

New course approval MoU (Ph.D. unani)

Maulana Mohammed Ali Jauhar Marg, New Delhi-110025
جامیہ ملیہ اسلامیہ
(مرکزی ادارہ اسلامیہ دارالعلوم اسلامیہ)
مولانا محمد علی جاوہر مارج، نئی دہلی-110025

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Office of the Registrar

कुलसचिव कार्यालय


دفتر منشی

No. AC-4(104-A)/RO/2017

6th December, 2017

OFFICE ORDER

In order to ease administrative handling and successful implementation of MoU signed between CRIUM, Hyderabad and Jamia Millia Islamia, New Delhi, the Shaikh-ul-Jamia (Vice-Chancellor), JMI has been pleased to appoint Prof. Mohammad Husain, Deptt. of Biotechnology, JMI as 'Coordinator' for the Unani Medicine and Allied Sciences with immediate effect.



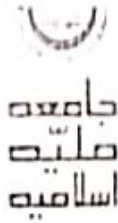
(A.P. Siddiqui), IPS
Registrar

Copy to:

1. Prof. Mohd. Husain, Deptt. of Biotechnology, JMI
2. The Dean, Faculty of Natural Sciences, JMI
3. The Head, Deptt. of Biotechnology, JMI
4. The Secretary to Vice-Chancellor, JMI

JAMIA MILIA ISLAMIA
Accredited by NMAC to 'A' Grade
IA Central University by an Act of Parliament
Madrassa Mohamud Ali Tahir Marg, New Delhi-110025
جامیاء میلیا اسلامیاء
(समर्थात प्रसिद्धिकासुवात केंद्रीय विश्वविद्यालय)
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No AC-13/(49)/2016

6th September, 2016

Dr. Mukesh Ranjan
Coordinator, International Relations
Jamia Millia Islamia
New Delhi - 110025

Sub: MoU signed between Jamia Millia Islamia, New Delhi and CRIUM, Hyderabad
-RCG.

Sir,

I am directed to enclose herewith a copy of the MoU signed between Jamia Millia Islamia, New Delhi and CRIUM, Hyderabad for your kind perusal and appropriate action.

Yours faithfully,


(M. Mazharul Haq Ansari)
Asstt Registrar (A&C)

Encl: As above.

Copy to:

1. The Controller of Examinations, JMI for perusal and appropriate action.
2. Prof. Mohammad Husam, Head, Deptt. of Biotechnology, JMI for information.
3. The Hony. Director, FTK CIT, JMI with request to upload it on Jamia's website.
4. The Section Officer (A&C) for placing it before next meeting of Academic Council.



THIS MEMORANDUM OF UNDERSTANDING IS SIGNED BETWEEN:

Jamia Millia Islamia (JMI), a Central University under an enactment of the Parliament of India (i.e. the Jamia Millia Islamia Act, 1988) and is a body corporate with a perpetual succession and a common seal (acting through its Registrar)

AND

The Central Council for Research in Unani Medicine (CCRUM) an apex research organization for research and development of Unani Medicine under the Ministry of AYUSH, Govt. of India. The Council was established with a view to aid, develop, conduct and coordinate multifaceted research activities in the field of Unani Medicine. The Council's Central Research Institute of Unani Medicine (CRIUM) located at Hyderabad is inter alia engaged in multifaceted research in various disciplines of Unani Medicine and as a Research Unit of CCRUM is responsible to carry out other activities in furtherance of the cause of promotion of Unani Medicine.

AND WHEREAS it is the statutory object of the JMI to disseminate and advance knowledge by providing instructional, research and extension facilities in such branches of learning as it may deem fit and it shall endeavor to provide to students and teachers the necessary atmosphere and facilities for the promotion of:

- (i) Innovations in education leading to restructuring of courses, new methods of teaching and learning.
- (ii) Studies in various disciplines
- (iii) Inter disciplinary/ allied studies.
- (iv) National integration, secularism and international understanding.

NOW THEREFORE JMI and CCRUM have intended, agreed and consented to following terms and deeds in pursuance of a common intent to promote and develop the study of MD, Ph.D in Unani Medicine at Central Research Institute of Unani Medicine (CRIUM), Hyderabad under the aegis of Faculty of Natural Sciences, JMI.

1. FIELD OF COOPERATION:

Following Ministry of Ayush, Government of India's endorsement to foster research in indigenous systems of medicines the CCRUM submitted a proposal to start M.D. and Ph.D programmes in specialties of Moalajat (General Medicine) and Ilmul Advia (Pharmacology) at Central Research Institute of Unani Medicine, Hyderabad in collaboration with Jamia Millia Islamia, New Delhi.

**DETAILS OF SUBJECTS REQUIRED FOR ONLINE EXAM FORMS: Even
SEM -2018**

(Fill separate form for each semester)

Name of the Department: Department of Biotechnology
Course Name: Pre-Ph.D. Course Work in Unani Medicine
Semester: One Semester Course
Whether CBCS structure followed: (Yes/No): No

Paper Details

S. No.	Paper Type Core/CBCS/ SEC/AECC	Paper Code	Title of Paper	Credit	Max. Marks (Internal Assessment)	Max. Marks (University Exam)
1	-	PMU-101	Research Methodology	4	25	75
2	-	PMU-102	Advia-Mualajat	4	25	75
3	-	PMU-103	Clinical & Experimental Medicine	4	25	75
4	-	PMU-104	Research Project, Review and Annotated Bibliography	4	25	75

Pre-Ph.D. Course Work (Unani)
Paper: Research Methodology

Code: PMU-101

Marks: 100

Unit-I (12 periods)

Principle and applications of various Chromatography techniques: Column chromatography, ion exchange, molecular exclusion, affinity chromatography, HPLC and GC; Principle of electrophoresis: agarose gels, polyacrylamide gels, native and SDS-PAGE; Centrifugation: principle, centripetal and centrifugal forces, rpm, g force; Theory and application of UV-visible spectrophotometry; NMR.

Unit-II (12 periods)

Principle and application of various forms of microscopy: bright-field microscopy, fluorescent, Electron microscopy-TEM and SEM; Immunoassays: Antigen-Antibody interactions, immunodiffusion, ELISA, immunofluorescence, Flow cytometry; Sterilization techniques in microbiology, liquid and solid media, serial dilutions, isolation of bacteria by streak plate and spread plate methods, pure culture, bacterial growth and enumeration techniques; Basics of mammalian cell culture and cell growth media.

Unit-III (12 periods)

Principle of Polymerase chain reaction: reverse, multiplex and real-time PCR; DNA sequencing methods, DNA and RNA extraction and quantification, plasmid isolation, mini and maxi preparations of plasmids, cDNA synthesis, modifying enzymes, restriction enzymes, cloning and expression vectors, ligation, bacterial transformation, Southern, Northern and Western blotting techniques; Molecular validation of herbs and herbal preparations using PCR, RAPD, RFLP and SCAR markers.

Unit-IV (12 periods)

Measures of variability- Range, Variance (mean deviation and standard deviation, standard error of mean); Testing of hypothesis: null hypothesis, types of errors, level of significance, Chi-square distribution, Chi-square test for independence and Goodness of fit, t-test, ANOVA; interpretation of P-value.

Computer application: word, excel and power point, paint and photoshop; Basic concept and application of Bioinformatics, Biological databases, Common biological databases for gene and protein; Sequence analysis: BLAST, FASTA, PSI-BLAST. Pairwise sequence alignments, Multiple sequence alignments, sequence patterns and profiles, motifs and domains, Primer design and T_m calculations, Plagiarism in research.

**Pre-Ph.D. Course work
(Advia-Mualajat)**

Code: PMU-102
Marks: 100

UNIT-1

(12 Lectures of 2 periods of 55 minutes)

- Adwiyati Tahqeeq mein Masadir-i Ilmul Adwiya ki Ahmiyat aur Unka Ijmali Ta'aruf (Unani Ahd se Hindi Ahd Tak)
- Kitabu'l Hashaish, Kitab al-Hwai fi'l Tibb, al-Qanoon fi'l Tibb, al-Adwiya al-Mufrada Abu al-Salt, Kitab al-Jami Ibn Baitar, Makhzan al-Adwiya
- Qarabadeen Ibn-i-Tilmiz, Dustur Bimaristani Ibn al-Bayan, Minhaj al-Dukkan, Qarabadeen Qadri, Ilajul Amraz

UNIT-2

(12 Lectures of 2 periods of 55 minutes)

- Concept of health and disease
- Concept of temperament, humours and faculties
- Tahqeeqi Maqala Nigari
- Mazmoon Nawisi ke Jadeed Ilmi Usool
- Concept of temperament of drugs and its relevance
- Role of Tajarba o Qiyas in Research and development of drugs.
- Shelf life of simple and compound drugs

UNIT-3

(12 Lectures of 2 periods of 55 minutes)

- Mu'alajati Tahqeeq mein Bunyadi Masadir ki Ahmiyat aur Unka Ijmali Ta'aruf (Unani Ahd se Hindi Ahd Tak)
- Kulliyat-e-Ilaj
- Principles of Matab
- Regimenal therapies

UNIT-4

(12 Lectures of 2 periods of 55 minutes)

- Fann-i Tarjama Nigari ka Ta'aruf o Tajziya
- Urdu Tibbi Tarjama Nigari ki Rawayat, Mu'asir Manzarnama ki Roshni mein uski Zaroorat o Ahmiyat, Tibbi Tarjama Nigari ke Ahmam Idaare aur mutarjimeen ka Ta'aruf
- Makhtoota Shanasi ya Mutala-i Makhtootat ke Ilmi o Fanni Adaab aur Muta'lliqa Mustalihat ki Tauzeeh o Tashreeh

Pre-Ph.D. Course work
(Clinical & Experimental Medicine)

Code: PMU-103

Marks: 100

UNIT-1

(01 Guest Teacher)

Clinical Studies

- Introduction of Clinical trials
 - Types (Observational/Cross-sectional/Interventional etc.)
 - Phases of Clinical Trials
 - Designing of Protocol
 - Calculation of sample size
 - Controls in Clinical trials
 - Randomization (Types)
 - Blinding (Types)
 - Testing of Hypothesis: Null and alternative hypothesis
 - Efficacy and safety
 - Pre and post end points

UNIT-2

(01 Guest Teacher)

- Human Ethical Issues:
 - Ethics Committee (Institutional/Independent Ethics Committee):Composition & Responsibilities
- Clinical Research guidelines; WHO, ICMR, OECD and AYUSH guidelines
- Regulatory affairs
- Pharmacovigilance
- Clinical Trial Registry
- IPR values

UNIT-3

(01 Guest Teacher)

Drug Standardization & Quality Control

- Collection and identification of raw material, storage etc

- Microscopic studies
 - Macroscopic studies
 - Chemical standardization
- Quantitative Chemical Tests.
- Acid value
 - Ester value
 - Peroxide value
 - Iodine value
 - Hydroxyl value
 - Saponification value

Qualitative Chemical Tests:

- Alkaloids
- Carbohydrates
- Glycosides Saponins Phenols Resins
- Esters
- Alcohol
- Acids
- Volatile oil
- Fats
- Fixed oils
- Passport data
- DNA fingerprinting, SCAR Markers

UNIT-4

(01 Guest Teacher)

Experimental/Preclinical Studies

- Animal Ethical Issues: CPCSEA and other guidelines
- Institutional Animal Ethical Committee: Composition & Responsibilities
- Toxicity Studies: Short term & Long term toxicity (acute, sub acute and chronic) studies
- Pharmacological Studies (Pharmacokinetics & Pharmacodynamics)
- In-vivo, Ex-vivo and In-vitro studies
- Regulatory issues