



Institute of Indigenous Medicine

University of Colombo



Bachelor of Unani Medicine and Surgery (BUMS)

COURSE UNIT SYSTEM

**Rules and Regulations
Course Curriculum
2011**



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The contents of this course unit system were prepared by the Curriculum Development and Evaluation Committee of the Unani Section, Institute of Indigenous Medicine, University of Colombo.

VISION STATEMENT OF THE INSTITUTE

To be the centre of excellence in the disciplines of Ayurveda, Unani, Traditional Medicine and of Allied Medical Sciences in teaching, training and research in Sri Lanka.

MISSION STATEMENT OF THE UNANI SECTION

To achieve the highest standards of Health in its Physical, Mental, Social and Spiritual aspects by creating a disease free society by promoting, preventing, preserving and treating the sick while delivering primary health care services in strict accordance with the guidelines, strategies and methodologies of Unani, Ayurveda, Traditional and Allied Systems of Medicine.

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Officers of the Institute of Indigenous Medicine

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Heads of Departments

Dept. of Kulliyat	Dr. M. I. M. Manuha	Ext. 225
Dept. of Ilmul Advia	Dr. B. M. Nageeb	Ext. 210
Dept. of Moalejat	Dr. A. W. S. Fawziya	Ext. 234
Dept. of Niswan Va Qabalat	Dr. M. H. Faslul Haq	Ext. 121
Dept. of Ilmul Jarahat	Dr. M. Seinadeen	Ext. 121
Dept. of Hifzan e Sehat	Dr. M. H. M. Hafeel	Ext. 234
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01. History

Unani Tibb is the Greeko Arabian Medical system that was developed during Islamic civilization. Muslims call it as Unani (Ionian) Medicine gratefully acknowledging its origin whereas European historians call it as Arab Medicine.

The Arabic Medicine was a continuation and renaissance of Greek, Persian, Egyptian and Babylonian sciences. The exile Nestorians founded schools of medicine in Persia. The schools established in Junde Shapur on the banks of the Euphrates served as the point of departure of medicine from Greek to Arabic.

During the period of the Omayyad Caliphs (first half of the 8th century) medical texts were translated from Greek into Persian and Arabic. Hunain (809AD- 873AD), Al Razi (850AD - 925AD) Ali Ibn Sina (980AD - 1037AD) contributed to the development of the system. Canon of Medicine (Al-Qanoon Fit Tibb) of Ali Ibn Sina has been the standard medical text book in the Europe until seventeenth century. Hunain's "Ten treatises on the Eye" is the earliest systematic text book of Ophthalmology. Al Razi's Notes on Small Pox and Measles" gave the first hand clear account of these two diseases.

The Arabs made three cardinal contributions to medicine viz. medicinal chemistry, organization of pharmacy and founding hospitals. They enriched the Greek medicine and this Arabic form of Greek medicine was transmitted to Europe through Latin translations.

Unani medicine or Arab medicine as European authors would call it remained true in Hippocratic principles. The Europe referred to it as the "European Traditional System". The Unani principle and philosophy still exist even in Australia in the existence of the Unani Medical Society of Australia.

1.1 Unani Medicine in Sri Lanka

Unani medicine which was practiced by the Muslims of Sri Lanka has a long history going back to the 12th century AD. The Unani system of medicine was brought in by the Arabs when they settled down on the coast land of Serandib (Sri Lanka) between the 10th to 12th centuries AD.

In the 10th century AD, the prince Jamaluddeen, the son of Sulthan of Kenya in Asia Minor settled in Beruwala and practiced as a physician.



In 1929 the Unani section was established along with the Ayurveda and Siddha sections at the College of Indigenous Medicine due to the untiring efforts of Dr. K. Balasingam. Dr. M. A. Ahamed and Dr. H. M. Jaffer were brought down from India as lecturers in Unani. They were instrumental in organizing and establishing Unani Section at the College. Dr. H. M. Jaffer along with Sir Razik Fareed then a Member of the Board of Indigenous Medicine strived to keep the Unani Section at the College. Dr. H. M. Jaffer was the Chief Lecturer in the Unani Section. Dr. M. H. M. Hafeel, Dr. M. A. M. Jalaldeen, Dr. M. I. William and Dr. H. Z. Jaffer succeeded him in the post of Head of Unani Section. They all strived hard to develop the Unani Section during their periods.



1.2 Introduction of the Degree Programme

This is the curriculum of Bachelor of Unani Medicine and Surgery formulated in accordance with the subsection 5 (B) of the Institute of Indigenous Medicine Ordinance, University of Colombo.

The Diploma Programme in Ayurveda, Unani and Siddha systems of medicine was first initiated in 1929. The Diploma Programme was later revised in the years 1934, 1941, 1961, 1964, 1965, 1966, 1972 and 1974. The Diploma was accepted by the Central Council for Indian Medicine (CCIM) as a basic qualification for pursuing postgraduate studies in Indian Universities. The teaching programme was upgraded, in 1982, from Diploma to Degree leading to B.A.M.S, B.U.M.S and B.S.M.S for Ayurveda, Unani and Siddha respectively.

The Borella Ayurvedic Hospital was established as a Teaching Hospital when the College was initiated in 1929. The training of undergraduates in the Hospital is being carried out under the direct supervision of the academic staff of the Institute. The B.U.M.S. degree consists of six year programme including one year internship. The curriculum composed of Unani and Allied medical sciences in order to produce competent graduates.

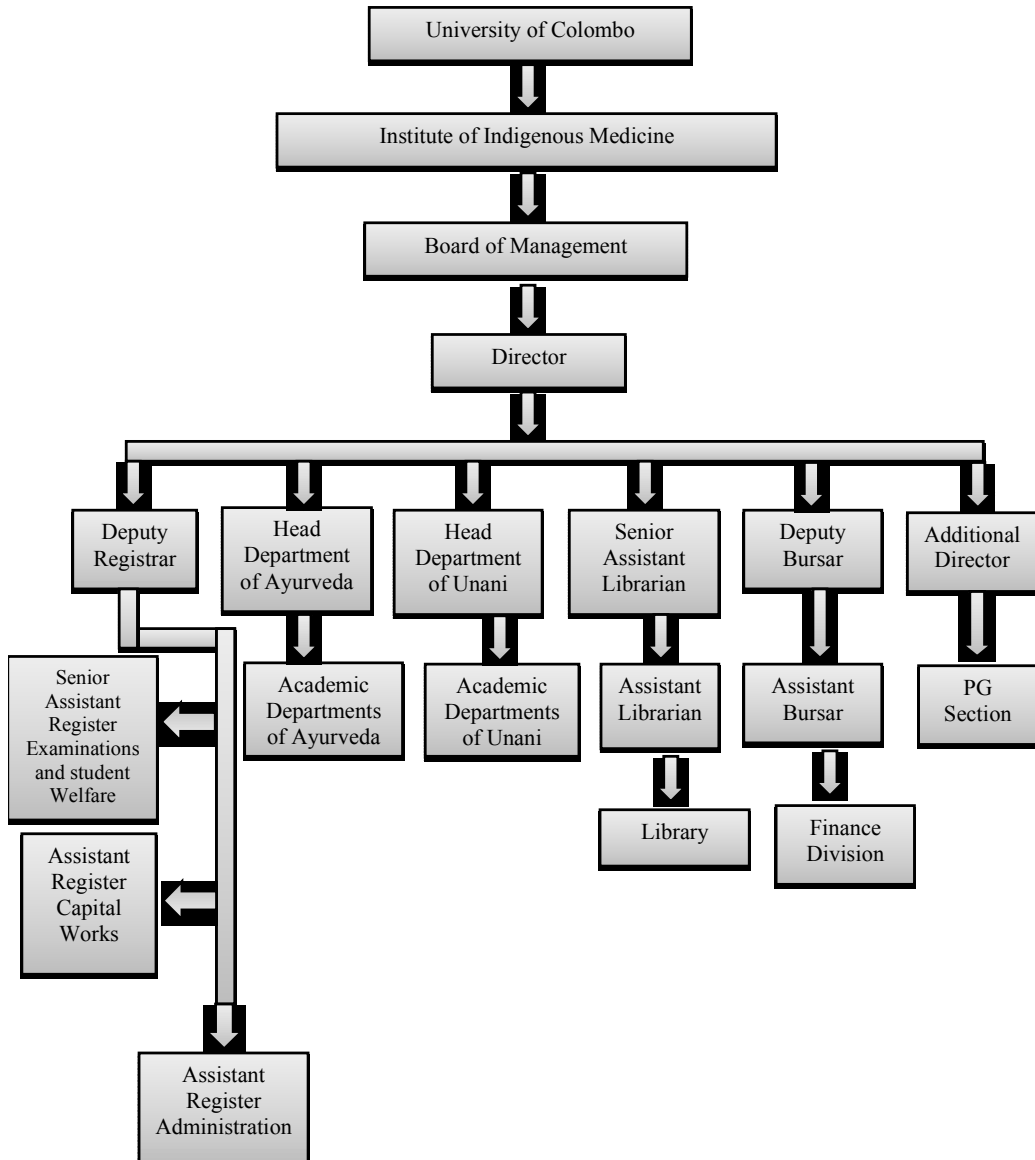
2. Objectives of the Degree Programme

At the completion of BUMS course, the graduates will be able to:

1. Apply knowledge, skills and attitudes of medical sciences based on Unani and Traditional medicines.
2. Offer better health services to the public preserving the salient characteristics of Unani and Traditional systems of medicine within the framework of national health system to suit the needs of present society.
3. Manufacture medicines by applying knowledge of conventional methods and modern technology with the maximum utilization of local resources based on Good Manufacturing Practices.
4. Diagnose medical and surgical emergencies and give initial management and refer to the appropriate centers.
5. Maintain the highest standard of professionalism as prescribed in legal medicine.
6. Carry out scientific research on Unani and the Traditional medical systems.



3. Organizational Structure of the Institute



The Board of Management of the Institute

1. Dr. R. A. Jayasinghe, Director, Institute of Indigenous Medicine
2. Mr. P. G. Jayasinghe, Additional Secretary, Ministry of Higher Education
3. Mr. Somarathna Widanapathirana, Senior Assistant Secretary (Administration), Ministry of Healthcare and Nutrition
4. Mr. P. S. K. R. Weerakoon, Commissioner of Ayurveda
5. Dr. H. L. Obesekara, Director, Bandaranaike Memorial Ayurveda Research Institute
6. Dr. D. H. Tennakoon, Acting Director, Ayurveda Teaching Hospital
7. Prof. Rohan W. Jayasekara, Dean, Faculty of Medicine, University of Colombo
8. Dr. D. P. A. Dissanayake, Head, Department of Ayurveda, Institute of Indigenous Medicine
9. Dr. B. M. Nageeb, Head, Department of Unani, Institute of Indigenous Medicine
10. Dr. Panduka Karunanayake, Department of Clinical Medicine, Faculty of Medicine, University of Colombo
11. Dr. Chrishantha Weerasinghe, Department of Community Medicine, Faculty of Medicine, University of Colombo
12. Dr. A. M. Heennilame, Member of Ayurveda Medical Council
13. Mr. R. H. M. Piyasena, UGC Nominee
14. Dr. A. G. Nimal Jayasinghe, UGC Nominee
15. Dr. Sunil Atapattu, UGC Nominee
16. Dr. (Mrs.) P. M. Chandrasiri, UGC Nominee
17. Dr. A. M. Aboothahir, UGC Nominee
18. Dr. Upali Seneviratne, UGC Nominee
19. Dr. M. M. P. Premakumara, UGC Nominee, Additional Secretary, UGC
20. Mr. P. A. Abeysekara, Deputy Secretary to the Treasury, Ministry of Finance and Planning, General Treasury
21. Mrs. I. K. K. Wijekoon, Senior Assistant Registrar, Institute of Indigenous Medicine (Secretary)

5. Faculty Members

Department of Kulliyat

Senior Lecturer – Grade I

Dr. M. C. M. Mahees

DAMS (Hons.), MD (General Medicine - Unani)

Senior Lecturer – Grade II

Dr. (Mrs) M. I. Manuha

BUMS (Hons.), M Phil (Unani)

Department of Ilmul Advia

Senior Lecturer – Grade I

Dr. B. M. Najeeb

DAMS (Sri Lanka), M Phil (Unani), PhD. (Microbiology)

Senior Lecturer – Grade II

Dr. A. H. M. Mawjood

DAMS (Sri Lanka), M. Pharm., Ph. D. (Physiology) Osaka University, Japan

Dr. S. J. Uthmalebbe

DAMS (Hons) M Phil (Unani)

Lecturer

Dr. M. M. M Rifaee

BUMS (Hons), M Phil (Unani)

Lecturer (Probationary)

Dr. M. N. F. Rizniya

BUMS (Hons)

Dr. M. S. M. Nasmeer

BUMS (Hons)

Dr. (Mrs) N. Fahamiya

BUMS (Hons)

Department of Moalejat

Senior Lecturer – Grade II

Dr. A. W. S. Fawziya

DAMS (Hons), M Phil (Unani)

Dr. (Mrs) M. L. U. Salma

BUMS (Hons), MD (General Medicine – Unani)

Dr. M. H. M. Nazeem

BUMS (Hons), M Phil (Unani)

Lecturer

Dr. S. M. Raeesuddeen

BUMS (Hons), MD (General Medicine - Unani)

Dr. M. A. M. Sirajudeen

BUMS (Hons), M Phil (Unani)

Lecturer (Probationary)

Dr. M. S. M. Shifa

BUMS (Hons)

Dr. A. M. Muthalib

BUMS (Hons)

Department of Niswan Va Qabalat

Senior Lecturer – Grade II

Dr. (Mrs) H. Nizamdeen

DAMS (Hons), MD (Gyn and Obs – Unani)

Dr. M. H. Faslul Haq

BUMS (Hons), M Phil (Unani)

Lecturer

Dr. (Mrs) M. U. Z. N. Farzana

BUMS (Hons), MSc, M.S. (Gyn and Obs - Unani)

Department of Illmul Jarahat

Senior Lecturer-Grade I

Dr. M. Seinadeen

BUMS (Hons), MD (General Medicine - Unani)

Lecturer Probationay

Dr. (Mrs) A. H. A Fazeenah

BUMS (Hons)

Department of Hifzan e Sehat

Senior Lecturer-Grade II

Dr. (Mrs) M. S. S. Fawmiya

BUMS (Hons), M Phil (Unani), PG Dip in Toxicology

Lecturer

Dr. M. H. M. Hafeel

BUMS (Hons), M Phil (Unani), PG Dip in Health Development

Department of Allied Science

Department of Deshiya Ilaj



6. Admission Requirements

The candidate should have met all the following criteria:

6.1 Educational Qualifications

The candidate should have passed G.C.E. Advanced Level in the Bioscience stream and should have met the criteria stipulated by the University Grants Commission.

6.2 Medical Fitness

The candidate should not suffer from any physical or mental disability that may hinder the duties of medical profession.

All the students who are admitted should undergo a medical examination.

6.3 Admission of Foreign Students

Foreign students are admitted for degree programme under the guidelines laid down by the University Grants Commission of Sri Lanka.



7. Description of Specific Terms

7.1 Semester

The academic programme is based on the semester system which consists two semesters per year. Each semester consists of 15 weeks of academic activities; teaching and learning. Examinations will be conducted at the end of each semester.

7.2 Course Unit

This is a programme taught within a semester consisting of one or more contact hours per week. A contact hour is defined as an hour of lectures/ practicals/tutorials etc.

7.3 Levels

The academic programme is organized as five levels; namely Level 1, 2, 3, 4 and 5. Each level consists of two semesters and each semester consists of fifteen academic weeks

Semester 1		Semester 2	
First half	08 weeks	First half	08 weeks
Mid semester break	01 week	Mid semester break	01 week
Second half	07 weeks	Second half	07 weeks
Study leave	02 weeks	Study leave	02 weeks
Examination	05 weeks	Examination	05 weeks
Vacation	02 weeks	Vacation	04 weeks

7.4 Credit

The abstract value assigned to a course unit on the basis of contact hours is called a credit. One credit unit is equivalent to either 15 hours of lectures or 30 hours of practical (OPD / IPD/Laboratory / tutorials / field visits). A series of digits with in the parenthesis following the course code indicate the number of lecture hours and practical hours.

e.g. 2 credit containing 15 hours of lectures and 30 hours of practicals will be denoted as (2:15/30).

7.5 Grade Point

The range of marks is partitioned into a sequence of suitable sub range and the sub ranges are designated by the symbols A⁺, A, A⁻, B⁺, B, B⁻, C⁺, C, C⁻, D⁺, D and E. These grades and grade points are assigned as follows:

Range of marks	Grades	Grade point value
85-100	A ⁺	4.0
70-84	A	4.0
65-69	A ⁻	3.7
60-64	B ⁺	3.3
55-59	B	3.0
50-54	B ⁻	2.7
45-49	C ⁺	2.3
40-44	C	2.0
35-39	C ⁻	1.7
30-34	D ⁺	1.3
25-29	D	1.0
00-24	E	0.0

7.6 Grade Point Average (GPA)

The overall performance of the students is assessed by calculating the Grade Point Average (GPA). All course units are weighted according to their corresponding credit values. GPA is the weighted mean of Grade Points obtained by a student from course units. GPA shall be computed to the second decimal place and is an indicator of the academic performance of the student. Grades of all registered course units in a study programme are taken into account when calculating the GPA.

7.7 Calculation of Grade Point Average (GPA)

The Grade Point Average (GPA) determines the pass or class of the Degree programme of Bachelor of Unani Medicine and Surgery. This shall be the credit weighted mean sum of the each individual Grade point (GP) values obtained by a student from the 195 credits of the programme he / she has offered.

GPA is determined by dividing the total credit- weighted grade point value (ΣCg) by the total number of Credits (ΣC).

$$GPA = \Sigma Cg / \Sigma C$$

e.g., a student who has completed a course of four subjects each 4 credits and two subjects each of 2 credits with grades of A⁺, C⁺, B, C⁺, A and B respectively would have the GPA.

$$GPA = \frac{4 \times 4.0 + 4 \times 2.3 + 4 \times 3.0 + 4 \times 2.3 + 2 \times 4.0 + 2 \times 3.0}{4 + 4 + 4 + 4 + 2 + 2}$$

$$\frac{16 + 9.2 + 12 + 9.2 + 8 + 6}{20}$$

$$GPA = 3.02$$

8. Medium of Instruction

The medium of instruction will be English / Tamil.

9. Structure of the Degree Programme

The name of the degree is Bachelor of Unani Medicine and Surgery (BUMS). This full-time programme spreads over a period of five years course work and one year of internship.

The degree programme is based on the course unit system consisting of compulsory course units and optional course units. Each course unit has been assigned a number of credits on the basis of the weight of the course unit. The core programme of the degree is offered by the eight departments of studies for the duration of ten semesters. The core programme consists of 195 credits (180

credits from compulsory course units including research component and 15 credits from optional courses units).

In addition to above mentioned credited courses a set of foundation courses are offered to impart satisfactory proficiency in English and Information Technology among all students. While these courses are not credited for the degree programme, it is mandatory for every student to pass the foundation courses for the completion of the degree programme. Certificates will be awarded for English and Information Technology, upon successful completion.

The compulsory research project comprising of six credits has to be completed in the 8th semester.

The degree will be awarded upon the successful completion of the course work and one year internship.

A student can be awarded the degree upon the completion of the level-5 on a written declaration by him/ herself that he/she is not willing to undergo internship and that should be recommended by the Board of Management.

9.1 Subjects offered

Subject course units are offered by eight academic departments of the institute namely; *Kulliyat, Ilmul Adviya, Moalejat, Tahaffuzi Va Samaji Tibb, Ilmul Jarahat, Amraz e Niswan Va Qabalat Va Atfal Deshiya Ilaj* and Allied Sciences. These departments offer 60 Course units. In addition, English language and Information Technology are offered by Language Centre and IT Centre of the Institute respectively.

9.2 Course Notation

The course notation includes two letters abbreviation denoting the department. The first two digits denote level of study, the semester respectively and the last two digits are for course unit serial number.

Eg: KU1101 denotes name of the department, level, semester and the serial number of the course unit.

9.3 Name of the Departments

- I. Department of Kuliyat – KU
- II. Department of Ilmul Adviya – IA
- III. Department of Moalajat – MJ
- IV. Department of Tahaffuzi Va Samaji Tibb – TS
- V. Department of Amraz e Niswan Va Qabalat Va Atfal – NQ
- VI. Department of Ilmul Jarahat – IJ
- VII. Department of Deshiya Ilaj – DI
- VIII. Department of Allied Sciences – AS

9.4 Allocation of Courses under the Departments

9.4.1 Department of Kuliyat – KU

1. Falsafa Va Mantiq – KU1101
2. Al Umoor al Taba'iyya – KU1102, KU1202
3. Tareekh e Tibb Va Akhlaqiyya – KU1103, KU1203
4. Urdu Va Arabic language – KU1104, KU1204, KU2104, KU2204

Optional:

5. Introduction to Bio Feedback – KU2105

9.4.2 Department of Ilmul Adviya – IA

1. Kuliyat e Adviya – IA1101, IA1201
2. Mufrad Advia – IA2101, IA2202
3. Dawa Sazi (Pharmacy) – IA3103, IA3203
4. Kushta Sazi (Mineralogy) – IA3104, IA3204

Optional:

5. Nutrition and Food cum Medicine – IA2205
6. Agro Techniques of Medicinal Plants – IA2206
7. Industrial Drug Manufacture – IA2207
8. Pharmacovigilance and Drug Safety – IA2208

9.4.3 Department of Moalajat – MJ

1. Usool e Tashkhees Va Sareeriyat – MJ3101, MJ3201
2. Kulliyat e Ilaj (Fundamentals of Treatment) – MJ3102, MJ3202
3. Moalejat (Unani Clinical Medicine) – MJ4103, MJ4203, MJ 5103, MJ 5203

Optional:

4. Psychology and Counseling – MJ4204
5. Massage and Physical Therapy – MJ4205
6. Panchkarma – MJ4206

9.4.4 Department of Tahaffuzi Va Samaji Tibb – TS

1. Tahaffuzi Va Samaji Tibb – TS3101, TS3201
2. Research Methodology and Bio Statistics – TS 2102, TS2202
3. Ilmus Sumoom (Toxicology) – TS 4103, TS4203

Optional:

4. Natural Diet and Health – TS4204
5. Herbal Beauty Culture – TS4205
6. Medical Sociology – TS4206
7. Drug Abuse Management – TS4207

9.4.5 Department of Ilmul Jarahat-IJ

1. Ilmul Jarahat (Unani Surgery) – IJ5101, IJ5201
2. Amraz e Ain, Anf, Uzn, Va Halq (ENT, Ophthalmology and Orthodontology) – IJ5102, IJ5202

9.4.6 Department of Amraz e Niswan Va Qabalat Va Atfal – NQ

1. Ilmul Atfal (Unani Paediatrics) – NQ5101, NQ5201
2. Amraz e Niswan Va Qabalat (Unani Gynaecology and Obstetrics) – NQ5102, NQ5202

9.4.7 Department of Deshiya Ilaj -DI

Deshiya Ilaj – DI4101, DI4201

9.4.8 Department of Allied Sciences – AS

1. Anatomy – AS1101, AS1201, AS2101
2. Physiology – AS1102, AS1202, AS2101
3. Pathology – AS3103, AS3203
4. Principles of Clinical Medicine – AS4104, AS4204
5. Forensic Medicine – AS4105, AS4205

Optional

6. Principles of Genetics, Molecular Biology and Bio Technology (optional) – AS4106

10. Registration for course units

Registration for an academic level commences one week prior to the start of the first semester and continues during the first two weeks. Students will not be permitted to change their selection of optional course units of Level 2 and 4 once the registration period is over. Optional course will not be conducted when the registered students are less than 10%. Students who have registered for such course units will be permitted to register for other available course units.

11. Eligibility for Subsequent Level

Students are required to meet the eligibility in each level in order to proceed to the subsequent level. If a student fails to meet the eligibility he/she will not be permitted to register for the subsequent level. The students who have not met the eligibility should repeat the particular course units until he/she meets the eligibility.

11.1 Level 1 and 2

A student should have obtained C or better grades in each course unit or aggregating to a minimum of GPA 2.00 at the level 1 and 2 to be promoted to the subsequent levels.

11.2 Level 3

A student should have obtained C or better grades in each course unit aggregating to a minimum of GPA 2.00 at the level 3 to be promoted to the level 4.

In addition, a student should have completed (i.e. C or better grades) all course units in Level 1 and 2 (excluding the credits of the optional subjects) to be promoted to the Level 4.

11.3 Level 4

A student should have obtained C or better grades in each course unit aggregating to a minimum of GPA 2.00 at the level 4 to be promoted to the level 5.

11.4 Level 5

A student should have obtained C or better grades in each course unit at level 5 and obtained C or better grades for entire course units aggregating to 195 credits including optional course units to fulfil the minimum requirement for graduation. In addition, a student must have completed the Foundation course units before the graduation.

12. Evaluation Procedure

Each course unit will be evaluated by Continuous Assessment (CA) and end semester examination with consist of a written examination, practical, assignments, presentation, and (viva-voce) examination or a combination of any of the above. The method of evaluation of course units will be announced by the relevant department at the beginning of each semester.

The results of first, second and third level examinations will be released within 6 weeks of completion of the examinations. Fourth and final year examination results will be released within 8 weeks of completion of examinations.

Failure to appear in a scheduled examination without a valid and accepted reason shall be considered as an unsuccessful attempt at the examination.

12.1 Written Examination

The theory component of a course unit will be assessed by an end semester written examination. The duration of this examination will vary according to the number of credit units as follows:

1 Credit unit	1 hr
2 Credit units	2 hrs
>2 Credit units	3 hrs

12.2 Guidelines for the structure of the question papers

One Hour Question Paper

Question type	No.	Duration	Marks
Structured	2	½ hr.	40%
Essay	1	½ hr.	60%

Two Hour Question Paper

Question type	No.	Duration	Marks
MCQ	15	½ hr	20%
Structured	2	½ hr	40%
Essay	2	1 hr	40%

Three Hour Question Paper

Question type	No.	Duration	marks
MCQ	15	½ hr	20%
Structured	2	1hr	20%
Essay	3	1 ½ hr	60 %

The above examinations will be designed according to the guidelines prepared by the respective departments and approved by the Unani Sectional Committee prior to conducting each examination.

12.3 Continuous Assessment (CA)

CA will be conducted in addition to end semester examinations. The guidelines for CA will be prepared by the lecturer concerned. Specific time determined by the lecturer will be given in order to complete and submit the CA. Students are requested to complete and submit all the CAs in order to sit for the end semester examinations. 80% of marks will be given for the end semester examination of the respective academic level. 20% will be added for the final marks from the continuous assessment in the each respective end semester examination.

12.4 Practical Examinations of the Degree Programme

The practical components of the course unit will be evaluated by an end semester examination. Viva-voce examinations also will be a component of the practical

evaluation as shown in following table. The proportion of marks allocated for course unit includes practicals weighted according to the credit units of the practical. The examination will be conducted according to the guidelines prepared by the departments and approved by the Unani Sectional Committee.

Chart of the Evaluation Methods of Course Units

Compulsory Subjects

Subject	Method of Evaluation			
	CA	W	P	V
Falsafa Va Mantiq (Philosophy and Analytical Study)	X	X		X
Al Umoor Al Taba'iyya (Principles Of Human Physics)	X	X		X
Tareekh e Thib Va Akhlaqiya (History Of Medicine and Behavioral Science)	X	X		
Urdu and Arabic Language	X	X		
Anatomy	X	X	X	X
Physiology	X	X	X	X
Kulliyath e Advia (Basic Principles Of Materia Medica)	X	X	X	X
Mufrad Advia (Unani Pharmacology)	X	X	X	X
Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)	X	X		X
Dawa Sazi (Unani Pharmacy)	X	X	X	X
Kushtha Sazi (Mineralogy)	X	X	X	X
Research Methodology and Bio Statistics				
Principles Of Clinical Medicine	X	X	X	X
Pathology	X	X	X	X
Forensic Medicine	X	X		X
Ilmus Sumoon (Toxicology)	X	X	X	X
Usool e Tashkhees Va Sareeriyath (Principles Of Diagnosis)	X	X	X	X
Kulliyat e Ilaj (Fundamentals Of Treatment)	X	X	X	X
Moalejat (Unani Clinical Medicine)	X	X	X	X
Deshiya Ilaj (Traditional Medicine)	X	X	X	X
Ilmul Athfal (Unani Pediatrics)	X	X	X	X
Amraz e Niswan Va Qabalat (Unani Gyn& Obst.)	X	X	X	X
Ilmul Jarahat (Unani Surgery)	X	X	X	X
Amraz e Ain, Anf, Uzn Vo Halq (ENT, Ophthalmology and Orthodontology)	X	X	X	X

Optional Subjects

Subject	Method of Evaluation			
	CA	W	P	V
Introduction to Bio Feedback	X	X		X
Nutrition and Food cum Medicine	X	X		X
Agro Techniques of Medicinal Plants	X	X		
Industrial Drug Manufacture	X	X		
Pharmacovigilance and Drug safety	X	X	X	X
Principles of Genetics, Molecular Biology and Bio Technology	X	X	X	X
Psychology and Counseling	X	X	X	X
Natural Diet and Health	X	X	X	X
Massage and Physical therapy	X	X	X	X
Panchakarma	X	X	X	X
Herbal Beauty Culture	X	X	X	X
Medical Sociology	X	X	X	X
Drug Abuse Management	X	X	X	X

Foundation Course

Subject	Method of Evaluation			
	CA	W	P	V
English	X	X		X
Introduction to Computer Application	X	X	X	

CA=Continuous Assessment

W=Written

P=Practical

V=Viva-voce

Research Component

The research component consists of 6 credits and the supervisor of the research component will be assigned by the related department of studies of the Unani section within four weeks of commencement of level 4. A student should complete the research component before the end of level 4.

Research component will be assessed continuously and marks will be allocated as follows:

Preparation of project proposal	10%
Conducting the research project	20%
Seminar presentation	20%
Final project report	50%

12.5 Assignment of Grades, Grade Point and GPA

The grade submitted by the lecturer will be reviewed by a three member committee comprising of the Head of the Unani Section, Head of the Department concerned, and lecturer concerned.

12.6 Other Type of Grade

Grade I: (Incomplete)

Grade I may be given, if the student is unable to complete the course unit due to acceptable reasons and the work in that particular course unit is sufficiently completed and of good performance. A student should have to remove the Grade I within one year of it is being given. In this case his/her attempt will be considered as repeat examination.

If the student fails to upgrade the Grade I at least to a grade C, within the stipulated time, he/she will be declared as gained grade E.

Note: In case of acceptable reason Zero credit will be allocated to the incompleting course unit /units for the calculation of his/ her GPA.

13. Attendance

Students must attend all lectures and practical classes of all course units. 75% of attendance is required for lectures and practical classes to sit for corresponding

examinations. Students who do not have the required attendance for lectures and practical classes will not be allowed to sit for the corresponding examination and should sit for the examination in the next scheduled examination as repeat candidate after fulfilling the required attendance at least 60%.



14. Repeat Examinations

A student who obtained a grade below 'C' in a particular course unit may re-sit for the examination in respect of that course unit for the purpose of improving the grade. All 'E' grades should be improved at the first available opportunity. The maximum grade that would be offered for repeated course unit is 'C'

15. Medical certificates

A student who is unable to appear in the examination due to a medical reason should inform the deputy registrar (Exam) within 72 hours.

If the student could not appear for the examination due to medical reason he should submit a valid medical certificate within 10 working days.

The medical certificate is valid only for the respective period stipulated in the medical certificate. If the medical certificate is more than 14 days, that should be endorsed by the District Medical Officer of the relevant area.

When a student produces medical certificate more than once, he or she should appear before a medical board appointed by the Institute. The report of the board will be submitted to the Sectional Committee. The decision of the Unani Sectional Committee is final.

16. Duration for Completion of Degree Programme

Students should complete their degree programme within a specific number of semesters. The maximum period allowed for the completion of the degree is 16 semesters from his/her first registration. Students are allowed to repeat examinations subjected to the above time limits.

17. Criteria for Awarding Degree

A student must complete minimum of 200 credits within the stipulated period for the award of the degree. 15 credits of these can be selected from optional course units. In addition, the student must have:

1. Obtained a minimum of GPA of 2.00
2. Obtained a minimum of C grade at the foundation course units.
3. Obtained a minimum of C grade at each course units.
4. Completed the relevant requirements within a maximum period of 16 semesters.
5. Completion of one year internship successfully.

Note: However a student can be awarded degree upon the completion of the level-5 on a written declaration by him/ herself that he/she is not willing to undergo internship and that should be recommended by the Board of Management.

Student shall deem to a cancellation of his registration if he fails to satisfy the conditions stated in the above article.

17.1 Award of Honours

A student who has fulfilled all the conditions stipulated in “Criteria for Awarding Degree” should be awarded honours if he/she fulfills the following additional criteria.

17.1.1 First Class

A student shall be awarded First Class honours if he/she fulfills the following requirements:

1. An overall minimum GPA of 3.70
2. At least two Grade A in each level course units and at least Grade C for remaining course units.
3. Complete the above requirements within five consecutive levels.

17.1.2 Second Class (Upper Division)

A student shall be awarded Second Class (Upper Division) honours, if he/she fulfills the following requirements:

1. An overall minimum GPA of 3.30
2. At least two Grade B in each level course units and at least Grades C for remaining course units.
3. Complete the above requirement within five consecutive levels.

17.1.3 Second Class (Lower Division)

A student shall be awarded Second Class (Lower Division) honours, if he/she fulfills the following requirements:

1. An overall minimum GPA of 3.00
2. At least two Grade B in each level course units and atleast Grades C for remaining course units.
3. Complete the relevant requirement within five consecutive levels.

18. Conferment of Degree

After fulfilling all the requirements the Institute on the recommendation of the Board of Management shall recommend the student to the University Senate for the conferment of the degree.

19. Entries in the Transcript

Course units with the corresponding grades and grade points obtained will be indicated in the transcript. E grades which have been upgraded will not appear but the credit earned of the repeat course will appear under the particular semester when the unit was complet with a label “R” (Repeat) to indicate that the course was repeated. The final GPA and the class will also be indicated in the transcript. The transcript will be issued upon application and the payment of a prescribed fee.

20. Internship

The internship programme is expected to equip the undergraduates with further 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.

01. He/she should have served nine months internship at various Ayurvedic hospitals and the remaining three months under two traditional physicians in specialized subjects or drugs manufacturing industries.
02. 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 he had successfully of completed his internship.
03. 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 B.U. M. S. degree.
04. If the student is unable to complete the internship due to unavoidable circumstances, he/she should complete that within a period of two years failing which he shall be considered as not eligible for Registration as an Unani Physician with the Sri Lanka Ayurvedic Medical Council Registry.
05. However, a student can be awarded the degree upon completion of the level-5 on a written declaration made by him/ herself that he/she is not willing to undergo internship training. Such request shall be approved by the Board of Management and the copy of the decision of the Board of Management should be made available to the Sri Lanka Ayurveda Medical Council.



21. Course Sequence of the Core Programme BUMS

Compulsory Subjects

Course code	Course unit	No of unit	Total credit
	Level 1		
KU1101	Falsafa Va Mantiq (Philosophy and Analytical Study)	03	20
KU1102	Al Umoor al Taba'iyya - 1 (Principles of Human Physis)	03	
KU1103	Tareekh e Tibb va Akhlaqiyya-I (History of Medicine and Behavioral Science)	02	
KU1104	Urdu va Arabic Language - 1	03	
AS1101	Anatomy - I	03	
AS1102	Physiology - I	03	
IA1101	Kulliyat e Adviya-I (Basic Principles of Materia Medica)	03	
KU1202	Al Umoor al Taba'iyya - 11 (Principles of Human Physis)	02	16
KU1203	Tareekh e Tibb va Akhlaqiyya - II (History of Medicine and Behavioral Science)	01	
KU1204	Urdu va Arabic Language - 11	04	
AS1201	Anatomy - II	03	
AS1202	Physiology - II	03	
IA1201	Kulliyat e Adviya - II (Fundamentals of Materia Medica)	03	
	Level 2		
KU2104	Urdu va Arabic Language -III	04	15
AS2101	Anatomy - III	02	
AS2102	Physiology - III	04	
IA2102	Mufrad Advia - I (Unani Pharmacology)	04	
TS2102	Research Methodology and Bio Statistics	01	
KU2204	Urdu va Arabic Language - IV	03	10
IA2202	Mufrad Advia - II (Unani Pharmacology)	06	
TS2202	Research Methodology and Bio Statistics	01	

(Continued)

Course code	Course unit	No of unit	Total credit
	Level 3		
AS3103	Pathology - I	03	19
IA3103	Dawa Sazi (Unani Pharmacy)	04	
IA3104	Kushta Sazi (Mineralogy)	03	
TS3101	Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)	03	
MJ3101	Usool e Tashkhees Va Sareeriyat - I	03	
MJ3102	(Principles of Diagnosis) Kulliyat e Ilaj (Fundamentals of Treatment) - I	03	
AS3203	Pathology - II	03	22
IA3203	Dawa Sazi (Unani Pharmacy)	04	
IA3204	Kushta Sazi (Mineralogy)	03	
TS3201	Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)	04	
MJ3201	Usool e Tashkhees vo Sareeriyat - II	04	
MJ3202	(Principles of Diagnosis) Kulliyat e Ilaj(Fundamentals of Treatment) - II	04	
	Level 4		
AS4104	Principles of Clinical Medicine - I	04	19
AS4105	Forensic Medicine - I	02	
MJ4103	Moalejat (Unani Clinical Medicine) - I	03	
DI4101	Deshiya Ilaj (Traditional Medicine)	04	
TS4103	Ilmus Sumoom (Toxicology) - I	03	
RC4101	Research Component	03	
AS4204	Principles of Clinical Medicine - II	04	18
MJ4203	Moalejat (Unani Clinical Medicine) - II	05	
DI4201	Deshiya Ilaj (Traditional Medicine)	03	
TS4203	Ilmus Sumoom (Toxicology) - II	02	
AS4205	Forensic Medicine -II	01	
RC4201	Research Component	03	

(Continued)

Course code	Course unit	No of unit	Total credit
	Level 5		
MJ5103	Moalejat (Unani Clinical Medicine) - III	03	20
NQ5101	Ilmul Atfal (Unani Paediatrics) - I	03	
NQ5102	Amraz e Niswan Va Qabalat (Unani Gyn.& Obst.) - I	07	
IJ5101	Ilmul Jarahat (Unani Surgery) - I	04	
IJ5102	Amraz e Ain, Anf, Uzn, vo Halq - I (ENT, Ophthalmology and Orthodontology)	03	
MJ5203	Moalejat (Unani Clinical Medicine) - IV	05	21
NQ5201	Ilmul Atfal (Unani Paediatrics) - II	03	
NQ5202	Amraz e Niswan Va Qabalat - II (Unani Gyn. & Obst)	06	
IJ5201	Ilmul Jarahat (Unani Surgery) - II	04	
IJ5202	Amraz e Ain, Anf, Uzn, vo Halq - II (ENT, Ophthalmology and Orthodontology)	03	

(Continued)

Optional Subjects

Course code	Course unit	No of unit	Total credit
KU2105	Introduction to Bio Feedback	01	09
IA2205	Nutrition and Food cum Medicine	02	
IA2206	Agro Techniques of Medicinal Plants	02	
IA2207	Industrial Drug Manufacture	02	
IA2208	Pharmacovigilance and Drug Safety	02	
AS4106	Principles of Genetics, Molecular Biology and Bio Technology	02	16
MJ4204	Psychology and Counseling	02	
TS4204	Natural Diet and Health	02	
MJ4205	Massage and Physical Therapy	02	
MJ4206	Panchakarma	02	
TS4205	Herbal Beauty Culture	02	
TS4206	Medical Sociology	02	
TS4207	Drug Abuse Management	02	

Foundation Subjects

Course code	Course unit	Credits	Total credit
EN1000	English - I	02	08
EN2000	English - II	02	
IT 1000	Introduction to Computer Application	02	
IT 2000	Computer Applications	01	
IT 3000	Computer Applications	01	

22. Course Sequence with Level and Hours of the Core Programme

Compulsary Subjects

Level – 1					
Course code	Course unit	Lecture	Practical	Credits	Total credits
First Semester:					
KU1101	Falsafa Va Mantiq (Philosophy and Analytical Study)	45		03	20
KU1102	Al Umoor al Taba'iyya - I (Principles of Human Physis)	45		03	
KU1103	Tareekh e Tibb va Akhlaqiyya - I (History of Medicine and Behavioral Science)	30		02	
KU1104	Urdu va Arabic Language - I	45	60	03	
AS1101	Anatomy - I	15	30	03	
AS1102	Physiology - I	30	30	03	
IA1101	Kulliyat e Adviya - I (Basic Principles of Materia Medica)	30		03	
Second Semester					
KU1202	Al Umoor al Taba'iyya - II (Principles of Human Physis)	15	30	02	16
KU1203	Tareekh e Tibb va Akhlaqiyya - II (History of Medicine and Behavioral Science)	15	-	01	
KU1204	Urdu va Arabic Language - II	60		04	
AS1201	Anatomy - II	30	30	03	
AS1202	Physiology - II	30	30	03	
IA 1201	Kulliyat e Adviya - II (Fundamentals of Materia Medica)	30	30	03	
Total					36

(Continued)

Level – 2					
Course code	Course unit	Lecture	Practical	No of credits	Total credits
First Semester					
KU2104	Urdu va Arabic Language - III	60		04	15
AS2101	Anatomy - III	15	30	02	
AS2102	Physiology - III	45	30	04	
IA2102	Mufrad Advia - I (Unani Pharmacology)	45	30	04	
TS2102	Research Methodology and Bio Statistics	15		01	
Second Semester					
KU2204	Urdu va Arabic Language - IV	45	-	03	10
IA2202	Mufrad Advia - II (Unani Pharmacology)	60	60	06	
TS2202	Research Methodology and Bio Statistics	15	-	01	
Total					25

Level – 3					
Course code	Course unit	Lecture	Practical	No of credits	Total credits
First Semester					
AS3103	Pathology - I	30	30	03	19
IA3103	Dawa Sazi (Unani Pharmacy)	30	60	04	
IA3104	Kushta Sazi (Mineralogy)	30	30	03	
TS3101	Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)	30	30	03	
MJ3101	Usool e Tashkhees vo Sareeriyat - I (Principles of Diagnosis)	30	30	03	
MJ3102	Kulliyat e Ilaj - I (Fundamentals of Treatment)	30	30	03	

(Continued)

Course code	Course unit	Lecture	Practical	No of credits	Total credits
Second Semester					
AS3203	Pathology - II	30	30	03	22
IA3203	Dawa Sazi (Unani Pharmacy)	30	60	04	
IA3204	Kushta Sazi (Mineralogy)	30	30	03	
TS3201	Tahaffuzi Va Samaji Tibb (Preventive and Social Medicine)	45	30	04	
MJ3201	Usool e Tashkhees Va Sareeriyat - II (Principles of Diagnosis)	30	60	04	
MJ3202	Kulliyat e Ilaj (Fundamentals of Treatment) II	30	60	04	
Total					41

Level – 4					
Course code	Course unit	Lecture	Practical	No of credits	Total credits
First Semester					
AS4104	Principles of Clinical Medicine - I	45	30	04	19
AS4105	Forensic Medicine - I	30	-	02	
MJ4103	Moalejat (Unani Clinical Medicine) - I	30	30	03	
DI4101	Deshiya Ilaj (Traditional Medicine)	30	60	04	
TS4103	Ilmus Sumoom (Toxicology) - I	30	30	03	
RC4101	Research Component		90	03	

(Continued)

Course code	Course unit	Lecture	Practical	No of credits	Total credits
Second Semester					
AS4204	Principles of Clinical Medicine II	45	30	04	18
MJ4203	Moalejat (Unani Clinical Medicine) - II	45	60	05	
DI4201	Deshiya Ilaj (Traditional Medicine)	30	30	03	
TS4203	Ilmus Sumoom (Toxicology) - II	15	30	02	
AS4205	Forensic Medicine - II	15	-	01	
RC4201	Research Component		30	03	
Total					37

Level – 5					
Course code	Course unit	Lecture	Practical	No of credits	Total credits
First Semester					
MJ5103	Moalejat - III (Unani Clinical Medicine)	30	30	03	20
NQ5101	Ilmul Atfal - I (Unani Paediatrics)	30	30	03	
NQ5102	Amraz e Niswan Va Qabalat - I (Unani Gynecology & Obstetrics)	60	90	07	
IJ5101	Ilmul Jarahat - I (Unani Surgery)	45	30	04	
IJ5102	Amraz e Ain, Anf, Uzn, vo Halq I (ENT, Ophthalmology and Orthodontology)	30	30	03	

(Continued)

Course code	Course unit	Lecture	Practical	No of credits	Total credits
Second Semester					
MJ5203	Moalejat - IV (Unani Clinical Medicine)	45	60	05	21
NQ5201	Ilmul Atfal - II (Unani Paediatrics) - I	30	30	03	
NQ5202	Amraz e Niswan Va Qabalat (Unani Gyn. & Obst.)	60	60	06	
IJ5201	Ilmul Jarahat - II (Unani Surgery)	30	60	04	
IJ5202	Amraz e Ain, Anf, Uzn, vo Halq - II (ENT, Ophthalmology and Orthodontology)	30	30	03	
Total					41



23. Course Sequence of the Core Programme – BUMS

23.1 Department of Kulliyat (Department of Basic Principles)

1. Falsafa Va Mantiq
2. Al Umoor Al Taba'iyya
3. Tareekh e Tib va Akhlaqiya
4. Urdu and Arabic Language

Optional subject

5. Introduction Bio Feedback



Falsafa Va Mantiq (3:45/00)

Learning Outcome:

1. Comprehend the philosophical aspects of medical systems
2. Identify non physical entities of traditional Unani system
3. Apply philosophy, non physical entity in medical practice to invigorate the modern Unani System

KU1101 Falsafa Va Mantiq

Falsafa Va Mantiq (2:30/00)

Introduction to *Falsafa Va Mantiq*, Classification of *Ilm* and its classification etc, Application of *Ilm* in health, disease and health promotion of human which includes physical and non physical entities along with subtle bodies.

Definition of *Tibbi Rooh* and its varieties and its combine study with other subtle energy related medical systems. Subtle bio-energies in Unani and other related systems with modern perspective. Guidelines to moral, philosophy, mental and spiritual wellbeing related to physical and psychosomatic disease. Definition and description of *quwa*, its *aqsam* and subordinates. Scientific merit and modern aspect of *Quwa*. *Quwa* in conservation of health. Introduction of Metaphysical disorders, spiritual therapy, *Dawa Va Duaa* concepts with *Tibbunnabavi*.

Nafs and Bahaz (1:15/00)

Knowledge of *Nafs* and its classification, *Nafs* related to *Quwa* and other systems. Traditional terminologies in relation to *Bahaz*, and scientific way of *Bahaz*.

Text Books

1. Ibn Rusd, Kitab al Kulliyat
2. Ibn Nafees, Sharah al Kulliyat
3. Avicenna, Qanoon fit Tibb, Volume 1

Al Umoor Al Taba'iyya (5:60/30)

Learning Outcome:

1. Recognize health and disease in the light of Unani principles
2. Identify *Tabi'at*, the real healer of the body
3. Apply basic analytical knowledge and skills of the fundamental principles of Unani medicine

KU1102 Al Umoor Al Taba'iyya – 1 (3:45/00)

Arkan e Arba theory and Mizaj (1:15/00)

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 *Ghair motadil*

Akhlat and Aza (2:30/00)

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

KU1202 Al umoor Al Taba'iyya - 11 (2:15/30)

Nabz, Tabiat

Nabz: its definition, Method of finding the *Nabz*, description of parameters of *Nabz*. *Tabiat*: its definition, function, importance in maintain health. Varieties of *Tabiat*. *Tabiat* related to modern aspect. *Fuzlat al 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*

Practical

1. Data collection / information for Mizaj Analysis
2. Categorize the given population according to the Mizaj concept
3. Application of diet and life style changes according to Mizaj concept for the health promotion.
4. Recognize unani diagnostic tools: *bole*, *baraz*.
5. Nabz examination
6. Basic laboratory analysis of blood constituents related with *akhlath* concept.

Text Books

1. Ibn Rusd, *Kitab al Kulliyat*
2. Ibn Nafees, *Sharah al Kulliyat*
3. Avicenna, *Qanoon fit Tibb*, Volume 1, English translation

Tareekh e Tib va Akhlaqiya (3:45/00)

Learning Outcome:

1. Comprehend the historical value related to indigenous medical systems.
2. Recognize and develop medico-cultural relationship in Unani medical field among SAARC and Middle East countries.
3. Understand the past, to put the best into practice in the present, to plan a better future in the medical field.

KU1103 Tareekh e Tib va Akhlaqiya-I (2:30/00)

Tareekh e Tib

History of changes in disease concept from primitive culture to modern times special reference to Greek, Greeco-arabic, Indians, Chinese. Unani scholars and their contributions towards the development of Unani medicine during middle ages in Middle East Indo - Park and Sri Lanka. Acts related to Indigenous medical system and its applications for indigenous practices and institution. History background and basic principles of traditional system.

KU1202 Tareekh e Tib Va Akhlaqiyya-II (1:15/00)

Akhlaqiya (Behavioural Sciences)

Basic Behavioural Changes, Communication Skills, Medical Ethics, Changing Behaviour, Health Management

Text Books

1. Abu Bakr Al Razi, Akhlaqut Tabeeb
2. Abdul Hameed, Theories and philosophies of medicine
3. Ayurveda Acts
4. Is'haq bin Hunain, Taarikhul Atibba Wal Falasifa
5. Barbar Fedem, Behavioral Science in Medicine

Urdu and Arabic Language (14:210/00)

Learning outcome:

1. Pronounce Urdu and Arabic words, especially Unani Medical Terms.
2. Comprehend both modern and classical texts of Unani Medicine in Urdu and Arabic

KU1104 Urdu and Arabic Language -1 (3:45/00)

Urdu (2:30/00)

Alphabets, vowels and other signs, Nouns, Prepositions, Interrogatives (Possessive pronouns), Adjectives, Pronouns, Gender, Number

Arabic (1:15/00)

Nouns, Adjectives, Gender, Possessives, Number, Prepositions, Personal pronouns, Demonstrative pronouns

KU1204 Urdu and Arabic Language - 11 (4:60/00)

Urdu (2:30/00)

Cases (Demonstrative pronouns), Tenses, Degree of comparison (Relative pronouns),
Adverbs, Conjunctions, Writing style (Ilmus sarf)

Arabic (2: 30/00)

Elatives, Colors and bodily defects, Adverbs, Vocatives, Triliteral verbs and Tenses, Hyper bole and Dimunitives, Negatives, Triliteral verbs with additions and their tenses interrogatives

KU2104 Urdu and Arabic Language III (04:60/00)

Urdu (2:30/00)

Transitive and intransitive verbs, Conditional tenses, Verbal noun, Direct speech and Reported speech, Continuous tenses

Arabic (2: 30/00)

Quadrilateral writing, Hamzated verbs, Weak verbs, Doubled verbs, Emphatic verbs, verbs expressing wonder, Defective verbs, Conditional tenses

KU2204 Urdu and Arabic Language IV (03:45/00)

Urdu (1:15/00)

Intensive verbs, Ordinal and fractional Nouns, Letter writing, Writing paragraphs and essays

Arabic (2: 30/00)

Relative pronouns, The Exceptive, Relative adjectives, Ghair al Munsarif, Asma ul Afaal, Al-Hal, Writing practice

Text Books

1. Kulliyath-e-Advia
2. Kulliyath-e-Thib
3. Al Qanoon Arabic/Urdu
4. Kulliyath-e-Nafeesi
5. Ifada e Kabeer

KU2105 Introduction Bio Feedback (1:15/00)

Learning outcome:

1. Recommend the appropriate techniques based on the condition of the patient for proper diagnosis
2. Gain the skills to train the patient to control the biological processes

Contents:

Definition, Sensor, Modalities, Electromyograph, Feedback, thermometer, Electrodermograph, Electroencephalograph, Photoplethysmograph, Electrocardiograph, Pneumograph, Capnometer, Rheoencephalograph, and Hemoencephalography Applications: Incontinence, EEG, Electrodermal system, Musculoskeletal system, Cardiovascular system, Pain, Clinical effectiveness, Organizations

Text books

1. Mark.S. Schwartz, Frank Andrasic, Biofeedback a practitioner's guide
2. David G. Danskin, Biofeedback an introduction and guide

23.2 Department of Allied Sciences

1. Anatomy
2. Physiology
3. Pathology
4. Principles of Clinical Medicine
5. Forensic Medicine

Optional subject

6. Principles of Genetics, Molecular Biology and Bio Technology



Anatomy (08:60/120)

Learning Outcome:

1. Understand the basic principles of embryology including genetic inheritance and stages involved in development of the organs and systems from the time of conception till birth.
2. Identify the muscles and the relationship of individual muscles to each other in order to understand the human activities
3. Comprehend the normal position, inter-relationships, structure, functional and applied anatomy of the various visceral organs in the body.
4. Apply the anatomical knowledge in medical and surgical practice.

AS1101 Anatomy - I (3:15/60)

Introduction of Anatomy, Embryology, Upper Limb- Back of neck, scapular region and shoulder, Arm and cubital fossa, Forearm, The Hand, Joints of upper limb, Bones - Humerus, Femur, tibia and fibula, Front and medial side of thigh, Gluteal region and back of thigh, Hip joint, Popliteal fossa, Knee joint, Leg and, Foot, Muscles of the back Applied Anatomy

AS1201 Anatomy - II (3:30/30)

Thorax and abdomen

Surface Anatomy, Intercostal space, Pleura and lungs, Mediastinum, its divisions and contents, Heart and pericardium, Autonomic nerves. Anterior abdominal wall, Abdominal viscera, Kidney, Ureter, Suprarenal glands, Diaphragm and posterior abdominal wall, lumbar plexus, Aorta and its branches, Inferior vena cava, Autonomic nerves, Applied Anatomy

Pelvis

Arrangement of pelvic viscera and pelvic peritoneum in the female and male, Perineum, Anus, Scrotum, Testis, urogenital organs and other structures, Pelvic viscera, Ureter in the pelvis, Urinary bladder, Male - ductus deferens, prostate, seminal vesicle and Urethra, Female - uterus, broad ligament, fallopian tube, ovary, Vagina, Sigmoid colon, Rectum and anal canal, Pelvic wall Muscles, vascular and nervous supply, Applied Anatomy

Text Books:

1. Cunningham's Practical Anatomy, Romanes
2. Gray's Anatomy
3. Clinical Anatomy, Harold Ellis
4. Comprehensive Human Anatomy, K.K.Pandey

AS2101 Anatomy - III (2:15/30)

Head, Neck and Neuroanatomy

Scalp and face, Superficial structures in the neck, Parotid region, Skull bones, Cranial cavity, Orbit and their contents, Neck, Deep structures near base of

the skull, Root of the neck, Front of the neck, Pre vertebral region, Oral cavity, Nasal cavity, Pharynx, Larynx, Eye, Ear. The vertebral column and vertebral canal, Spinal cord, Brain stem, Medulla, Pons, Midbrain, Cerebellum, Cerebrum, Blood supply of the Brain, Ventricular system and flow of CSF, Cranial nerves, Clinical Anatomy

Text Books:

1. Cuninghams Practical Anatomy, Romanes
2. Gray's Anatomy
3. Clinical Anatomy, Harold Ellis
4. Comprehensive Human Anatomy, K.K.Pandey



Physiology (10:105/90)

Learnig Outcome:

1. Explain the normal function of all the organ systems of the body and their interactions.
2. Describe the contribution of each organ system to the maintenance of homeostasis.
3. Elucidate the physiological aspects of normal growth and development.
4. Apply physiological principles underlying pathogenesis and treatment of disease.

AS1102 Physiology - I (3:30/30)

Body fluids, Digestive, Respiratory and Urinary System (3:30/30)

Body fluid: Divisions, Percentage, Location, Mechanism of formation and exchange. Complication - Edema, Dehydration, Digestive system: Component of the balanced diet and their role. Digestion of Carbohydrates, Protein and Fat, Functions of Nose, Mechanism of Respiration, Exchange of Gases, Control of Breathing, Changes in respiration in high attitude, Hypoxia, Anoxia, Asphyxia, Cyanosis, Artificial respiration, Kidney - structure, blood supply and functions, Urine - normal and abnormal constituents, Oliguria, Anuria and Polyuria, Renin angiotensin mechanism, Clearance values

AS1202 Physiology - II (3:30/30)

Cardiovascular System and Haematology (1:15/00)

Structure and properties of Heart muscles, Cardiac potentials, E.C.G., Pressure in Heart and Vessels, Circulation, Heart sounds, Heart rate, Cardiac out put, Pulmonary circulation and other special regions, Capillaries and vascular responses of the skin. Blood composition, Functions, Red Blood Cells, Haemoglobin, White Blood Cells, Platelets, Anemia, Jaundice and Applied Haematology

Endocrine and Reproductive Systems (2:15/30)

Endocrine System: Hormones, functions, hyper secretion and hypo secretion of Hypothalamus, Pituitary gland, Thyroid gland, Adrenal gland, Pancreas, Reproductive system: Male and Female reproductive system

Text Books:

1. Text book of Physiology, Ganong
2. Illustrated Physiology, Mackenn Calland
3. Applied Physiology, S. Right

AS2102 Physiology - III (4: 45/30)

Nervous System and Special Sensory Organs (3:30/30)

Divisions, functions of Pyramidal pathway and lesions. Cerebral cortex areas, connections and functions, Extra pyramidal pathway, Cerebellum - functions, Spinal cord, Sensory pathway, Cranial nerves

Biochemistry (1:15/00)

The Cell, Biomolecules, Enzymes and Hormones, Glucose metabolism, Lipid metabolism, Protein metabolism, Electron transport chain and ATP synthesis, Integration of Metabolism, Haem metabolism and jaundice, Purine and pyrimidine metabolism, Diseases associated with lipid metabolism.

Text Books:

1. Text book of Physiology, Ganong
2. Illustrated Physiology, Mackenn Calland
3. Applied Physiology, S. Right
4. Biochemistry, Lippincott

Pathology (6:60/60)

Learning outcome:

1. Recognize the pattern, causes, mechanisms and effects of diseases and to co relate with Unani concepts
2. Recognize medical microbiology that is of particular significance in the field of clinical practice
3. Recommend appropriate pathological investigations and interpret their results

AS3103 Pathology -I (3:30/30)

General Pathology (1:15/00)

Acquired causes of Diseases, Hypoxic injury, Chemical injury, Physical injury, Immunological injury, Psychological injury, Degeneration, Cell Death, Necrosis Gangrene, Derangements of Body Fluids, Electrolytes and blood flow, Derangement in the volume of the circulating blood, Circulatory disturbances of obstructive nature Inflammations and Healing. Haematological Examination

Gastro Intestinal Tract, Urinary Tract, Immunopatho- physiology, and Neoplasm (2:15/30)

Gastrointestinal system, Nutritional deficiency, Congenital diseases, Oesophagitis, Chemical burns, Gastric inflammation, Gastric and Duodenal ulcer, Congenital abnormalities, Small intestinal inflammatory diseases, Large intestinal diseases,

Hepatitis, Cirrhosis, Portal hypertention, Jaundice, Gall bladder tumours, Gall stones, Pancreatitis, Splenomegaly Stool Examination

Urinary Tract: Glomerular nephritis, Nephrotic syndrome, Renal hypertension, Renal stones, Bladder stones, Tumours, Haematuria. Urine analysis, Immunophysiology and Immunopathology, Immunity, Immunodeficiency disorders, Hypersensitivity Diseases

Neoplasia, Atrophy, Hypertrophy, Hyperplasia, Metaplasia, Dysplasia, Promalignant Lesions, Characteristics of Tumors, Carcinogenesis

AS3203 Pathology - II (3: 30/30)

Cardio Respiratory and Nervous System (1:15/00)

Cardiovascular System: Hypertension, Atheroma, Thrombosis, Embolism, Aneurysm, Pulmonary hypertension, Portal hypertension, Senile heart diseases, Rheumatism, Ischaemic and congenital heart diseases. X-Ray, E.C.G

Respiratory diseases: Bronchitis, Bronchiectasis, Bronchial Asthma, Pneumonia, Tuberculosis, Abscess, Emphysema, Fibrosis, Pleurisy, Pyothorax, Pneumothorax, Hydrothorax, Haemothorax, Nervous System: Meningitis, Encephalitis, Neuritis, Hemiplegia, Paraplegia, Monoplegia, Cephalic and Spinal degenerative diseases, Tumours, Parkinsonism, Alzheimer's diseases, E.E.G, US image technology

Parasitology, Microbiology, Endocrinology, and Sexually Transmitted Diseases (2:15/30)

Parasitology: Protozoal, Malaria, Amoebiasis, Giardiasis, Leishmaniasis, Helminthes, Intestinal Nematodes, Identification of Parasites

Microbiology: Viruses, Viral infections, Sterilization and Disinfections, Identification of types of Bacteria

Endocrine Disorders: Diabetes mellitus, Diabetes insipidus, Hyper/Hypo thyroidism

Sexually Transmitted Diseases: Syphilis, AIDS, Gonorrhoea, Semen, Vaginal Secretions

Text Books:

1. General Pathology, F.T. Waltor & M.S Izrayal
2. Mur's Pathology
3. Pathology Andason
4. Pathology Illustrated - Govan/Macfarlane/Callander

Principles of Clinical Medicine (08:90/60)

Learning outcome:

1. Recognize aetiology, pathogenesis, classification, symptomatology and diagnosis of diseases to be handled frequently by Unani physicians in their clinical practice
2. Interpret the signs and symptoms and diagnose clinical conditions differentially
3. Able to refer when specialized therapeutic care is needed

AS4104 Principles of Clinical Medicine - I (4:45/30)

Cardiovascular disease

Presenting Problems in Cardiovascular Disease, Abnormal Heart Sounds and Murmurs, Atherosclerosis, Coronary Heart Disease, Vascular Disease, Diseases of the Heart Valves, Congenital Heart Disease, Diseases of the Myocardium and Diseases of the Pericardium

Neurological Disease

Presenting Problems in Nervous System Disease, Cerebrovascular Disease, Inflammatory Diseases, Degenerative Diseases, Infections of the Nervous System, Intracranial Mass Lesions and Raised Intracranial Pressure, Disorders of the Spine and Spinal Cord, and Diseases of Nerve and Muscle

Blood Disorders

Presenting Problems in Blood Disease, Anaemia, Haematological Malignancies, Myeloproliferative Disorders, Bleeding Disorders and Venous Thrombosis

Respiratory Disease

Presenting Problems in Respiratory Disease, Obstructive Pulmonary Diseases, Infections of the Respiratory System, Tumours of the Bronchus and Lung, Interstitial and Infiltrative Pulmonary Diseases, Pulmonary Vascular Disease, Diseases of the Nasopharynx, Larynx and Trachea, Diseases of the Pleura, Diaphragm and Chest Wall

Alimentary Tract and Pancreatic Disease

Presenting Problems in Gastrointestinal Disease, Diseases of the Oesophagus, Diseases of the Stomach and Duodenum, Diseases of the Small Intestine, Diseases of the Pancreas, Inflammatory Bowel Disease, Irritable Bowel Syndrome, Disorders of the Colon and Rectum, and Diseases of the Peritoneal Cavity

Liver and Biliary Tract Disease

Presenting Problems in Liver Disease, Chronic Liver Disease, Viral Hepatitis, Alcoholic Liver Disease, Non-Alcoholic Fatty Liver Disease, Inherited Liver Diseases, Autoimmune Liver Diseases, Vascular Liver Diseases, Tumours of the Liver, Gallstones, Cholecystitis, Choledocholithiasis, Tumours of the Gallbladder and Bile Duct

AS4204 Principles of Clinical Medicine - II (4:45/30)

Skin Disease

Presenting Problems in Skin Disease, Eczema, Psoriasis and other Erythematous Scaly Eruptions, Common Skin Infections and Infestations, Pressure Sores, Acne and Rosacea

Endocrine Disease

The Thyroid Gland, The Reproductive System, The Parathyroid Glands, The Adrenal Glands, Diabetes Mellitus, The Hypothalamus and The Pituitary Gland, Diseases Affecting Multiple Endocrine Glands

Kidney and Urinary Tract Disease

Presenting Problems in Renal and Urinary Tract Disease, Renal Vascular Diseases, Glomerular Diseases, Tubulo-Interstitial Diseases, Diseases of the

Collecting System and Ureters, Diseases of the Lower Genitourinary Tract, Diseases of The Prostate Gland, Tumours of the Kidney and Urinary Tract

Musculoskeletal Disorders

Presenting Problems in Musculoskeletal Disease, Osteoarthritis, Inflammatory Joint Disease

Fibromyalgia, Diseases of Bone, Systemic Connective Tissue Disease

Text Books:

1. Davidsons Principles and Practice of Medicine
2. Harrison's Internal Medicine
3. Cecil Text Book Medicine-Robin Reid, Fiona Roberts

Forensic Medicine (3:45/00)

Learning outcome:

1. Gained knowledge and conceptual understanding of areas of Forensic Medicine
2. Familiar with the role of the coroner, the circumstances in which death should be reported to the coroner, the role of the autopsy and the inquest.
3. Learn the importance of accurate certification of death and be familiar with the signs of violence and injury/trauma.
4. Acquire skills in establish the cause of death

AS4105 Forensic Medicine (2:30/00)

Introduction to medico legal system in Sri Lanka, Medical Councils of Sri Lanka, basic medical ethics, medical evidence, medical negligence, birth and death registration procedure in Sri Lanka.

Mechanical injuries, head injuries, injuries due to physical agents, firearm injuries, road traffic accidents, introduction to DNA technology and finger printing, death diagnosis, changes after death, estimation of time since death, certification of death, inquest.

AS4205 Forensic Medicine (1:15/00)

Child abuse, Infanticide, Sexual offences, Abortion, Asphyxia and drunkenness.

Text Books:

1. Sympton Forensic Medicine, Bernard Knight
2. Clinical Forensic Medicine, W.D.S. Maclay
3. Legal Aspect of Medical Practice, Bernard Knight

AS4106 Principles of Genetics, Molecular Biology and Bio Technology (2: 15/30) – (Optional Subject)

Mendelian Genetics: Gene segregation, Mendel's law. Linkage; Mutation: Mutagenes, Mutation types. Cytogenetics: numerical changes in chromosomes, structural changes in chromosomes, sex determination and sex linked inheritance, cell division, related diseases. Introduction to molecular genetics: neuleotides and nucleic acids, replication, transcription, gene regulation, recombinant DNA technology. DNA finger printing; DNA sequencing

Text Books:

1. Lehninger Principles of Biochemistry, Nelson and Cox
2. Genes III
3. Principles of Molecular Genetics and Biotechnology



23.3 Department of Ilmul Adviya (Department of Materia Medica)

1. Kulliyat e Adviya
2. Mufrad Advia (Single Drugs)
3. Dawa Sazi (Pharmacy)
4. Kushta Sazi (Mineralogy)

Optional Subjects

5. Nutrition and Food cum Medicine
6. Agro Techniques of Medicinal Plants
7. Industrial Drug Manufacture
8. Pharmacovigilance and Drug safety

Kulliyat e Adviya (6:60/60)

Learning outcome:

1. Apply properly the inherent concepts of Materia Medica in the understanding of the functions of the medicinal plants (*Mufrad Dawa*)
2. Identify, collect, store and use medicinal plants in accordance with the characteristics stated in Unani and Modern texts.
3. Possess knowledge on the basic chemical constituents of medicinal plants and correlate their pharmacological properties with the actions mentioned in Unani.

IA1101 Kulliyat e Adviya (3:30/30)

Introduction to *Ilmul Adviya*, Historical development of *Ilmul Adviya*, The importance and application of *Ilmul Adviya* in day to day life, Definition of *Dawa*, *Ghiza*, *Dawa e Ghiza* and *Ghiza e Dawa*, Differences between *Dawa e Summi* and *Summ e Mutlaq*, Principles and importance of *Badal* (Substitute), *Muzir* (Side effects) and *Muslih* (Corrective) *Tarkeeb e Adviya*, *Dawa ke Ajza e Tarkeeba*, (Different constituents of drugs), *Jauhar e Fial* (Active principles), *Dawa ki Taba'i Khusoosiyat* (Special properties of drugs), *Masalik e Adviya* (Routes of administration of drugs), *Ghair Ma'roof Adviya ke Asrat Ma'loom Karne ke Farai* : , *Qiyas Va Tajruba* (Ancient empirical methods of induction and experimentation for the assessment of medicinal effects of unknown drugs), *Mizaj e Adviya* (Temperament of drugs,

Darjat 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), Detail description of important Unani medical terminologies used in Unani system of medicine

Practicals

Morphological identification of medicinal plants, Detection of *Mizaj* and *Afaal* of medicinal plants, Herbarium sheets preparation, Educational tours to Herbal gardens and Herbarium

IA1201 Kulliyat e Adviya (3:30/30)

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 cultivation of medicinal plants, Principles of collection and preservation of raw drugs, Principles of standardization and quality control raw materials

Practicals

Morphological identification of medicinal plants, Basic training in the cultivation of medicinal plants, Educational tours to Herbal gardens and Herbarium

Text Books:

1. Kabeeruddeen, Makhzanul Mufradath
2. Najmul Gani, Khzainul Adviya
3. Ibn Sina, Al Qanoon Fit Tibb
4. Ziyaudddeen Abdullah Ibn Al Baitar, Aljamiu li Mufradat il Adviya val Aghziya Vol. I and II

Mufrad Advia (Single Drugs) (10:90/120)

Learning outcome:

1. Identify medicinal plants on the basis of their characteristics and apply accordingly.

2. Comprehend the pharmacological actions of medicinal plants on various systems of the body.
3. Develop skills in the application of single drugs in accordance with the Unani concept.

IA2102 Mufrid Adviya (Materia Medica) (4:45/30)

Introduction, Detail study of single drugs with following information, *Tibbi* Name of the plant, Botanical name, Natural order/Family, Synonyms - English, Tamil, Sinhalese, Arabic, Sanskrit, *Mahiyat* (Habitat), Parts used in medicine, *Mizaj* (Temperament), 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)

IA2202 Mufrid Adviya (Materia Medica) (06:60/60)

Mufrid Adviya (04:30/60)

Detail study of single drugs with following information, *Tibbi* Name of the plant, Botanical name, Natural order/Family, Synonyms - English, Tamil, Sinhalese, Arabic, Sanskrit, *Mahiyat* (Habitat), Parts used in medicine, *Mizaj* (Temperament), 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), Action and Indication of drugs, Important chemical constituents of medicinal plants, Basic experiments for actions of medicinal plants, Basic practical training of cultivation of medicinal plants

Practical

Identification of medicinal plants, Identification of crude drugs (different forms of drugs), Basic chemical analysis of medicinal plants, Practical demonstration at field visits to Botanical gardens

Pharmacology (1:15/00)

The principles and actions of chemical drugs, (Modern drugs) on different systems of the body, Importance of vitamins and minerals, Common medical emergencies, Therapeutic application of drugs on different diseased conditions, Therapeutic applications of drugs in Panchakarma, Efficacy of drugs, Identification of main

physical and chemical compounds contain in medicinal plants and their pharmacology, Fundamental of Pharmacology, Nomenclature of modern drugs, Pharmacokinetics, Pharmacodynamics, Toxicology, adverse drug reaction and drug interactions, Acute and chronic diseases and there complications and treatments, The legal aspects of drug regulation, The ethical aspects and responsibilities of therapy and experiments, Importance of vitamins, salt and iron in maintaining the health and in the prevention of diseases, Common emergencies

Text Books

1. Kabeeruddeen, Makhzanul Mufradath
2. Kabeeruddin, Kithabul e Adviya
3. Avicenna, Al Qanoon fit Tibb, Vol. II
4. Ziyauddin Abdullah Ibn Albaitar, Aljamiul mufradath ul Adviya Val Aghziya Vol. I and II

Dawa Sazi (Pharmacy) (08:60/120)

Learning outcome:

1. Develop skills in the preparation of compound medicines in accordance with the concept of Unani system of medicine, and modern technology.
2. Apply appropriate processing methods of purification or detoxification of poisonous drugs.
3. Develop skills in the application of compound Unani preparations with the due considerations to their indications, contraindications, side effects and dosage
4. Prepare compound medicines by using substitutes with due consideration to their cost, efficacy and safety in terms of Unani system of medicine.

IA3103 Dawa Sazi (Pharmacy) (4:30/60)

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 (*Advia ka Murakkab Karne ki 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 (*Dawaon ka 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

Practicals

Demonstration of selection of drugs, weighing methods and equipments used in Pharmacy Demonstration of *Tadbeer Karna* (Purification processes), *Makhsoos Adviya ka Safoof* (Preparation of Powders), Preparation of *Arq*, Preparation of *Joshanda* and *Kaisanda*, Preparation of *Sat*, *Murawwaq*, *Ma ul Asal*, Preparation of various kinds of *Safoof*, Preparation of *Hab*, Preparation of *Sharbat* and *Sikanjabeen*, Preparation of *Murabba* and *Gulqand*

IA3203 Dawa Sazi (Pharmacy) (4:30/60)

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

Practicals

Preparation of *Majoon*, Preparation of *Itrifal*, Preparation of *Jawarish*, Preparation of *Laoq*, Preparation of *Laboob*, Preparation of *Halwa*, Preparation of *Roghan*, Preparation of *Marham*, Pharmaceutical factory visits

Text Books

1. Hakim and Dr. Ghulam Jeelani Khan, Maghzanul Murakkabat Muallim Dawa Sazi

2. Hakim Kabeeruddeen, Bayaz e Kabeer
3. Government of India, National Formulary of Unani Medicine

Kushta Sazi (Mineralogy) (06:60/60)

Learning outcome:

1. Develop skills in the *Kushta* preparations in accordance with the concept of Unani system of medicine, and modern technology
2. Apply appropriate processing method of purification or detoxification of poisonous drugs
3. Develop skills in the application of compound Unani preparations containing *Ma'dani* and *Haiwani Adviya* with the due considerations to their indications, contraindications, side effects and dosage

IA3104 Kushta Sazi (Mineralogy) (03:30/30)

Introduction to the subject and relevant books on *Kushta*, Definition of *Kushta*, origin and development of *Ilmul Keemiya*, (Knowledge of chemistry), *sthilahat* used in *Kushta Sazi Equipments*, *Put*, *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*, Introduction to Ayurveda Rasa preparations, Detail study of *Ma'dani* and *Haiwani Adviya* with following information - Chemical Name, Minerological name, Synonyms, Purification, Method of preparation of compound preparations containing *Ma'dani* and *Haiwani Adviya*, *Miqdar e Khurak*, *Iste'mal e Afal e Khawas* and *Badraqa*, Side effects of *Kushta*

Practical

Identification of *Ma'dani* and *Haiwani Adviya*, Demonstration of equipments and utensils used in *Kushta* preparation, Preparation of *Gil e Hikmat*, Manipulation of *Jantar* involved in *Kushta* preparations, Purification of *Ma'dani* and *Haiwani Adviya*

IA3204 Kushta Sazi (Mineralogy) (03:30/30)

Detail study of *Ma'dani* and *Haiwani Adviya* with following information:

Chemical Name / Minerological name, Synonyms, Purification, Method of preparation of compound preparations containing *Ma'dani* and *Haiwani Adviya*, *Miqdar e Khurak*, *Iste'mal e Afal e Khawas* and *Badraq*, Side effects of *Kushta*

Practical

Purification of *Ma'dani* and *Haiwani Adviya*, Preparation of compound medicinal preparations containing *Ma'dani* and *Haiwani Adviya*

Text Books

1. Hakeem Gulam Mueenuddeen - Madhanul Akseer
2. Dr. S. Mahadihassan - Indian Al chemy
3. Dr. S. B. Vohora and Dr. S. Y. Khan - Animal origin drugs used in Unani medicine
4. Dr. K M Nadkarni - Indian Materia medica vol ii
5. Kabeeruddin, Makhzanul Murakkabat

Optional Subjects

IA2205 Nutrition and Food cum Medicine (2:30/00)

Learning outcome:

1. Identify the role of nutrients in human health nutritional issue and Unani concept of food and disease
2. Identify and describe new trends in functional food and nutraceuticals
3. Discuss how diets can help in specific diseases
4. Describe the nutritional care though the primary health care in Sri Lanka

Contents:

Introduction, Nutraceutical factor, Food and non-food sources of nutraceutical factors, Natural herbal medicine as Nutraceuticals and functional foods, Mechanism of action, Classifying nutraceutical factors based on chemical nature, Marketed preparation of nutritional supplements, Medical foods as nutritional supplements, Effectiveness and safety

Text Books

1. Handbook of Nutraceuticals and Functional foods; Wildman REC, Kelley M

2. Nutraceuticals and Functional Foods, Taylor & Francis
3. Handbook of Analysis of Active Compounds in Functional Foods Nollet LML, F,

IA2206 Agro Techniques of Medicinal Plants (2:15/30)

Learning outcome:

1. Gain knowledge in basic methods of cultivation, propagation and preservation of medicinal plants
2. Identify and describe new trends in agro techniques of plants

Contents:

Introduction, Causes of stress and failure in plants, Basic tissue culture techniques, Nursery management, Propagation methods, Planting and aftercare, Propagation guide to selected medicinal plants, Exposure in new Agro techniques of medicinal plants.

Text Books

1. Cultivation of Medicinal and Aromatic Crops, Farooqi AA, B.S. Sreeramu BS
2. Medicinal plants: utilisation and conservation Aavishkar, Trivedi PC,
3. Principles and Procedures of Plant Breeding. Chahal, G.S. and Gosal, S.S.

IA2207 Industrial Drug Manufacture (2:15/30)

Learning outcome:

1. Gain complete knowledge in good manufacturing of finished herbal products
2. Obtain exposition in large scale drug manufacturing industry

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

Text Books:

1. Michel F Aulton BPharm PhD FAAs MR pharma – The design and manufacture of medicine

2. Daan J.A Crommelin (editor), Robert D Sindelar (editor), Bernd meibohm – Pharmaceutical bio technology; Fundamentals and Application, 3rd Edition
3. Orient Longman publishers – Textbook of industrial pharmacy: Drug delivery system & cosmetic and Herbal drug technology

IA2208 Pharmacovigilance and Drug safety (2:30/00)

Learning outcome:

1. Understanding the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problems .
2. Describe and interpret drug safety issues and regulatory aspects and ethical and societal consideration of pharmacovigilance.

Contents:

Introduction, Risks of medical treatment, Terms commonly used in drug safety, Finding the risk of drugs, Reporting methods, International collaboration, Pharmacoenvironmentology, Pharmacovigilance of herbal Medicines

Text Books

1. WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems, World Health Organization, Geneva, 2004

23.4 Department of Tahaffuzi Va Samaji Tibb Va Ilmus Sumoom (Department of Preventive, Social Medicine and Toxicology)

1. Tahaffuzi Va Samaji Tibb
2. Research Methodology and Bio Statistics
3. Ilmus Sumoom / Toxicology

Optional Subjects

4. Natural Diet and Health
5. Herbal Beauty Culture
6. Medical Sociology
7. Drug Abuse Management



Tahaffuzi Va Samaji Tibb (7:75/60)

Learning outcome:

1. Identify the health care principles of healthy living prescribed in Unani classical texts with the modern methods in order to maintain the health
2. Identify common health problems at the individual, family and community levels
3. Identify the maternal and child health problems and advice on the family planning methods

TS3101 Tahaffuzi Va Samaji Tibb (3:30/30)

Introduction to the subject, *Tareekh e Hifzan e Sehat* / History of *Hifzan e Sehat*,

Various concepts of *Sehat* and *Hifzan Sehat* and signs of *Sehat*, Applied aspect of *Asbab e Sit e Zarooriya* in maintaining *Sehat*.

Hammam; Varieties and their effect on health.

Applied aspect of *Asbab e Ghair Zarooriya* in maintaining *Sehat*, *Al Bilad* / Geographical conditions and related matters, *Maholiyati Asrath* / Effects of environment, habitat, *Ilm e Mosamiyat* / Meteorological environment and *Mosam e Asarat Va Awarizat* / Seasonal effects and their complication, 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, *Ziyaae Fuziat* / 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 the various conditions of life and applied aspects in primary health care in infancy, childhood, adults, *Amraz e Kuhooliyat* / Geriatrics, *Al Ajnas* / Sex and related matters and *Umoor Muzadat Tabi'at* / factors antagonistic to nature and bodily health

TS3201 Tahaffuzi Va Samaji Tibb (4:45/30)

Hifzan Va Tarqee 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 special reference to tradition, faith, and culture as mentioned spiritually and medically, *Ilm e Vobayee*, concept of *Waba*, *Ta'dia*, *Asbab*, *Alamat* and *Hifz e Mataqaddam* of *Muta Addi Amraz* and *Hifz e Mataqaddam* of *Ghair e Muta Addi Amraz*.

Definition of Health and well being, methods available to measure health and well being, concept of disease causation and prevention, Health and Nutrition, Food components, Balanced diet, Nutritional deficiency diseases, Nutritional status, Determination of Nutritional status, Nutritional health problems and Food transmission diseases, Epidemiology, Prevention and control of communicable diseases and Immunization, Prevention and control of non-communicable diseases, Health promotion and health education and Social responsibilities of a doctor, Health care services in Sri Lanka, Maternal and child health services, Antenatal, natal, post natal services, Family planning, Infant nutrition, growth and development, School health services, Social health services and primary healthcare services, International organizations of health services, Medical entomology

Practical

1. Community based educational programme.
2. Health promotive Clinic: Measuring status of *Sehat*, Identifying the clinical manifestations and the prevention of Communicable and non-communicable diseases
3. Field Visits:
Water Resources Board; Labugama, Ambatale, Kalatuwawa, Port Health, Slaughter house, Maternal and child health care centers, National Institute of Health, Kalutara, Institutes connected to Family Health Bureau, waste disposal sites and Public Health Department; Colombo Municipal Council owned houses, toilets and farms

Text Books

1. Mazhar H. Shah, The General Principles of Avicenna's Canon of Medicine
2. J. E. Park, K. Park, Park's Text Book of Preventive and Social Medicine
3. Abu Bakkar Mohamed Bin Zakariya Razi, Al Havi fitTibb Volume 1 to 23

Research Methodology and Bio Statistics (02:30/00)

Learning Outcome:

1. Develop skills in relevant statistical softwares
2. Develop skills in the appropriate Research Methodology
3. Collect, analyze, interpret and present simple community and hospital based data

TS2102 Research Methodology and Bio Statistics - I (1:15/00)

Introduction to research methodology, selection of research topic, principles and methods of literary research, research methods and study design, data collecting techniques, research ethics, sampling techniques sample size and data analysis.

TS2202 Research Methodology and Bio Statistics - II (1: 15/00)

Mean, mode, median, SD, SE, basic statistics, central tendency and computer aid data analysis. Coding the data, prevalence, trends of co relation, introduction to medical statistics, effective proposal and report writing

Text Books

1. Martin bland – An introduction to Medical Statistics
2. Inderbir Singh – Elementary statistics for medical workers

Ilmus Sumoom / Toxicology (5:45/60)

Learning Outcome:

1. Identify the health risks related to toxicology
2. Understand the environmental and occupational health hazards
3. Provide the preliminary measures in intoxicated and venomated cases and refer to appropriate centers

TS4103 Ilmus Sumoom (3:30/30)

Evolution of Medicine towards Ilmus Sumoom, Concept of *Sum*, *Aqsam e Sum*, *Miqdar e Sum*, *Miqdar e Mumeet*, and *Arza e Mumeet*.

General management of poisoning, First aid measures and special management.

Sumoom Va Triyaq, *Thriyaq e Mufradha* and *Thriyaq e murakkaba*. *Moalejat e Ilmus Sumoom: Nabathi Zahar* and its *Alamat*, *Alamat e Tashkheesa*, *Miqdar e Mumeet*, *Miqda e Arza*, *Anjam Va Usool e Ilaj*. *Afiyoon*, *Bhang*, *Datura*, *Jamalgota*, *Kuchla*, *Bachnak*, *Foxglove*, *Madar*, *Seethraj*, *Ajwain*, *Bilawa*, *Yebrooj*, *Tambago*, *Muleem*, *Nerium odorem*, *Thevetia peruviana*, *Kafoor*, *Manihot utilisima*, *Adenia palmate* and *Rasasea group*.

Haiwani Zahar and its *Mikdar e Sum*, *Alamat*, *Alamat e Tasheesa*, *Miqdar e Mumeet*, *Miadar e Arza*, *Anjam Va Usool e Ilaj*, Poisonous snake, Domestic pets and dog, insect bites: scorpion, centipede, spider, wasp and marine animals.

Ma'dani Zahar and its *Miqdar e Sum*, *Alamat*, *Alamat e Tashkheesa*, *Miqdar e Mumeet*, *Miqdar e Arza*, *Anjam e Usool e Ilaj*, *Para*, *Sankiya*, *Surb*, *Tootiya*, Cadmium, Chromium, Aluminium, Zinc, Antimony, Phosphorous and Sulphur. Environmental Toxicology *Mufsidat e Pani*, *Hawa Va Mitti*

TS4203 Ilmus Sumoom (2:15/30) Prevention of poisoning

Occupational and industrial toxicology, Classification of chemicals, mode of entry,

Safe exposure level, health hazards, monitoring, Prevention and control of hazards, Chloroform, Ether, Phenol and Chloral hydrate, Acids: Carboic acid, Hydrochloric acid, Sulphuric acid, Nitric acids, Hydrocyanic acid, Citric acid, Acetic acid and Oxalic acids.

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

Alcohol: Ethyl alcohol, Methyl alcohol and Isopropyl alcohol

Drug abuse, drug addictions, drug habituation, classification, complications and drug withdrawal symptoms and measures for prevention, Food Toxicology, Food contaminants, Food Additives, Natural Toxins, Nutritional Hazards and Food borne Hazards / Microbiological origin, Laws and Legislations in Toxicology, Medico legal aspects and responsibilities in a case of poisoning

Practicals

1. Identification of *Nabathi zahar*, *Haiwani Zahar* Va *Ma'dani Zahar*
2. Demonstration on gastric lavage
3. Educational tours; National Zoological Garden, Traditional *Sarpavisha Vedakama* practicing places
4. 10 case studies should be made with the association of OPD / IPD of the Teaching Hospital of Ayurveda.

Text books

1. Kabeeruddin, Makhzanul Murakkabat
2. Arazani, Tib e Akbar
3. Henry Methew A, A H Lawson, Treatment of acute poisoning
4. Ibnu Sina Al Qanoon Fit tibb 5th book Vol 3

Optional Subjects

TS4204 Natural Diet and Health

Learning outcome:

1. Gain knowledge of traditional naturopathic nutritional approaches
2. Describe conservation methods of natural food preparing practices.

3. Ensure a comprehensive understanding of the naturopathic context of nutrition as a means to maintaining good health.
4. Develop the skills to advice on and modify diets appropriately in order to use food as a therapeutic tool.

Contents:

Theory of diet, Dietary practices, Principles of diet

Text books

1. Kitab fil Ghiza by Rabban Tabari
2. Kitab Aghzia tur marziya by Najibuddin samargandi
3. Houghton Mifflin Harcourt by Natural Health and Natural Medicine
4. Andrew Weil by Eating Well for Optimum Health

TS4205 Herbal Beauty Culture (2:15/30)

Learning Outcome:

1. Develop skills to obtain exposition in corporate sector.
2. To manage a self-owned parlour or to assist the employer in managing the parlour.
3. Learn about composition, function and preparation of different Herbal cosmetics

Content:

Analysis of one's assets and liabilities with reference to personality in elimination of the negative and accentuating of the positive beauty problems, Skin care – Basic steps for skin care routine, Care of hair, face, neck, back, hands and feet, Beauty with fruits and vegetables, Body shaping health care, Massage and reflexology

Text Book

Rashmi Sharma, Hearbal Beauty Care, 2nd edition

TS4206 Medical Sociology (2:30/00)

Learning Outcome:

1. Identify the influence of the social environment on health and illness.

2. Describe the prominent current theoretical perspectives in explaining the social distribution of health and well-being
3. Describe the social implications of advanced health care technology

Contents:

The distinction between health and illness, The role of social stress in health and well-being, The current state of the Sri Lankan health care system, The role of insurance in financing health care

Text Book

1. Weiss, Gregory L. and Lynne E. Lonnquist. 2006, The Sociology of Health, Healing, and Illness, 5th Edition.
2. John B. McKinlay and Sonja M. McKinlay, The Sociology of Health and Illness

TS4207 Drug Abuse Management (2:15/30)

Learning outcome:

1. To describe a method of searching for substance abuse related information on the WEB and the current patterns of use of Alcohol, Tobacco, Cocaine and other mood altering substances in our society
2. To describe the researched method of screening patients for tobacco alcohol and other drug abuse.
3. To describe methods for making viable referrals for specialized treatment and / or other community services for substance use disorders.

Contents:

Classification of addictive drugs, effects and characteristics, clinical features of poisoning, prevention and treatment of poisons, counseling, management of drug abuse and relevant law.

Text Books

1. Mim J. Landry – Understanding Drugs of abuse: The process of Addiction, Treatment and Recovery.
2. Robert T. Ammermann, Peggy J, Ott Ralph E, Tarter – Prevention and social impact of Drug and Alcohol Abuse .
3. Steve Sussman, Susan L. Ames – The Social Psychology of Drug Abuse.

23.5 Department of Moalejat (Department of Unani Clinical Medicine)

1. Usool e Tashkhees Va Sareeriyat
2. Kulliyat e Ilaj (Fundamentals of Treatment)
3. Moalejat (Unani Clinical Medicine)

Optional Subjects

4. Psychology and Counselling
5. Massage and Physical therapy
6. Panchakarma

Usool e Tashkhees Va Sareeriyat (Principles of Diagnosis) (7:60/90)

Learning outcome:

1. Analyze the patients' complaints based on Unani and modern fundamental principles.
2. Interact with the patients, gather the complaints, analyze and record them in an organized manner highlighting the Unani fundamentals as well.
3. Examine the patients by inspection, palpation, percussion, and auscultation and to suggest relevant laboratory tests for diagnosing the disease correlating the Unani basic principles.
4. Distinguish clinical and surgical conditions.

MJ3101 Usool e Tashkhees Va Sareeriyat - I (3:30/30)

Introduction to the subject, History taking, Basic introduction to general examination and commonly used instruments, *Ilmul 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), Significance of *Bole* (Urine), *Baraz* (Faeces), *Nabz* (Pulse), *Khoon* (Blood) and *Balgham* (Sputum) in diagnosis.

Kulliyat e Ilaj (Fundamentals of Treatment) (6:60/60)

Learning outcome:

1. Recognize the objectives of fundamentals of treatment
2. Formulate *Usool e Ilaj* (Principles of Treatment) and its mode of application in various diseases

MJ3102 Kulliyat e Ilaj (Fundamentals of Treatment) - I (3:30/30)***Anwa ul Ilaj (1:15/00)***

Fundamentals of treatments and the objectives, Factors to be observed in *Ilaj*, Classification of *Ilaj* and their descriptions, *Ilaj bil Taghziya* (Diet therapy), *Ilaj Bil Adviya* (Pharmaco therapy), *Ilaj Bil Tadbeer* (Regimental therapy), *Isthifaragh* (Evacuation) methods and their principles of application

Qawaneen ul Ilaj (2:15/30)

Qanoon e Nuzj (Coction), *Qanoon e Is'hal* (Principles of Inducing 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)

MJ3201 Usool e Tashkhees va Sareeriyat - II (4: 30/60)***Imtihaan e Mareez***

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

Text Books

1. Ibn Nafees, Kulliyat e Nafeesi
2. Ibn Rushd, Kitabul Kulliyat
3. Ibn Sina, Ilmul Amraz
4. Ali Ibn Abbas Al Majoosi, Kamilus Sana'ah
5. Hutchinson, Clinical methods
6. Bates Guide to Physical Examination
7. Macleod's Clinical Examination

MJ3202 Kulliyat e Ilaj (Fundamentals of Treatment) - II (4:30/60)

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 treatment) of common diseases, Introduction to other Indigenous and Traditional Therapy

Text Books

1. Ibn Nafees, *Kulliyat e Nafeesi*
2. Ibn Rushd, *Kitabul Kulliyat*
3. Ibn Sina, *Ilmul Amraz*
4. Ali Ibn Abbas Al Majoosi, *Kamilus Sana'ah*
5. Hakeem Kabiruddeen, *Bayaz e Kabeer*

Moalejat (Unani Clinical Medicine) (16:150/180)

Learning Outcome:

1. Examine patients according to Unani and modern concepts and recommend necessary investigations
2. Provide initial management for emergencies and refer to the relevant institutions
3. Diagnose medical disorders and emergencies based on Unani concepts
4. Plan management modalities and apply

MJ4103 Moalejat (Unani Clinical Medicine) - I (3:30/30)

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

MJ4203 Moalejat (Unani Clinical Medicine) - II (5:45/60)

Amraz e Dimagh Va A'sab (Diseases of Nervous System), *Amraz e Kulya Vo Masana* (Diseases of Urinary System), *Amraz e Jigar, Mirrara Vo Tihal* (Diseases of Liver and Biliary System and Spleen)

MJ5103 Moalejat (Unani Clinical Medicine) - III (3:30/30)

Hummiyat (Fevers), *Amraz e Qalb* (Diseases of Heart)

MJ5203 Moalejat (Unani Clinical Medicine) - IV (5:45/60)

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)

Text Books

1. Ibn Sina, Al Qanoon Fit Tibb
2. Abu Bakr Mohamed Ibn Zakariya Razi, Al Havi Fit Tibb
3. Al Majusi, Kamilus Sana'ah
4. Raban Tabari, Firdousul Hikmat

Optional Subjects

MJ4204 Psychology and Counselling (2:15/30)

Learning Outcome:

1. Summarize the basic skills needed to be a successful counselor
2. Identify the counseling skills a social worker needs.
3. Compare and contrast counseling techniques in diverse environments.
4. Apply the major counseling techniques.

Introduction to General Psychology, Developmental Psychology, Social Psychology, Psychology of Abnormal Behaviour Introduction to counseling, Code of Ethics, Counseling Techniques, Counseling Treatment Plan

Text Books

1. Mangal S.K (2004) An Introduction to psychology, 4th edition sterling publishers Pvt. Ltd India
2. Coleman C. James (1976) Abnormal psychology and modern life 5th edition Universal book corporation, USA
3. Shard S. Richard (2006) - Theories of Psychotherapy and counseling 3rd Edition, Thomson publication, USA
4. Dorothy Abeywickrama, (1983) Counseling skills 1st edition Lake House Publishers, Sri Lanka

MJ4205 Massage and Physical therapy (2:15/30)

Learning outcome:

1. Recognize the importance of procedure specified in the physical therapy to maintain the health and reverse the pathological process.

2. Apply appropriate intervention to suit the individual cases

Contents:

Massage Anatomy, Massage Physiology, Massage strokes, requirement of Massage therapy centre, Head massage therapy, Limbs massage therapy, Body front massage therapy, back massage therapy, baby massage therapy, pregnancy massage therapy, Aged massage therapy.

Introduction to Physical therapy, Paediatric physical therapy, Geriatrics physical therapy and Gynecological physical therapy. Musculo skeletal and Neurological physical therapy.

Text Books

1. Massage Therapy, Haris johari
2. Neurological Rehabilitation Optimizing Motor performance, Janet Carr and Roerta Shepherd

MJ4206 Panchakarma (2:15/30)

Learning outcome:

1. To recognize the principles of Panchakarma that could be applicable to various conditions.
2. To design intervention modalities to suit the individual cases

Contents:

Introduction on Panchakarma and its various concepts, Poorvakarma, Pradhanakarma, Paschat Karma. Snigdha Karma, Sweda Karma, Vamana Karma, Virechana karma, Vasti Karma (Niruha and Anuvasana), Nasya, Rakthamokshana, Kshudra Karma

Recommended Texts:

1. Vaidyaka Sarartha Sangraha, Kumarasinghe A.
2. Sinhala Yoga Rathnakaraya
3. Vatika Prakaranaya, Vaidyarathna S.S.T., Vaidyarathna M.T.S.
4. Cakradatta (English Translation), Sharma P.V.

23.6 Department of Deshiya Ilaj (Department of Traditional Medicine)

1. Deshiya Ilaj



Deshiya Ilaj (7:60/90)

Learning outcome:

1. Understand the traditional medical practices indigenous to Sri Lanka and Islamic cultural treatment modalities.
2. Develop skills in diagnosing the diseases based on the traditional methods and techniques.
3. Manufacture medicinal preparations using traditional methods and proper methods of applying the treatment modalities.

DI4101 Deshiya Ilaj (4:30/60)

Traditional primary health care knowledge will be imparted in the following Deshiya ilaj disciplines. Traditional treatment for Sarma Rogam Udaivu Murivu, Kattikal, Erikayam, Vatha Rogham, Paambuk Kadi Nayana Rogham and Traditional treatment for Siruvar NoihaI

Practical

Field visit to traditional physicians

DI4201 Deshiya Ilaj (3:30/30)

Traditional primary health care knowledge will be imparted in the following Deshiya ilaj disciplines

Traditional treatment for Mahapperu Maruththuwaamum, Pennoikal, Peenas rogham, Maandam, Visha vaithiyam, Puththunarchi Maruththuwaam, Waitrottam, Iraththam Kutthi eduthal, Manabi maruththuwaam, Noi thaduppu muraikal,

Practical

Clinical demonstration of treatments for various diseases at the Ayurvedic hospital, Methods of preparation of drugs

Text books

1. Tibbun nabavi-Ibnul Qayyim (English)
2. Sahih al Buhari – Book of Medicine
3. Sahih al Muslim – Book of Medicine
4. Nattu vaithiya sinthamani

23.7 Department of Amraz e Niswan, Qabalat Va Atfal (Department of Unani Gynecology, Obstetrics and Paediatrics)

1. Ilmul Atfal
2. Amraz e Niswan Va Qabalat (Unani Gynecology and Obstetrics)



Ilmul Atfal: (6:60/60)

Learning outcome:

1. Identify common pediatrics problems and compare and contrast the pathological changes based on Unani and modern medical systems
2. Record the detail history and recommend relevant investigations to arrive at diagnosis in order to design principles of treatment modalities
3. Guide the care givers to promote and maintain health during childhood

NQ5101 Ilmul Atfal (Unani Paediatrics) – I (3:30/30)

Amraz e Naumooladat (1:15 /00)

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*, *Ophtalmic Neonatarum*, *Khilqi Amraz* (Congenital abnormalities),

Ilmul Atfal – I (2:15/30)

Naqz e Taqziya. Amraz e Kulliya vo Tanasuliya (Diseases related to genito-urinary

tract); *Ilthihib e Gurda Va Masana, Ilthihib 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, Ilthihib e Lawzatain, Amraz e Qalb* (Diseases related to Cardio vascular system); *Marz e Qalb e Judari, Zof e Qalb*

Text Books

1. Ali Ibn Sina. Al Qanoon Fit Tibb
2. Al Razi, Al Hawi Fit Tibb

NQ5201 Ilmul Atfal (Unani Paediatrics) – II (3:30/30)

Ilmul Atfal - II (2:15/30)

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* (Preventive measures in Paediatrics)

Ilmul Atfal - III (Modern Paediatrics) (1:15/00)

Importance of child health, Perinatal / Neonatal / Infant mortality in Sri Lanka, New born, Examination of new born, Care of new born, Pre- term and small for date babies and their complications, Birth asphyxia and neonatal resuscitation, Neonatal jaundice and its complication Gastro Intestinal Tract: Acute gastro enteritis, Worm infestation, Chronic diarrhoea, Respiratory system: Upper and lower respiratory tract infections (viral/bacterial), Childhood tuberculosis, Bronchial asthma

Haematological disorders: Anaemia in childhood, Nutritional and Iron deficiency anaemia, Thalaseamia

Cardio Vascular Diseases: Congenital heart diseases, Heart failure in infancy and Childhood Rheumatic fever

Developmental Problems: Down's Syndrome, Cerebral palsy, Congenital Hypothyroidism

Identification of Pediatric Emergencies: Febrile convulsion, Epilepsy, Management of Fever

Diseases of the Urinary Tract : Urinary tract infection, Nephritis, Nephrotic syndrome

Text Books

1. Ali Ibn Sina. Al Qanoon Fit Tibb
2. Al Razi, Al Hawi Fit Tibb
3. O. P. Ghai, Essential Paediatrics

Amraz e Niswan Va Qabalat (Unani Gynecology and Obstetrics) (13:120/150)

NQ5102 Amraz e Niswan Va Qabalat (Unani Gynecology and Obstetrics - I (7: 60/90)

Learning outcome:

1. Evaluate the gynecological patient including history taking, physical examination, investigation and diagnosis
2. Perform common gynecological procedures competently
3. Manage gynecological problems with appropriate Unani treatment modalities and to refer when necessary



Amraz e Niswan Va Qabalat - I (2:15/30)

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)

Amraz e Niswan Va Qabalat - II (3:30/30)

Futurat e Haiz (Menstrual Disorders), *Amraz e Farj* (Diseases of Vulva), *Amraz e Mehbal* (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)

Amraz e Niswan Va Qabalat - III (2:15/30)

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), Paediatrics gynaecological problems

Text Books

1. Ibnu Sina, *Al Qanoon Fit Tibb*
2. Al Razi, *Al Hawi Fit Tibb* Volume IX
3. I. Jurjani, *Zaheer Khwarizamshahi* Volume II
4. D. C. Dutta, *Text book of Gynaecology*

NQ5202 Amraz e Niswan Va Qabalat (Unani Gynecology and Obstetrics) – I (6:60/60)

Learning outcome:

1. Record detailed obstetrical history and perform relevant physical examination
2. Handle normal labor and identify major deviation and refer cases to the relevant Institutions if required.
3. Manage common obstetrical problems through Unani methods and techniques

Amraze Niswan Va Qabalat – IV (2:15/30)

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

Amraze Niswan Va Qabalat - V **(Modern Gynecology and Obstetrics) (4: 45/30)**

Anatomy and Physiology of female reproductive system. Normal menstrual cycle, ovulation, placenta and umbilical cord, Reproductive embryology, Gametogenesis, fertilization and development of fetus, Antenatal care and identification of risk pregnancy, Diseases of pregnant mother, Abortion, ectopic pregnancy, antepartum haemorrhage, pre eclamptic toxemia, pregnancy induced hypertension, diabetic mellitus, Rh incompatibility, infections in pregnancy, heart diseases, mal presentation. Normal labor Physiology, stages, mechanism and management, Abnormal progress of labor, Fetal disorders – Distress, intra uterine growth retardation, intra uterine death, Normal and abnormal puerperium, current knowledge on instruments and investigation used in obstetrics contraceptive methods, gynaecological malignancies, sexually transmitted diseases, abortion, subfertility (male /female), current knowledge on instruments and investigation used in gynaecological practice

Text Books

1. Ibnu Sina, Al Qanoon Fit Tibb
2. Al Razi, Al Hawi Fit Tibb Volume IX
3. Hkm. Ajmal Kan, Ta'leemul Qabila
4. D. C. Dutta, Text book of Obstetrics

23.8 Department of Ilmul Jarahat (Department of Unani Surgery)

1. Ilmul Jarahat (Unani Surgery)
2. Amraz-e-Ain, Anf, Uzn, vo Halq
(ENT, Ophthalmology and Orthodontology)



Ilmul Jarahat (Unani Surgery) (08:75/90)

Learning outcome:

1. Diagnose and manage common surgical conditions according to Unani concept as well as modern science.
2. Identify the surgical conditions for referral.
3. Diagnose and perform operative procedures in minor surgical conditions.

IJ5101 Ilmul Jarahat (Unani Surgery) – I (4: 45/30)

Introduction, Definitions and Basic Principles of Ilmul Jarahat (4: 30/30)

Introduction, the origin, development and the present condition of Unani surgery and teachers of *Ilmul Jarahat*, text, documents, commentary, Humoral pathology in surgical conditions, Three stages of surgery: Pre operative, operative, and post operative management of patients, *Ilthihib/Varm* (inflammation) – *Mahaiyat*, *Asbab*, *Aqsam*, *Awarizat*, *Ilaj*, *Alamat vo Nishaniyat* and *Inthizam* (pathology, causes, classification, complications, treatment, clinical features and management) *Alamat vo Nishaniyat* and *Inthizam* (pathology, causes, classification, complications,

treatment, clinical features and management), Surgical conditions due to "*Garam Varm*" , "*Barid Varm*", *Varm-e-Maee*, *Varm-e-Reehi* and their management, *Jarahat* (Wound) and its management, *Qurooh* (Ulcer) and its management, *Nasoor/ Majri* (Fistula/sinus) and its Management, *Jiryan-ud-Dam* (Haemorrhage) and its management, *Sadma* (Shock) and its management, *Kharaq-ul-Naar vo Salaq* (Burns and scalds) and its management, *Umoomi Bayan*, *Aqsam*, *Alamat vo Nishaniyat*, *Awarizat* and *Inthizam of Kasoor*, *Khala vo Moonch* general description, types, symptoms and signs, complication and management of fracture, dislocation and sprain

Ilmul Jarahat - Modern (1:15/00)

Development of modern surgery, latest surgical invention and techniques and their advantage and disadvantage, acute traumatic wounds, ulcers, head injuries and shock (Examination and management), Examination and management of a sinus and fistula (External fistule, internal fistule, tuberculoses, sinus etc.), Examination and management of peripheral vascular disease and Raynoud's disease, Gas gangrene, Diabetic, dry gangrene, senile gangrene, Burger's diseases, infective gangrene, Examination and management of varicose veins (Venous thrombosis, hemorrhage, deep vein thrombosis, thrombophlebitis), Examination and management of disease related to lymphatic system (Lymphadenitis, Hodgkin' diseases, syphilis, lymph sarcoma, Tuberculosis, lymphoedema, Elephantiasis, Sarcoma, Carcinoma, Lymphoma, Leukemia), Disease of muscles, tendons and fascia (Tendinitis, traumatic Tendon disease, ganglion, Carpal tunnel syndrome, tennis, Elbow, Fibrocystic), Examination and management of disease related to bone and joints. (Traumatic bone and joints lesions, osteomyelitis, developmental disorders, nutritional metabolic and endocrinal disorders, Adhesion, Osteoporosis), Examination and management of head injuries Haemorrhage, Unconsciousness, Cerebral, contusion, Cerebral concussion Cerebral compression Injury to base of the skin brain, blood vessels and complication, Examination and management of disease related to hand and foot (Infections localized infections spreading infections, congenital and acquired deformities swelling and ulcers)

IJ5201 *Ilmul Jarahat (Unani Surgery) - II (4: 30/60)*

Ilmul Jarahat (Unani Surgery) (3:30/60)

Fataq (Hernia) and its management, *Amal-e-Kai* (cauterization) in surgical condition, *Hajamat* (Cupping) in surgical condition, *Fasd* (Venesection) in surgical

conditions, Jonk (Leech application) in surgical conditions, Bawaseer and its Management, *Inshiqaqul miq'ad* its Management, Anorectal abscess and other peri-anal conditions, Nasoor and its management, *Khuroojul miq'ad* its Management, *Sang-e-Gurda Vo Masana*, *Azm Guda-e-Mazi*, *Bol-ud-Dam*, *Qeel mae*, *Khatna*, *Qurookh-e-Meda vo Ama*, *Varm-e-Zaida*, *Sudda-e-Ama*, *Poda vo Sartan-e-Kabid*, *Hassathul Mirara*, *Varm-e-Mirara*, *Amraz-e-Urookh*, *Amraz-e-Ghudoodi*.

Ilmul Jarahat – Modern (1:15/00)

Examination and management of diseases related too chest, (Solid swelling, Traumatic conditions, swelling, Sinus, Empyema, Carcinoma, Embolism), Examination and management of disease related to breast (Traumatic conditions, Mastitis, abscess, Cysts, Tumors, Gynaecomastia), Examination and management of diseases related to abdomen (Acute abdomen injuries to abdomen acute appendicitis, Intestinal obstruction, cholecystitis, Pancreatitis, Diverticulities, Salphingitis Colitis, Abscess Exploration hemorrhage and torsion Colic's, ulcers, carcinomas and other chronic abdominal condition, Examination and management of diseases related to anal canal and rectum (Hemorrhoids, Fissure in ano, Abscess, Fistula in ano, sinuses, Prolaps, Structures, Carcinomas, Incontinence, Examination and management of diseases related to urinary case (Calculi, Polycystic kidney, Renal cysts, Hydronephrosis, Tuberculosis Renal tumors, Diseases, related to prostate.), Examination and management of diseases related to swelling in the Inguinal scrotal or grain region (Hernia, Hydrocele, Varicocele Funiculitis, Cysts and Tumors, congenital Abnormalities, Torsion Inflammatory and infective condition Haemotocele), Examination and management of disease related to male External genitalia (Sebaceous cysts, Elephantiasis, Phimosis, Syphilitic conditions, Chancroid, premalignant conditions tumors), Radiological examinations, Utilization of X-ray Scan etc. in diagnosis.

Text Books:

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

Amraz-e-Ain, Anf, Uzn, vo Halq (06:60:60) (ENT, Ophthalmology and Orthodontology)

Learning outcome:

1. Produce competent Unani graduates with the capabilities of diagnosis and management of disease related to Eye, Ear, Nose, and Throat and Oral cavity.
2. Impart modern scientific methods and materials related diseases of Eye, ENT and Oral cavity.
3. Manage ENT, Eye and Oral problems at the first level of case and be able to refer whenever necessary.

IJ5102 Amraz e Ain, Anf , Uzn va Halq – I (3:30/30) (ENT, Ophthalmology and Orthodontology)

Amras e Ain (1:15/00)

Introduction to the subject, *Ain ka Thashreeh vo Afal* – Anatomy of eye, clinical examination of the *Ain* (Eye), Minor injuries of the eye, *Amraz-e-Ajfan*, *Amraz-e-Multhahima*, *Amraz-e-Qarnia*, *Amraz-e-Anbia*, *Amraz-e-sulbiya*, *Amraz-e-Ruthubat-e-Jalidiya*, *Amraz-e-Ruthubat-e-Baiziya*, *Amraz-e-Basarat*, *Amraz-e-Shabkiya*,

Amraz-e-Uzn (Ear Disease), Amraz-e-Anf – Disease of the Nose (2:15/30)

Tashreeh-Vo-Afal-e-Uzn (Anatomy and Physiology of Ear), *Voja ul-Uzn*, *Varm-e-Gosh*, *Sailan-e-Uzn*, *Behrapen*, *Saql sama't*, *Sailan-e-peep*, *Taneen*, *Jsm ghareeb*, *Kanpeid*

Amraz-e-Anf (Disease of the Nose)

Thashreeh-vo-Afal-e-Anf (Anatomy and Physiology of Nose), *Fasad-e-sham*, *Nakseer*, *Khasham*, *Buzurul Anf*, *Ilthihib-e-Thajaveef-ul-Anf*, *Jism ghareeb* in nose

IJ5202 Amraz-e-Ain, Anf, Uzn Va Halq (ENT, Ophthalmology and Orthodontology – II (3:30/30)

Amraz-e-Halq – Disease of the Throat (2:15/30)

Suquthulahat, *Khunnaq*, *Varm e Halq*, *Inthibaq e mari*, *Bahaut e saut*, *Varm e Mari*, *Sarthan*

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

Amraz e Lisan, Varm e lisan, Fasad e zawk, Qila e lisan, Shiqaqul lisan, Hikkathul lisan, Luab ki kasarāt, Luknat, Azmul lisan, Amraz e Isnan, Voje ul Isnan, Thaharruk ul Isnan

Amraz-e-Ain, Anf, Uzn, vo Halq

(ENT, Ophthalmology and Orthodontology – Modern (1:15/00))

Eye diseases

Refractive Errors, Accommodation Anomalies, Conjunctivitis, Pterygium, Glaucoma, Strabismus (Squint), Corneal Ulcer, Corneal Opacities, Episcleritis, Scleritis. Staphyloma, Iridocyclitis, Pan Ophthalmitis, Cataract, Vascular Retinopathies. Retinal Detachment, Optic Neuritis, Papilloedema, Common Intra Ocular Tumours-Blepharitis, Hordeolum Externum, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis.

Ear diseases

Acute and Chronic Suppurative Otitis Media. Secretory Otitis Media. Otitis Externa, Furuncle, Otomycosis, Otagia, Tinnitus, Otosclerosis, Meniere's Disease, Deafness, Labyrinthitis Common Benign and Malignant Tumours of the Ear

Diseases of Nose

Diseases of External nose and Nasal Vestibule, Nasal Deformities, Congenital and Malignant Tumours. Furuncle / Boil, Stenosis and Atresia of the Nares, Nasal septum and its diseases, Deviated Nasal Septum, Acute and Chronic Rhinitis, Hypertrophic Rhinitis. Atrophic Rhinitis, Rhinitis Sicca, Allergic Rhinitis, Vasomotor and otherforms of Non-Allergic Rhinitis, Nasal polyps, Epistaxis, Common Neoplasms of Nasal Cavity, Acute and Chronic Sinusitis, Oro-Antral Fistula

Diseases of Throat

Pharyngitis, Adenoids, Tonsillitis, Abscesses in relation to Pharynx

Diseases of Oral Cavity

Periodontal Diseases, Gingivitis and Periodontitis, Pericoronitis
Odontogenic and Non-Odontogenic Tumours

Oral Cavity Carcinomas Common Types, Pre-Malignant conditions, Dental Caries, Dental Hard Tissue Disorders, Glossitis, Oral mucosal Lesions, Stomatitis

Text Books

1. Abul Cassim Zahravi, Al-Tashreef
2. Aminuddaula Abu Ibn AL-Quf Masihi, Kitabul Umda fil Jarahat
3. Abu Ali Ibn Sina, Al Qanoon fil Tibb
4. Diseases of the Nose, Throat and Ear 13th Edition, Simon Hall Bernard H. Colman
5. Lecture notes on Diseases of the Ear, Nose and Throat, 6th Edition. P. D. Bull
6. Diseases of the Eye 17th Edition, Stephen J.H. Miller