Part II - Gynaecology and Obstetrics clinical cum *viva voce* component is 100

Cumulative mark for the clinical cum *viva voce* component (Part I + Part II) is 100

### **Criteria for passing Amraz e Niswan va Qabalat (Gynaecology and Obstetrics)**

To pass the subject Amraz e Niswan va Qabalat (Gynaecology and Obstetrics), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and the Clinical cum *viva voce* component (50% out of 100 marks) and
  - ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Amraz e Niswan va Qabalat (Gynaecology and Obstetrics).
- There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Amraz e Niswan va Qabalat (Gynaecology and Obstetrics), only in the first attempt.

### 3.2.5. Examinations in *Ilmul Atfal* (Paediatrics)

The examinations in *Ilmul Atfal* (Paediatrics) include Continuous Assessments (CA) and Professional examination.

#### Continuous Assessments (CA)

Students are evaluated at the end of each semester by the following assessments.

- |                            |                                 |
|----------------------------|---------------------------------|
| i. End of first semester   | OSPE – 10 stations (60 minutes) |
| ii. End of second semester | OSCE – 10 stations (60 minutes) |
| iii. End of third semester | OSPE – 10 stations (60 minutes) |
| iv. End of fourth semester | OSCE – 10 stations (60 minutes) |

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of *Ilmul Atfal* (Paediatrics) Professional Examination.

#### Professional examination

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

1. The theory component consist of

- |                                      |                     |
|--------------------------------------|---------------------|
| i. MCQ– 20 questions (30 minutes)    | - 20 marks (1 x 20) |
| ii. SEQ – 5 questions (90 minutes)   | - 40 marks (8 x 5)  |
| iii. Essay– 2 questions (60 minutes) | - 40 marks (20 x 2) |

Total mark for the theory component is 100

2. The clinical cum *viva voce* component consists of

- |                                           |            |
|-------------------------------------------|------------|
| I. A long case (60 minutes)               | - 80 marks |
| II. Short cases – 2 cases (2 X10 minutes) | - 20 marks |

Total mark for the clinical cum *viva voce* component is 100

#### Criteria for passing *Ilmul Atfal* (Paediatrics)

To pass the subject *Ilmul Atfal* (Paediatrics) a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and the clinical cum *viva voce* component (50% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of *Ilmul Atfal* (Paediatrics).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of *Ilmul Atfal* (Paediatrics) only in the first attempt.

### 3.2.6. Examinations in Deshi Ilaj (Indigenous Medicine)

The examination in Deshi Ilaj (Indigenous Medicine) include Continuous Assessments (CA) and Professional examination.

#### Continuous Assessment (CA)

Students are evaluated at the end of each semester by the following assessments.

- |                            |                                |
|----------------------------|--------------------------------|
| i. End of first semester   | SEQ – 4 questions (60 minutes) |
| ii. End of second semester | SEQ – 4 questions (60 minutes) |
| iii. End of third semester | OSCE – 6 stations (60 minutes) |
| iv. End of fourth semester | OSCE – 6 stations (60 minutes) |

Each CA will get 20 marks and the total 20 marks of three CAs will contribute to 20% of marks of Deshi Ilaj (Indigenous Medicine) Professional Examination.

#### Professional examination

This examination has (1) a theory component, (2) a clinical cum *viva voce* component.

This examination has (1) a theory component, and (2) a Practical cum *viva voce* examination.

1. The theory component: There is one question paper consists of;

- |                                       |            |
|---------------------------------------|------------|
| i. MCQ– 20 questions (30 minutes)     | - 20 marks |
| ii. SEQ – 5 questions (90 minutes)    | - 40 marks |
| iii. Essay – 2 questions (60 minutes) | - 40 marks |

Total mark for the theory component is 100

2. The clinical cum *viva voce* component consists of;

- |                                          |            |
|------------------------------------------|------------|
| i. A long case (60 minutes)              | - 60 marks |
| ii. Short cases – 4 cases (4X10 minutes) | - 40 marks |

Total mark for the clinical cum *viva voce* component is 100

#### Criteria for passing Deshi Ilaj (Indigenous Medicine)

To pass the subject Deshi Ilaj (Indigenous Medicine), a candidate must

- i. obtain a minimum % of mark from the marks allocated for the Theory component (45% out of 100 marks) and the clinical cum *viva voce* component (50% out of 100 marks) and
- ii. also obtain a minimum pass marks of 50% from the 100 marks allocated for the subject of Deshi Ilaj (Indigenous Medicine).
  - There is no minimum pass mark for CA component.
  - 20% of marks allocated for the CA component will be added to the final mark of Deshi Ilaj (Indigenous Medicine) only in the first attempt.

### **1.2.7. Research Project**

The examinations in research project include preparation of research proposal, conducting research work, research presentation, and final report.

Marks will be assigned as follows.

Preparation of research proposal	- 10 marks
Conducting research work	- 15 marks
Research Presentation	- 25 marks
Final report	- 50 marks

Total mark for the research project is 100.

### **3.3 Criteria for passing the Final Professional BUMS examination**

A candidate is deemed to have passed the Final professional BUMS examination if the candidate has at one and the same examination passed each of 6 subjects and the research project of this examination as prescribed by By-Laws made by the Council; while fulfilling the minimum requirement for the separate components of the 6 subjects and the research project, the pass marks for each subject is 50% ; provided that a candidate may be referred in one or more subjects at the Final professional BUMS examination, when the candidate has not obtained the minimum pass mark (50%) for the particular subject. Such candidates shall be deemed to have passed the Final professional BUMS examination when they pass the referred subject (s) at a subsequent Final professional BUMS examination.

A candidate who obtains less than 50% in all six subjects or less than 25% in any three of the 06 subjects and research component shall be considered to have failed the entire Final Professional BUMS examination. Such candidates shall be deemed to have passed the examination when they pass the six subjects at a subsequent Final Professional BUMS examination.

### **3.4 Calculation of marks for award of classes in the Final professional BUMS examination**

Only candidates who have passed the Final professional BUMS examination at the first attempt are considered eligible for award of classes. The % of marks obtained by the candidate at first attempt for each of 6 subjects and research project are added up and divided by 7 to get the cumulative % mark. This mark is called the % cumulative Final professional BUMS examination mark and used in awarding classes. The classes are decided according to the classification of marks described in the By-Laws.



### **3.5. Award of Distinction**

A candidate, who has obtained at least 75% of marks, shall be awarded a Distinction in the relevant subject.

### **3.6. Contribution to the Cumulative BUMS result**

The Final Professional BUMS Examination will contribute 40% to the 100 marks of the Cumulative BUMS result.

### **3.7. Calculation of the Cumulative BUMS results**

The Cumulative BUMS results are calculated only after the candidates have passed all the Professional examinations in the BUMS degree programme. The cumulative mark that each candidate has obtained for each Professional Stage is used to calculate the contribution from each Stage to the cumulative BUMS results. The contributions from all 3 Professional Stage are calculated according to the apportioning as indicating below.

### **3.8. Apportioning of marks for the examinations of the three (03) Professional Stages used in calculating the cumulative BUMS results;**

First Professional BUMS – Pre clinical Stage	- 30%
Second Professional BUMS – Para clinical Stage	- 30%
Final Professional BUMS – Clinical Stage	- 40%

The contribution by the 3 Professional Stages to the cumulative BUMS results may be changed periodically depending on the ongoing changes that are made in the curriculum and such changes will be informed to the students.

### **3.9. Award of classes at the Cumulative BUMS Result**

The method of calculating the cumulative result has been described above and this mark is used to decide award of classes. The classes are decided according to the classification of marks described in the By-Laws.

### **3.10. Internship training programme**

The internship training programme is expected to equip the undergraduates with knowledge, skills and attitudes required to be completed to function as a medical professional. This internship is prerequisite for registration at the Sri Lanka Ayurvedic Medical Council as a medical practitioner.

Period of Internship include nine months of training at selected Ayurveda hospitals and three months under a traditional physician in a specialized subject. At the end of internship, the student should produce a certificate to the Director of the Institute of Indigenous Medicine issued by the Commissioner of Ayurveda to the effect that she has successfully completed the internship. The Board of Management of the Institute shall recommend the candidate to the Senate of the University of Colombo stating his eligibility for the conferment of the BUMS degree. If the student is unable to complete the internship due to unavoidable circumstances, she should complete that within a period of two years failing which he shall be considered as not eligible for Registration as an Ayurvedic Physician with the Sri Lanka Ayurvedic Medical Council.