Competency-Based Dynamic Curriculum for MD/ MS Unani
(PRESCRIBED BY NCISM)
Semester II
Applied Basics of Ilmul Saidla
(Materia Medica, Pharmaceutics and Clinical Pharmacy)
(SUBJECT CODE : UNIPG-AB-IS)

(Applicable from 2024-25 batch, from the academic year 2024-25 onwards until further notification by NCISM)

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Preface

Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات is a vital discipline within the Unani system of medicine that encompasses the principles of drug formulation, processing, standardization, quality assurance, and pharmaceutical management. Rooted in classical Unani wisdom and aligned with modern pharmaceutical needs, this field plays a critical role in healthcare, industry, and education. The MD program in Ilmul Saidla wa Murakkabāt, launched in 2010, has evolved significantly in response to global demands, technological advancements, and the need for standardized, research-driven Unani formulations. The revised curriculum represents a thoughtful integration of classical knowledge with contemporary advancements in pharmaceutical sciences, aiming to produce professionals who are both tradition-rooted and innovation-ready.

This competency-based dynamic curriculum (CBDC) focuses on imparting core competencies through a structured semester-wise model, combining theory, practical training, and experiential learning. It introduces new modules like pharmaceutical advancements, Itriyat (perfumery), cosmetology, bioinformatics, artificial intelligence, and regulatory affairs, while reinforcing classical foundations such as Qiwa, Mizaj, and Tadbeer. The curriculum emphasizes translational education from maqasid-e-tib (objectives of medicine) to application, enabling students to explore standardization, experimental pharmacology, and industrial pharmacy practices. Field visits, industry internships, and research projects are incorporated to foster a deeper understanding of Unani drug development and commercialization.

This curriculum is designed to prepare students for diverse roles in academia, the pharmaceutical industry, research and development, public health, and entrepreneurship. It offers a comprehensive platform to develop skilled Unani pharmacy professionals who are competent in formulation, regulatory compliance, and evidence-based validation. By blending the strengths of classical Ilmul Saidla with modern scientific tools, this syllabus aspires to nurture graduates who will uphold the legacy of Unani medicine and contribute meaningfully to its global acceptance. The success of this initiative depends on collaborative efforts from educators, institutions, and policymakers to ensure its robust implementation and sustained relevance.

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Competency-Based Dynamic Curriculum for MD/ MS Unani
Applied Basics of Ilmul Saidla (UNIPG-AB-IS)

Summary & Credit Framework

Semester II

Module Number & Name	Credits	Notional Learning Hours	Maximum Marks of assessment of modules (Formative Assessment)
M 1. Ilmul Saidla wa Murakkabāt علم الصیدلہ ومرکبات	2	60	50
M 2. Applied Aspect of Classical Method and Equipment روایتی طریقے، آلات اور ان کا اطلاقی پہلو	3	90	75
M 3. 'Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation عمل تدبیر، تصفیہ اور ترکیب ادویہ کا عمومی واطلاقی پہلو	2	60	50
M 4. 'Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب	2	60	50
M 5. Unani Nutraceuticals یونانی اغذیہ	2	60	50
M 6. Ihrāq wa Taklīs احراق وتلھیس	2	60	50
M 7. Applied aspect of Murakkabat مرکبات کا عملی پہلو	3	90	75
	16	480	400

Credit frame work

UNIPG-AB-IS consists of 7 modules totaling 16 credits, which correspond to 480 Notional Learning Hours. Each credit comprises 30 hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Important Note: The User Manual MD/MS Unani is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic. In case of difficulty and questions regarding the curriculum, write to syllabus24uni@ncismindia.org.

Course Code and Name of Course

Course code	Name of Course
UNIPG-AB-IS	Applied Basics of Ilmul Saidla (Materia Medica, Pharmaceutics and Clinical Pharmacy)

Table 1 : Course learning outcomes and mapped Program learning outcomes

CO No	A1 Course learning Outcomes (CO) UNIPG-AB-IS At the end of the course UNIPG-AB-IS, the students should be able to	B1 Course learning Outcomes mapped with program learning outcomes.
CO1	Demonstrate advanced knowledge of principles and classical dosage forms of Unani pharmacy applying them in academia, industry, and pharmacy practice.	PO1,PO4,PO5,PO6,PO8
CO2	Acquire and utilize necessary skills and modern technology for drug processing, manufacturing, commercialization and optimization of Unani Drugs and Cosmetics exploring opportunities for entrepreneurship	PO1,PO4,PO6
CO3	Engage in research, product development, focusing on new dosage forms and innovative formulations, integrating traditional Unani knowledge with modern pharmaceutical technology.	PO1,PO4,PO5,PO7,PO8
CO4	Interpret and apply national and international regulatory frameworks, pharmacopoeias for Unani medicines, ensuring compliance in drug development, pharmaceutical industry, and marketing.	PO4,PO5,PO8
CO5	Develop SOPs and standardise Unani formulations using advanced techniques and establish methods for quality control (QC) and quality assurance (QA).	PO1,PO4,PO5,PO7,PO8
CO6	Conduct process validation and implement production management strategies for the manufacturing of Unani Drugs, ensuring sustainability and efficiency.	PO4,PO5,PO7,PO8
CO7	Contribute to the development of industry guidelines and protocols for Unani drugs manufacturing, aligning them with Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP).	PO5,PO8
CO8	Extrapolate the principles of pharmacovigilance and abreast with pharmacognostical, phytochemical evaluation and pre-clinical studies to assess safety and efficacy of Unani drugs.	PO1,PO4,PO5,PO7,PO8

Table 2 : Course contents (Modules- Credits and Notional Learning Hours)

2A Module Number	2B Module & units	2C Number of Credits	Notional Learning Hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
1	**M-1 Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات** This module offers an introduction to Ilmul Saidla wa Murakkabāt, providing a historical perspective, chronological development, and scope of the subject. It also includes a brief overview of classical Pharmacopoeias, authoritative texts, the National Formulary, and the Unani Pharmacopoeia of India. Additionally, the module covers the classification of Saidla and the terminologies of A'māl-i-Dawāsāzī. • **M1.U1** Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات 1.1.1 Introduction of Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات کا تعارف 1.1.2 Introduction تعارف 1.1.3 Historical Background and Chronological Development تاریخی پس منظر اور عہد بعہد پیش رفت 1.1.4 Scope of Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات کا دائرہ کار • **M1.U2** Classical Pharmacopoeias and Authoritative Books قدیم اور موجودہ مستند قرابادین اور معتبر کتابیں	2	10	20	30	60

	1.2.1 Introduction of Classical Pharmacopoeias and Authoritative Books قدیم اور موجودہ قرابادین اورمستند کتابوں کا تعارف 1.2.2 Overview of Kunnāsh, Bayād and Qarābādīn کناش ،بیاض اور قرابادین کا جائزہ 1.2.3 General description of Unani Pharmacopoeia of India (UPI) and National Formulary of Unani Medicine (NFUM) یونانی فارماکوپیا آف انڈیا اور نیشنل فارمولری آف یونانی میڈیسن کا تعارف 1.2.4 Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H) فارماکوپیا کمیشن برائے انڈین میڈیسن اینڈ ہومیوپیتھی • **M1.U3** Govt. E Portal گورنمنٹ ای پورٹل 1.3.1 Introduction of Govt. E Portal, and Govt.schemes regarding promotion of Unani Pharmaceutics, entreprenurship and Unani manufacturing unit / industry گورنمنٹ ای پورٹل، یونانی دواسازی کے فروغ ، کاروباری مواقع اور یونانی مینوفیکچرنگ یونٹ /صنعت کیلئے سرکاری اسکیم کا تعارف 1.3.2 Traditional Knowledge Digital Library (TKDL) ٹریڈیشنل نالج ڈیجیٹل لائبریری کا تعارف 1.3.3 Introduction of Shodhganga, Herbal / Unani drug data base شودھ گنگا، نباتی /یونانی ادویہ کے ڈیٹا بیس کا تعارف • **M1.U4** Classification of Ilmul Saidla علم الصیدلہ کی درجہ بندی					

	1.4.1 In-house pharmacy / Small Scale Manufacturing جزوی دواسازی / گھریلو دواسازی 1.4.2 Industrial Pharmacy / Large Scale Manufacturing عمومی دواسازی/ صنعتی دواسازی 1.4.3 Hospital Pharmcy ہسپتال فارمیسی 1.4.4 Clinical Pharmacy کلینکل فارمیسی 1.4.5 Community Pharmacy کمیونٹی فارمیسی • **M1.U5** A'māl-i-Dawāsāzī(Pharmaceutical Procedures) اعمال دواسازی 1.5.1 Introduction of A'māl-i-Dawāsāzī اعمال دواسازی کا تعارف 1.5.2 Principle and Applied aspects of pharmaceutical procedures. اعمال دواسازی کے اصول اور ان کا اطلاقی پہلو 1.5.3 Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb. ، تقطیع، تقشیر، دق ورض، سحق، نخل، تجفیف، تعصیر، تعریق یا تقطیر، تبخیر، تبلور، اقلاء، تصفیہ، ترویق، تصویل، ترشیح ارغاء، تحمیص، تدھین، تشویہ، تقلیہ، تحلیل، تصعید، تدخین، اطفاء، احراق، تکلیس، تحبیب، تخمیر، دھناب					
2	**M-2 Applied Aspect of Classical Method and Equipment روایتی طریقے،آلات اوران کااطلاقی پہلو** This module provides an applied aspect of classical distillation methods, drug and oil extraction techniques along with traditional apparatus. Additionally, it covers the applied aspects of Safūfsāzī(powdering), overview of particle sizes for dosage forms, and equipment for size reduction along with description of Qiwami Murakkabāt.	3	15	30	45	90

	• **M2.U1** Distillation and Sublimation تعریق وتصعید 2.1.1 General Principle, method of distillation and equipment تعریق کے عمومی اصول، طریقہ اور آلات 2.1.2 Introduction of Classical Distillation Apparatus روایتی آلاتِ تعریق کا تعارف 2.1.2.1 Qar'Anbīq قرع انبیق 2.1.2.2 Nal Bhabka, نل بھبکہ 2.1.2.3 Ta'rīq Lawlabī, تعریق لولبی 2.1.2. 4 Hammam Mā'iyya/Nāriyya حمام مائیہ/حمام ناریہ 2.1.2.5 Ta'rīq Habli / Garbh Jantar تعریق حبلی/ گربھ جنتر 2.1.3 Method of Rūh preparation روح کشید کرنا 2.1.4 General method of Sublimation and equipment جوہر حاصل کرنے کا عمومی طریقہ اور آلہ تصعید • **M2.U2** Classical Extraction methods روایتی طریقہ تعصیر 2.2.1 Introduction of classical Extraction methods: روایتی طریقہ تعصیر کا تعارف 2.2.2 Infusion, Decoction, Maceration, Percolation. تسریب، جوشاندہ، خیساندہ، ترشیح					

	2.2.3 ‘Uṣāra, Rubb, Satعصارہ، رُب، ست 2.2.4 ‘Amal-i-Ta‘sīr: Ta‘sīr -i-Musalsal عمل تعصیر، تعصیر مسلسل 2.2.5 Apparatus: Soxhlet Apparatus, Reflux method and Cold method • **M2.U3** Oil extraction Methods: روغن کشید کرنے کا طریقہ 2.3.1 Fixed oil- Decoction Method, Cold Expression, Hot Expression, Expeller روغن کثیف کی تخریج بذریعہ طبخ، بذریعہ تعصیر بارد و حار ، آئل اکسپلر 2.3.2 Essential Oil: Enfleurage, Extraction by Expression, Distillation, Clevenger apparatus روغن فراری کی تخریج بذریعہ گل کشی، بذریعہ تعصیر، تعریق و بذریعہ آلہ کلیونجر 2.3.3 Classical Apparatus: Patāl Jantar, Jaljantar, Nal Bhabka, Ta‘rīq Habli / Garbh Jantar, Damru Jantar روایتی آلات :پتال جنتر، جل جنتر، نل بھبکہ، تعریق حبلی یا گربھ جنتر، ڈمرو جنتر • **M2.U4** Applied aspects, methods and equipment used in Safūfsāzī سفوف سازی میں مستعمل آلات اور طریقہ کار کا اطلاقی پہلو 2.4.1 Applied aspects, methods and equipment used in Safūfsāzī سفوف سازی میں مستعمل آلات اور طریقہ کار کا اطلاقی پہلو 2.4.2 Introduction of Size Reduction Equipment آلات سفوف سازی کا تعارف 2.4.3 Types of Kharal, Sil Batta, Hawan Dasta, Grinder, Pulverizer کھرل کی قسمیں، سل بٹہ، ہاون دستہ، گرائنڈر، پلویرائزر					

	2.4.4 Safūfsāzī of following drugs: مندرجہ ذیل ادویہ کی سفوف سازی Mastagī, Za'farān, Marwārīd, Kuchla, Ushaq, Maghziyāt, Ābresham, Hajariyāt wa Jawahirāt مصطگی، زعفران، مروارید، کچلہ، اشق، مغزیات، آبریشم، حجریات وجواہرات 2.4.5 Grades of Safūf درجات سفوف • **M2.U5** Qiwāmi Madda, Qiwāmi Murakkab, قوامی مادہ، قوامی مرکب 2.5.1 Importance of Qiwāmi Murakkabat قوامی مرکبات کی اہمیت 2.5.2 Materials for the preparation of Qiwām قوامی مادے 2.5.3 Description of Qiwāmi Murakkbat and their types قوامی مرکبات اور ان کی اقسام کا بیان 2.5.4 Classical and Modern methods for the Assessment of Qiwām قوام کو جانچنے کے روایتی اور جدید طریقہ 2.5.5 Description of Brix برکس کا بیان 2.5.6 Grades of Qiwām according to different dosage form اشکال ادویہ کے مطابق قوام کے مختلف درجات					
3	**M-3 'Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation** عمل تدبیر، تصفیہ اور ترکیب ادویہ کا عمومی واطلاقی پہلو	2	10	20	30	60

	This module covers the aims, objectives, and analysis of *Amal-i-Tadbīr wa Tasfiya*, including the processing of crude drugs. It also explores the classification, principles of formulation and preparation of dosage forms, granulation, *habb wa qurs*, along with defects and remedial meseures. • **M3.U1** 'Amal -i-Tadbīr wa Tasfiya عمل تدبیر وتصفیہ 3.1.1 Aims and Objectives of Tadbīr, Tasfiya, and Gasl. تدبیر ، تصفیہ و غسل کے اغراض و مقاصد 3.1.2 General method of Tadbīr, Tasfiya and their effect on drugs تدبیر و تصفیہ کا عمومی طریقہ اور دواؤں پر ان کے اثرات کا جائزہ 3.1.3 Amal -i- Tadbīr of following drugs: مندرجہ ذیل ادویہ کا طریقہ تدبیر Afyūn, Kamūn, Adharāqī, Shangraf, Habb us Salātīn, Turbud, Ghāriqūn, Saqmūniyā, Kibrīt, Sammul Fār, Bābchī, Chāksū, Balādur افیون، کمون، اذاراقی، شنگرف، حب السلاطین، تربد، غاریقون، سقمونیا، کبریت، سم الفار، بابچی، چاکسو، بلادر 3.1.4 Amal -i- Tasfiya wa Ghasl of following drugs: مندرجہ ذیل ادویہ کا طریقہ تصفیہ وغسل Gandhak, Suhāga, Shorā, Sang-i-Jarāhat, Surma, Dar-i-Chikna, Chuna, Pāra, Elwa, Mome, Bahroza, Abrak, Muqil, Ravghan, Luk, Atyān گندھک، سہاگہ،شورہ، سنگ جراحت، سرمہ، دارچکنہ، چونا، پارہ، ایلوہ، موم، بہروزہ، ابرک، مقل، روغن، لک، اطیان					

	• **M3.U2** Classification, principle of formulation of dosage form اشکال ادویہ کی اقسام اور اصول ترکیب 3.2.1 Classification اقسام 3.2.2 An overview of Solid, Liquid, Semisolid and Gaseous dosage forms along with their principle of formulation. جامد، سیال، نیم جامد اور بخاری اشکال ادویہ کا عمومی جائزہ اور ان کی ترکیب تیاری کے اصول • **M3.U3** Method of preparation of dosage form: اشکال ادویہ کی ترکیب تیاری 3.3.1 Method of preparation of solid dosage form جامد اشکال ادویہ کی ترکیب تیاری 3.3.1.1 Habb, Qurs, Dharūr, Kuhal, Shiyāf, Ḥamūl, Firzaja حب ، قرص، ذرور، کحل، شیاف، حمول،فرزجہ 3.3.2 Prepartion method of semi solid dosage form نیم جامد اشکال ادویہ کی ترکیب تیاری 3.3.2.1 Ma'jūn, Iṭrīfal, Jawārish, Khamīra, La'ūq, Anoshdārū, Dawā' al-Misk, Labūb, Zar'ūnī, Barsha'shā', Gulqand معجون، اطریفل، جوارش، خمیرہ، لعوق، انوشدارو، دواء المسک، لبوب، زرعونی، برشعشاء، گلقند 3.3.2.2 Marham, Qayrūṭī, Ḍimād , Khiḍāb مرہم ، قیروطی، ضماد، خضاب 3.3.3 Preparation method of liquid dosage form سیال اشکال ادویہ کی ترکیب تیاری					

	3.3.3.1 Sharbat, Joshānda, Khīsānda, Zulāl, Sikanjabīn, Ḥalīb, Mazīj شربت، جوشاندہ، خیساندہ، زلال، سکنجبین، حلیب، مزیج 3.3.3.2 Ṭilā‘, Naṭūl, Ghasūl, Ābzan, Pāshoya طلاء، نطول، غسول، آبزن، پاشویہ 3.3.4 Preparation method of Gaseous dosage form بخاری اشکال ادویہ کی ترکیب تیاری 3.3.4.1 Inkibāb, Bakhūr, Shamūm, Lakhlakha انکباب، بخور، شموم، لخلخہ 3.3.5 Natural Excipient قدرتی تشکیلی مواد 3.3.6 Binders, Sweeteners, colourants, flavours and coating materials رابطات،اجزاء شکریہ، اجزاء لونیہ، اجزاء عطریہ اور مواد تورِیق 3.3.7 Ratio of Sweetener, colorant, flavours in Murakkabāt مرکبات میں اجزاء شکریہ، اجزاء لونیہ اوراجزاء عطریہ کا تناسب 3.3.8 Coating (‘Amal-i-Tawrīq) عمل تورِیق 3.3.9 Description of base of ointment, cream, lotion, Qayrūṭī, Ḍimād and Shiyāf مرہم، کریم ،لوشن، قیروطی، ضماد اور شیاف میں مستعمل اساس کا بیان					
4	**M-4 ‘Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب**	2	10	20	30	60

	The section on 'Amal-i-Takhmīr covers various process and preparation of fermented *d*osage form. It includes descriptions and preparation of some specific drugs also. • **M4.U1** 'Amal-i-Takhmīr عمل تخمیر 4.1.1 Introduction of Fermentation and Fermented Products عمل تخمیر اور اس سے تیار شدہ اشیاء کا تعارف 4.1.1.1 Nabīdh نبیذ 4.1.1.2 Dar Bahra دربہرہ 4.1.1.3 Khamr)شراب(خمر 4.1.1.4 Fuqqā فقاع 4.1.1.5 Sirka سرکہ 4.1.1.6 Ābkāma آبکامہ • **M4.U2** Preparation of some special drugs بعض مخصوص ادویہ کی نوعیت ترکیب 4.2.1 Preparation of some special drugs: بعض مخصوص ادویہ کی نوعیت ترکیب 4.2.1.1 Sindūr سیندور 4.2.1.2 Dārchikna دارچکنہ 4.2.1.3 Raskapūr رسکپور 4.2.1.4 Safeda Kāshgharī سفیدہ کاشغری					

	4.2.1.5 Zangār زنگار 4.2.1.6 Tūtia توتیا 4.2.1.7 Hīrā Kasīs ہیرا کسیس 4.2.1.8 Kajlī کجلی					
5	**M-5 Unani Nutraceuticals یونانی اغذیہ** This section provides an introduction and perspective of Unani nutraceuticals, including the classification of Ghidhā' Dawā'ī (medicinal foods) and Dawā' Ghidhāī (food-based medicines). It also explores the preparation of specialized diets. • **M5.U1** Unani Nutraceuticals یونانی مخصوص اغذیہ 5.1.1 Introduction and concept of Unani Nutraceutical. طب یونانی کی مخصوص غذائے دوائی کا تعارف اور تصور • **M5.U2** Ghidhā' Dawā'ī and Dawā'Ghidhāī غذاء دوائی اور دواء غذائی 5.2.1 Introduction of Ghidhā' Dawā'ī and Dawā'Ghidhāī غذاء دوائی اور دواء غذائی کا تعارف • **M5.U3** Preparation of Special diets مخصوص غذاؤں کی ترکیب تیاری 5.3.1 Preparation of some Special diets. مخصوص اغذیہ کی ترکیب تیاری 5.3.2 Mā'al-Sha'īr, Kashk al-Sha'īr, Mā'al-Laḥm, Mā' al-Rā'ib, Mā'al-'Asal, Mā'al-Uṣūl, Mā' al-Buzūr, Mā'al-Fawākih, Mā'al-Buqūl, Mā'al-Jubn, Panīr Māya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Qalya,. Ḥarīra, Khabīs ماء الشعیر، کشک الشعیر، ماء اللحم، ماء الرائب، ماء العسل، ماء الاصول، ماء البزور، ماء الفواکہ، ماء البقول، ماء الجبن، پنیر مایہ سکنجبین، اسفیداج، سکباج، مصوص، قلیہ، حریرہ، خبیص	2	10	20	30	60

6	**M-6 Ihrāq wa Taklīs احراق وتکلیس** This section covers the preparation and assessment of *Kushtajāt* with classical and modern method. The assessment involves classical and modern analytical methods of each *Kushtajāt* to evaluate its quality. • **M6.U1** Historical Background تاریخی پس منظر 6.1.1 Historical Background تاریخی پس منظر 6.1.2 Introduction, Aims, Objectives and Scope of Ihrāq wa Taklīs احراق وتکلیس کا تعارف، اغراض ومقاصد اور دائرہ کار 6.1.3 Drugs used for Kushtasāzī . کشتہ سازی میں مستعمل ادویہ 6.1.4 Metals, non-Metals, minerals and animals used in Kushta. کشتہ سازی میں مستعمل دھات، اپدھات، معدنیات اور حیوانات 6.1.5 Changes during the calcination process. عمل تکلیس کے دوران ہونے والے تغیرات • **M6.U2** Process of Calcination عمل تکلیس 6.2.1 Process of Calcinations عمل تکلیس کے مراحل 6.2.2 Principles اصول 6.2.3 General description عمومی ہدایات 6.2.4 Material used -Būta, Crucible, Gil-i-Hikmat, Kaprotī مستعمل اشیاء :بوتہ، کروسبل، گِل حکمت، کپڑوتی	2	10	20	30	60

	6.2.5 Method for Kushtasāzī کشتہ سازی کا طریقہ 6.2.6 Traditional روایتی 6.2.7 Muffle Furnace مفل فرنیس 6.2.8 Heating Grades in Calcination عمل تکلیس میں حرارت کی درجہ بندی 6.2.9 Type of put (Heat) پٹ کی اقسام • **M6.U3** Preparation of Kushtajāt کشتہ جات کی تیاری 6.3.1 Preparation of following Kushtajāt: Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, Hajrul Yahūd. درج ذیل کشتہ جات کی تیاری :فولاد، صدف، مرجان، قلعی، گودنتی، جست، نقرہ، خبث الحدید، پوست بیضہ مرغ، حجر الیہود • **M6.U4** Assessment of Kushtajāt کشتہ جات کا تجزیہ 6.4.1 Assessment of Kushtajāt 6.4.2 Classical methods 6.4.2.1 Thumb and Index Finger Test 6.4.2.2 Floating Test 6.4.2.3 Wall Stick Test 6.4.2.4 Loss of Metallic Lustre					

	6.4.3 Tests for specific Kushtajāt 6.4.4 Particle size analysis of Kushtajāt 6.4.5 Toxicity of Kushtajāt					
7	**M-7 Applied aspect of Murakkabat مرکبات کا عملی پہلو** This module covers general principle of mixing, formulation, temperament of Murakkabt and dose determination. Additionly, it also explores, prescription writing, interpretation, including duties and ethics for pharmacy professionals, alongwith posology and pharmacy management. • **M7.U1** Unani Formulation یونانی مرکبات 7.1.1 Need and Importance of Unani Murakkabāt یونانی مرکبات کی افادیت و اہمیت 7.1.2 Pre-requisite of of formulation and mixing ترکیب ادویہ سے پیشترابتدائی اعمال اور باہم ادویہ کی آمیزش کا طریقہ کار 7.1.3 Method to find out temperament and dose of Murakkabāt مرکبات کا مزاج اور مقدار خوراک کے تعین کا طریقہ 7.1.4 Factors affecting the Quality of finished products and their remedial mesures مرکبات کے معیار پر اثرانداز ہونے والے عوامل اور ان کا تدارک 7.1.5 General principle of weight, ratio and mixing of additives, excipients and preservative in preparation of Murakkabāt معین اجزاء، مواد تشکیل اور محافظ ادویہ کا وزن،تناسب اور ان کی آمیزش کے عمومی اصول اور طریقہ کار	3	15	30	45	90

	7.1.6 Prepartory method and mixing of precious stone, minerals, silver, gold foil, mushk, amber and zafran قیمتی حجریات ، معدنیات، ورق طلاء، ورق نقرہ، مشک، عنبراور زعفران کی مرکبات میں شمولیت کا طریقہ 7.1.7 Defects in Murakkabāt and their corrective measures قوامی مرکبات کے نقائص اور ان کی اصلاح • **M7.U2** Principle of Nuskha Nawesi (Prescription Writing) اصول نسخہ نویسی 7.2.1 Principle of Nuskha Nawesi (Prescription Writing) اصول نسخہ نویسی 7.2.2 Criteria for drug selection- انتخاب ادویہ کے اصول 7.2.3 Degree of Temperament درجات مزاج 7.2.4 Terminologies used in prescription نسخہ نویسی میں مستعمل اصطلاحات 7.2.5 Duties and Ethics for Pharmacy Professionals. فن صیدلہ کے ماہرین کے فرائض واخلاقیات 7.2.6 Management of Pharmacy صیدلیہ کا نظم ونسق • **M7.U3** Posology علم اوزان ادویہ 7.3.1 Posology علم اوزان ادویہ					

	7.3.2 Definition تعریف 7.3.3 Factors affecting Posology علم الاوزان پر اثر انداز ہونے والے عوامل 7.3.4 Dose Calculation based on age and weight عمر اور وزن کی بنیاد پر مقدارخوراک کا تعین 7.3.5 Selection of five Murakkabat for each system and their detailed description on the basis of their active constituents of ingredients 7.3.6 Storage and shelflife of Murakkabat مرکبات کی ذخیرہ اندوزی اور مدت تاثیر					
		16	80	160	240	480

Table 3 : Modules - Unit - Module Learning Objectives and Session Learning Objective- Notional Learning Hours- Domain-Level- TL Methods

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 1 : Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات						
Module Learning Objectives (At the end of the module, the students should be able to) Discuss the historical evolution, scope, and development of Ilmul Saidla wa Murakkabāt, including its classification, and the role of institutions like PCIM&H, TKDL, and government initiatives in promoting Unani pharmaceutics, entrepreneurship, authoritative texts, the National Formulary, and the Unani Pharmacopoeia of India. Illustrate the classification of Saidla, familiarize with the terminologies of A'māl-i-Dawāsāzī, and analyze the functions of various pharmacies, such as in-house, industrial, hospital, clinical, community, and mobile pharmacies, in Unani medicine. Explore the Govt. E-Portal and associated government schemes to understand their significance in the promotion of Unani pharmaceutics, entrepreneurship, and the development of Unani manufacturing units and industries.						
Unit 1 Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات 1.1.1 Introduction of Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات کا تعارف 1.1.2 Introduction تعارف 1.1.3 Historical Background and Chronological Development تاریخی پس منظر اور عہد بعہد پیش رفت						

1.1.4 Scope of Ilmul Saidla wa Murakkabāt

علم الصیدلہ و مرکبات کا دائرہ کار

References: 1,2,3,4,6,8,13,15,20,30,38,39,42,53,54,56,60

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe Historical Background and Scope of Ilmul Saidla wa Murakkabāt	2	Lecture	CK	Knows-how	L,L&PPT
CO1,CO2	Evaluate Chronological Development of Ilmul Saidla wa Murakkabāt	2	Practical1.1	PSY-SET	Shows-how	DIS,PrBL
CO1,CO2	Analyze the scope of Ilmul Saidla wa Murakkabāt.	4	Experiential - Learning1.1	CAN	Knows-how	FV,PER,PrBL

Unit 2 Classical Pharmacopoeias and Authoritative Books قدیم اور موجودہ مستند قرابادین اور معتبر کتابیں

1.2.1 Introduction of Classical Pharmacopoeias and Authoritative Books

قدیم اور موجودہ قرابادین اور مستند کتابوں کا تعارف

1.2.2 Overview of Kunnāsh, Bayād and Qarābādīn

کناش ،بیاض اور قرابادین کا جائزہ

1.2.3 General description of Unani Pharmacopoeia of India (UPI) and National Formulary of Unani Medicine (NFUM)

یونانی فارماکوپیا آف انڈیا اور نیشنل فارمولری آف یونانی میڈیسن کا تعارف

1.2.4 Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)

فارماکوپیا کمیشن برائے انڈین میڈیسن اینڈ ہومیوپیتھی

References: 1,2,3,4,5,6,7,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Introduce Classical Pharmacopoeias and Authortative Books	2	Lecture	CS	Knows-how	DIS,L,L& PPT
CO1,CO2	Illustrate Kunāsh, Bayād, Qarābādīn, Unani Pharmacopoeia of India (UPI) and National Formulary of Unani Medicine(NFUM)	4	Practical1.2	CC	Shows-how	DIS,PER
CO1,CO2,CO4	Describe Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)	6	Experiential - Learning1.2	CC	Knows-how	DIS,PER, TBL

Unit 3 Govt. E Portal گورنمنٹ ای پورٹل

1.3.1 Introduction of Govt. E Portal, and Govt.schemes regarding promotion of Unani Pharmaceutics, entreprenurship and Unani manufacturing unit / industry

گورنمنٹ ای پورٹل، یونانی دواسازی کے فروغ ، کاروباری مواقع اور یونانی مینوفیکچرنگ یونٹ /صنعت کیلئے سرکاری اسکیم کا تعارف

1.3.2 Traditional Knowledge Digital Library (TKDL)

ٹریڈیشنل نالج ڈیجیٹل لائبریری کا تعارف

1.3.3 Introduction of Shodhganga, Herbal / Unani drug data base

شودھ گنگا، نباتی /یونانی ادویہ کے ڈیٹا بیس کا تعارف

References: 1,4,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Describe Govt. E Portal, and Govt.schemes regarding promotion of Unani Pharmaceutics, entreprenurship and Unani manufacturing unit / industry	1	Lecture	CAP	Knows-how	L,L&PPT
CO1,CO2,CO4	Discuss about Traditional Knowledge Digital Library (TKDL)	4	Practical1.3	AFT-VAL	Shows-how	D,LS,ML

CO1,CO2,CO3	Illustrate Govt E. Portal: Shodhganga, Herbal / Unani drug data base	3	Experiential - Learning1.3	PSY-ADT	Does	D,DIS,ML ,PAL,SDL

Unit 4 Classification of Ilmul Saidla علم الصیدلہ کی درجہ بندی

1.4.1 In-house pharmacy / Small Scale Manufacturing

جزوی دواسازی / گھریلو دواسازی

1.4.2 Industrial Pharmacy / Large Scale Manufacturing

عمومی دواسازی/ صنعتی دواسازی

1.4.3 Hospital Pharmcy ہسپتال فارمیسی

1.4.4 Clinical Pharmacy کلینکل فارمیسی

1.4.5 Community Pharmacy کمیونٹی فارمیسی

References: 1,2,4,6,15

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Classify the Pharmacy: Classical : (In-house and industrial / large-scale)	2	Lecture	CC	Knows-how	L,L&PPT
CO1,CO2,CO3	Expound with Definition, Functions, Objectives Hospital Pharmacy, Clinical Pharmacy and Community Pharmacy	4	Practical1.4	PSY-SET	Shows-how	DIS,ML,PER
CO1,CO2,CO3	Choose location and organize management of Hospital Pharmacy	3	Experiential - Learning1.4	AFT-REC	Does	FC,ML,PER,PrBL

Unit 5 A'māl-i-Dawāsāzī(Pharmaceutical Procedures) اعمال دواسازی

1.5.1 Introduction of A'māl-i-Dawāsāzī اعمال دواسازی کا تعارف

1.5.2 Principle and Applied aspects of pharmaceutical procedures.

اعمال دواسازی کے اصول اور ان کا اطلاقی پہلو

1.5.3 Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb.

تقطیع، تقشیر، دق ورض، سحق، نخل، تجفیف، تعصیر، تعریق یا تقطیر، تبخیر، تبلور، اقلاء، تصفیہ، ترویق، تصویل، ترشیح، ارغاء، تحمیص، تدھین، تشویہ، تقلیہ، تحلیل، تصعید، تدخین، اطفاء، احراق، تکلیس، تحبیب، تخمیر، دھناب

References: 1,2,3,4,5,6,7,8,15,18,56

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO4,CO5	Define A'māl-i-Dawāsāzī.Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb.	3	Lecture	CK	Knows-how	L,L&PPT
CO1,CO2,CO3,CO4,CO5	Discuss principles and applied aspects of pharmaceutical procedures	6	Practical1.5	CAN	Shows-how	DIS,PT,PER
CO1,CO2,CO3,CO4,CO5	Demonstrate Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb.	10	Experiential - Learning1.5	PSY-SET	Does	DL,DIS,FV,PER

Practical Training Activity

Practical 1.1 : Chronological Development of Ilmul Saidla wa Murakkabāt

(Total duration of Activity: 2 hours)

The teacher will present the chronological development of *Ilmul Saidla wa Murakkabāt* using classical texts and reference books. This will be delivered through a PowerPoint presentation or an interactive discussion, highlighting key milestones and contributors in the field.(1 hour)
The teacher will guide students to analyze classical literature and extract relevant information. Students will create a flowchart or timeline and compile an assignment that demonstrates the chronological progression of *Ilmul Saidla wa Murakkabāt*.(1 hour)

Practical 1.2 : Kunāsh, Bayād, Qarābādīn, Unani Pharmacopoeia of India (UPI) and National Formulary of Unani Medicine(NFUM)

(Total duration of Activity: 4 hours)

The teacher will provide an overview of *Kunāsh*, *Bayāḍ*, *Qarābādīn*, the *Unani Pharmacopoeia of India (UPI)*, and the *National Formulary of Unani Medicine (NFUM)*. Emphasis will be placed on their historical context, regulatory importance, and relevance in Unani practice. This will be followed by a guided group discussion focusing on the structure, content, and applications of these texts.(2 hours)
Students will explore these classical and regulatory texts through PowerPoint-supported discussions and a hands-on group assignment. Each group will compare and contrast key aspects of the texts and present their findings to the class. The session will conclude with a Q&A segment to foster critical thinking and active engagement.(2 hours)

Practical 1.3 : Traditional Knowledge Digital Library (TKDL)

(Total duration of Activity: 4 hours)

The teacher will introduce the concept of the *Traditional Knowledge Digital Library (TKDL)* through an engaging presentation, followed by an interactive discussion or a guided assignment briefing. The session will cover the objectives, structure, and importance of TKDL in preserving traditional medicinal knowledge and safeguarding intellectual property rights. (2 hours)
The teacher will facilitate student exploration of TKDL's role in the context of traditional medicine and modern intellectual property frameworks. Students will be guided to research and analyze key aspects of TKDL and will complete an assignment that demonstrates their understanding of its significance, structure, and application in Unani and other traditional systems. (2 hours)

Practical 1.4 : Definition, Functions, Objectives Hospital Pharmacy, Clinical Pharmacy and Community Pharmacy

(Total duration of Activity:4 hours)

The teacher will facilitate an interactive session using a Power Point presentation, group discussion, or mobile learning to explain the definition, functions, and objectives of Hospital Pharmacy, Clinical Pharmacy, and Community Pharmacy. Following the discussion, (2 hours) students will actively engage in learning by conducting surveys, preparing reports, creating charts, or developing assignments and presentations on the given topics.(2 hours)

Practical 1.5 : Principles and applied aspects of pharmaceutical procedures

(Total duration of Activity: 6 hours)

The teacher will introduce the principles and applied aspects of pharmaceutical procedures through a combination of practical demonstrations, hands-on training with instruments, and interactive lectures supported by video clips and presentations.(2 hours)

Students will actively engage in performing various pharmaceutical processes under guided supervision, ensuring they gain firsthand experience in applying theoretical knowledge to practical tasks. Through direct participation, they will develop essential skills in handling instruments, executing procedures, and understanding the critical parameters involved in pharmaceutical manufacturing and quality control.(4 hours)

Experiential learning Activity

Experiential-Learning 1.1 : Scope of Ilmul Saidla wa Murakkabāt

(Total duration of Activity: 4 hours)

Students will explore the scope of *Ilmul Saidla wa Murakkabāt* by designing field surveys, identifying target locations and selecting relevant case studies for analysis.(1 hour)
Students will independently conduct surveys and collect data on formulation demand, regulatory aspects, and therapeutic applications in Unani pharmacy. They will analyze their findings and present them through Power Point presentations, group discussions, or written assignments.(3 hours)

Experiential-Learning 1.2 : Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)

(Total duration of Activity: 6 hours)

Students will initiate exploring the role and significance of the *Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)*. Through interactive discussions, case studies, and engagement with expert opinions, they will investigate its influence on standardization, quality control, and regulatory practices in Unani pharmacy. (2 hours)
Students will conduct in-depth research on PCIM&H, including expert interviews and field-based inquiry. They will analyze its impact on Unani formulations, focusing on pharmacopoeial standards, certification procedures, and industry challenges. Findings will be shared through presentations, group discussions, or written assignments. (4 hours)

Experiential-Learning 1.3 : Govt E. Portal: Shodhganga, Herbal / Unani drug data base

(Total duration of Activity: 3 hours)

Students will be introduced to government e-portals such as *Shodhganga* and the *Herbal/Unani Drug Database*. They will learn how to navigate these platforms through hands-on exploration, focusing on their use for research and evidence-based learning in Unani pharmacy. (2 hour)
Students will independently explore the e-portals to analyze available research and extract relevant data on Unani drugs. They will present their findings through video clips, PowerPoint presentations, or group discussions, highlighting the role of digital resources in promoting innovation and academic growth in Unani medicine. (1 hour)

Experiential-Learning 1.4 : Location and organize management of Hospital Pharmacy

(Total duration of Activity: 3 hours)

The students will engage by exploring the selection of hospital pharmacy locations and management strategies through real-world case studies, problem-based learning (PBL), and interactive discussions. They will analyze hospital layouts, regulatory requirements, and workflow optimization in Unani pharmacy settings. (1 hours)
The students will conduct surveys in healthcare facilities to identify suitable locations for hospital pharmacies and evaluate existing operational models. They will develop management strategies by assessing inventory systems, patient counseling setups, and staff coordination. Their findings will be presented through PowerPoint presentations, flipped classroom formats, or mobile learning modules. (2 hours)

Experiential-Learning 1.5 : Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb.

(Total duration of Activity:10 hours)

Students will begin by engaging in observational visits to pharmaceutical units, participating in expert interactions, and exploring multimedia-based learning materials. Through these experiences, they will gain exposure to both traditional and modern pharmaceutical techniques used in *Ilmul Saidla*, supported by real-world applications, case studies, and historical context. (2 hours) Students will explore a wide range of pharmaceutical processes such as *Taqṭī'*, *Taqshīr*, *Daqq wa Radd*, *Saḥq*, *Nakhl, Tajfīf, Ta'ṣīr, Ta'nīq/Taqṭīr, Tabkhīr, Tabalwur, Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣʿīd, Tadkhīn, Itfā, Iḥrāq, Takliṣ, Taḥbīb, Takhmīr, and Dhanā.* They will observe these techniques in manufacturing setups, engage with industry professionals, and study detailed video demonstrations to understand their practical application in Unani pharmacy. (6 hours) Students will document their observations and insights in the form of Power Point presentations, written reports, or group discussions. They will reflect on the relevance and evolution of these pharmaceutical processes, demonstrating their understanding of how traditional methods are integrated or adapted within modern Unani pharmaceutical practice. (2 hours)

Modular Assessment

Assessment method	Hour
The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Practical Viva-25 marks Project work: 25 marks Or SAQ- 10 marks Presentation done during Experiential learning-15 marks Practical Viva-25 marks Or Any practical in converted form can be taken for assessment.-25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-25 marks	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 2 : Applied Aspect of Classical Method and Equipment روایتی طریقے،آلات اوران کاطلاقی پہلو						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the applied aspects of classical distillation methods, sublimation, and extraction techniques, including the principles, methods, and apparatus for drug, oil, and essence extraction. Explore the applied methods and equipment for Safūfsāzī (powdering) including traditional tools and modern grinders, along with Safūfsāzī grades and the preparation of specific drugs. Analyze the importance and assessment of Qiwāmi Maddah and Qiwāmi Murakkabat, their types, classical and modern evaluation techniques, including Brix, and the grades of Qiwām according to dosage forms.						
Unit 1 Distillation and Sublimation تعریق وتصعید 2.1.1 General Principle, method of distillation and equipment تعریق کے عمومی اصول، طریقہ اور آلات 2.1.2 Introduction of Classical Distillation Apparatus روایتی آلاتِ تعریق کا تعارف 2.1.2.1 Qar'Anbīq قرع انبیق 2.1.2.2 Nal Bhabka,نل بھبکہ						

2.1.2.3 Ta‘rīq Lawlabī,تعریق لولبی

2.1.2. 4 Hammam Mā’iyya/Nāriyya حمام مائیہ/حمام ناریہ

2.1.2.5 Ta‘rīq Habli / Garbh Jantar تعریق حبلی/ گربھ جنتر

2.1.3 Method of Rūh preparation روح کشید کرنا

2.1.4 General method of Sublimation and equipment

جوہر حاصل کرنے کا عمومی طریقہ اور آلہ تصعید

References: 1,2,3,4,5,6,7,8,15,18,20,29,30,31,38,46

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe Classical Distillation Apparatus: Qar‘Anbīq, Nal Bhabka, Ta‘rīq Lawlabī, Hammam Mā’iyya/Nāriyya, Ta‘rīq Habli / Garbh Jantar	2	Lecture	CC	Knows-how	L,L&PPT
CO1,CO2	Demostrate Classical Distillation Apparatus: Qar‘Anbīq, Nal Bhabka, Ta‘rīq Lawlabī, Hammām Mā’iyya/Nāriyya, Ta‘rīq Habli / Garbh Jantar	6	Practical2.1	PSY-GUD	Shows-how	D-M,FC,L&PPT
CO1,CO2,CO3	Prepare Rūh and Jawhar	7	Experiential-Learning2.1	PSY-ADT	Does	DIS,PL,PER,PrBL

Unit 2 Classical Extraction methods روایتی طریقہ تعصیر

2.2.1 Introduction of classical Extraction methods:

روایتی طریقہ تعصیر کا تعارف

2.2.2 Infusion, Decoction, Maceration, Percolation.

تسریب، جوشاندہ، خیساندہ، ترشیح

2.2.3 ‘Uṣāra, Rubb, Satt عصارہ، رُب، ست

2.2.4 ‘Amal-i-Ta‘sīr: Ta‘sīr -i-Musalsal عمل تعصیر، تعصیر مسلسل

2.2.5 Apparatus: Soxhlet Apparatus, Reflux method and Cold method

References: 1,2,3,4,6,7,8,13,15,30,54,57

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO5	Describe Classical Extraction methods: Infusion, Decoction, Maceration, Percolation, ‘Uṣāra, Rubb, Satt, ‘Amal-i-Ta‘sīr: Ta‘sīr -i-Musalsal	5	Lecture	CC	Knows-how	L&PPT ,L_VC,ML
CO1,CO2,CO3	Demonstrate Infusion, Decoction, Maceration, Percolation, ‘Uṣāra, Rubb, Satt, ‘Amal-i-Ta‘sīr, Ta‘sīr -i-Musalsal	8	Practical2.2	PSY-GUD	Shows-how	D,L&PPT ,L_VC,ML,PT
CO1,CO2,CO4	Demonstrate Soxhlet Apparatus, Reflux method and Cold method of extraction	8	Experiential-Learning2.2	PSY-SET	Does	D,D-M,L&PPT ,L_VC,ML

Unit 3 Oil extraction Methods: روغن کشید کرنے کا طریقہ

2.3.1 Fixed oil- Decoction Method, Cold Expression, Hot Expression, Expeller

روغن کثیف کی تخریج بذریعہ طبخ، بذریعہ تعصیر بارد و حار ، آئل اکسپلر

2.3.2 Essential Oil: Enfleurage, Extraction by Expression, Distillation, Clevenger apparatus

روغن فراری کی تخریج بذریعہ گل کشی، بذریعہ تعصیر، تعریق و بذریعہ آلہ کلیونجر

2.3.3 Classical Apparatus: Patāl Jantar, Jaljantar, Nal Bhabka, Ta‘rīq Habli / Garbh Jantar, Damru Jantar

روایتی آلات :پتال جنتر، جل جنتر، نل بھبکہ، تعریق حبلی یا گربھ جنتر، ڈمرو جنتر

References: 1,2,3,4,6,7,8,31,32,38,39,54

3A	3B	3C	3D	3E	3F	3G

CO1,CO2	Describe fixed oils, essential oils, and their extraction methods	2	Lecture	CC	Knows-how	L,L&PPT ,TUT
CO1,CO2,CO4	Demonstrate the extraction methods of fixed oils, such as the decoction method, cold expression, hot expression, and expeller, and essential oils, such as enfleurage, extraction by expression, distillation, and using the Clevenger apparatus	6	Practical2.3	PSY-GUD	Shows-how	DL,ML,PT,PER
CO1,CO2,CO4	Illustrate classical apparatus for oil extraction such as Patāl Jantar, Jaljantar, Nal Bhabka, Ta'rīq Habli / Garbh Jantar, and Damru Jantar	8	Experiential-Learning2.3	PSY-ADT	Does	D,FV,ML,PER

Unit 4 Applied aspects, methods and equipment used in Safūfsāzī سفوف سازی میں مستعمل آلات اور طریقہ کار کا اطلاقی پہلو

2.4.1 Applied aspects, methods and equipment used in Safūfsāzī
سفوف سازی میں مستعمل آلات اور طریقہ کار کا اطلاقی پہلو

2.4.2 Introduction of Size Reduction Equipment

آلات سفوف سازی کا تعارف

2.4.3 Types of Kharal, Sil Batta, Hawan Dasta, Grinder, Pulverizer

کھرل کی قسمیں، سل بٹہ، ہاون دستہ، گرائنڈر، پلویرائزر

2.4.4 Safūfsāzī of following drugs:

مندرجہ ذیل ادویہ کی سفوف سازی

Mastagī, Za'farān, Marwārīd, Kuchla, Ushaq, Maghziyāt, Ābresham, Hajariyāt wa Jawahirāt

مصطگی، زعفران، مروارید، کچلہ، اشق، مغزیات، آبریشم، حجریات وجواہرات

2.4.5 Grades of Safūf درجات سفوف

References: 1,2,3,4,6,7,8

3A	3B	3C	3D	3E	3F	3G

CO1,CO2	Describe applied aspect of Classical methods used in Safūfsāzī: Mastagī, Za'farān, Marwārīd, Kuchla, Ushaq, Maghziyāt, Ābresham, Hajariyāt wa Jawahirāt	4	Lecture	CAP	Knows-how	L,L&PPT
CO1,CO2,CO3	Determine the grades of Safūf	6	Practical2.4	PSY-GUD	Shows-how	D,ML,PT,PER
CO1,CO2,CO4	Demonstrate size reduction equipment such as types of Kharal, Sil Batta, Hawan Dasta, Grinder, and Pulverizer	10	Experiential-Learning2.4	PSY-ADT	Does	D,DIS,FV,ML,PER

Unit 5 Qiwāmi Madda, Qiwāmi Murakkab, قوامی مادہ، قوامی مرکب

2.5.1 Importance of Qiwāmi Murakkabat

قوامی مرکبات کی اہمیت

2.5.2 Materials for the preparation of Qiwāmقوامی مادے

2.5.3 Description of Qiwāmi Murakkbat and their types

قوامی مرکبات اور ان کی اقسام کا بیان

2.5.4 Classical and Modern methods for the Assessment of Qiwām

قوام کو جانچنے کے روایتی اور جدید طریقہ

2.5.5 Description of Brixبرکس کا بیان

2.5.6 Grades of Qiwām according to different dosage form

اشکال ادویہ کے مطابق قوام کے مختلف درجات

References: 1,2,3,4,6,7,8,9,39

3A	3B	3C	3D	3E	3F	3G

CO1,CO2	Describe Qiwām, materials used for the preparation of Qiwām, and Qiwāmi Murakkab.	2	Lecture	CC	Knows-how	L,L&PPT ,L_VC
CO1,CO2	Demonstrate Brix and grades of Qiwām according to different dosage forms	4	Practical2.5	PSY-GUD	Shows-how	DL,FC,PER
CO1,CO2	Describe the assessment of Qiwām	6	Experiential-Learning2.5	PSY-SET	Does	D,ML,PER

Practical Training Activity

Practical 2.1 : Classical Distillation Apparatus

(Total duration of Activity: 6 hours)

The teacher will initiate the session by introducing the structural components, historical context, and working principles of classical distillation apparatuses, including *Qar'Anbīq*, *Nal Bhabka*, *Ta'ṅīq Lawlabī*, *Hammām Mā'iyya/Nāriyya*, and *Ta'ṅīq Habli / Garbh Jantar*. Visual presentations and live demonstrations will be used to explain the design and function of each apparatus within the scope of Unani pharmacy. (4 hours)
The teacher will supervise hands-on training sessions where students will assemble and operate the classical distillation setups. Throughout the process, the teacher will guide students in observing functionality, identifying operational challenges, and understanding the comparative efficiency of different distillation methods. Students will document their observations and participate in group discussions to reinforce conceptual and practical understanding under the instructor's guidance. (2 hours)

Practical 2.2 : Infusion, Decoction, Maceration, Percolation, 'Uṣāra, Rubb, Satt, 'Amal-i-Ta'sīr, Ta'sīr -i-Musalsal

(Total duration of Activity: 8 hours)

The teacher will introduce the concepts of Infusion, Decoction, Maceration, Percolation, 'Uṣāra, Rubb, Satt, and 'Amal-i-Ta'sīr, Ta'sīr-i-Musalsal through an interactive session using PPT presentations, video clips, live demonstrations, and practical explanations.(3 hours)

Students will actively participate by preparing Infusion, Decoction, Maceration, Percolation, 'Uṣāra, Rubb, and Satt under guided supervision. They will observe, document, and analyze each process, noting variations in extraction methods and their effects on the final product.(5 hours)

Practical 2.3 : Extraction methods of fixed oils

(Total duration of Activity: 6 hours)

The teacher will facilitate hands-on training in the Ilmul Saidla Lab to help students understand the extraction methods of fixed oils and essential oils. They will guide students through practical exercises involving techniques such as decoction, cold expression, hot expression, and expeller method for fixed oils, as well as enfleurage, expression, distillation, and use of the Clevenger apparatus for essential oils. (3 hours)

To reinforce learning, the teacher will provide demonstrations, video clips, PPTs, and mobile-based resources. Students will be encouraged to perform each extraction method, record observations, and compare the yield and quality of oils obtained through different techniques. (3 hours)

Practical 2.4 : Grades of Safūf.

(Total duration of Activity: 6 hours)

The teacher will facilitate hands-on training to help students determine the grades of Safūf by guiding them through the observation and analysis of various samples. Practical demonstrations will be supported by video clips, PPTs, mobile learning resources, and live presentations to reinforce key concepts. (2 hours)

The teacher will engage students in the classification and assessment of Safūf grades based on defined characteristics. Learning will be conducted through interactive and experiential methods to ensure deep understanding and active participation. (4 hours)

Practical 2.5 : Brix and grades of Qiwām according to different dosage forms

(Total duration of Activity: 4 hours)

The teacher will facilitate hands-on training to help students understand Brix and the grades of Qiwām across various dosage forms. They will guide students through practical demonstrations in the Ilmul Saidla Lab, where students will observe, measure, and analyze Brix levels using laboratory equipment. (2 hours)

The teacher will further encourage collaborative learning as students compare variations in Qiwām grades, record observations, and engage in discussions. Interactive methods such as video clips, PPTs, mobile learning, and flipped classroom techniques will be used to enhance understanding. (2 hours)

Experiential learning Activity

Experiential-Learning 2.1 : Rūh and Jawhar

(Total duration of Activity: 7 hours)

Students will engage on *Rūh* and *Jawhar* by conducting historical analysis, reviewing classical Unani texts, and exploring relevant case studies. They will interact with experts and examine industry perspectives to understand the significance, preparation methods, and therapeutic applications of these formulations. (3 hours)
Students will research traditional and modern approaches to *Rūh* and *Jawhar* by surveying pharmacies, pharmaceutical industries, and academic institutions. They will analyze formulation techniques and collect real-world insights through expert interviews. Findings will be presented through PowerPoint presentations, group discussions, or assignments, linking theoretical knowledge with practical applications in Unani pharmacy. (4 hours)

Experiential-Learning 2.2 : Soxhlet Apparatus, Reflux method and Cold method of extraction

(Total duration of Activity: 8 hours)

Students will analyze the principles, applications, and comparative advantages of the Soxhlet apparatus, reflux method, and cold method of extraction through collaborative discussions, multimedia content, and interactive demonstrations. (3 hours)

They will describe these methods using PPTs, video clips, model-based demonstrations, and group activities. Real-world applications will be explored through mobile learning and expert interactions, with students presenting their comparative insights through presentations or assignments. (5 hours)

Experiential-Learning 2.3 : Classical apparatus for oil extraction

(Total duration of Activity: 8 hours)

Students will explore traditional Unani oil extraction tools such as Patāl Jantar, Jaljantar, Nal Bhabka, Ta'rīq Habli / Garbh Jantar, and Damru Jantar using multimedia resources, expert talks, and historical case studies. They will analyze the significance, working principles, and evolution of these apparatuses in Unani pharmacy. (3 hours)

Through PPTs, video clips, live demonstrations, and mobile-based learning, students will engage in discussions, compare traditional and modern extraction techniques, and present their insights on the relevance of these classical methods in present-day pharmaceutical practices. (5 hours)

Experiential-Learning 2.4 : Size reduction equipment

(Total duration of Activity: 10 hours)

Students will explore various size reduction tools such as Kharal, Sil Batta, Hawan Dasta, Grinder, and Pulverizer through interactive discussions and multimedia resources. They will investigate the historical context, working principles, and practical applications of these tools in Unani pharmacy. (4 hours)

Students will further analyze video clips, presentations, and mobile-based content related to these tools. They will engage in group discussions, share insights, and present comparative analyses highlighting the efficiency and suitability of different equipment in pharmaceutical formulations. (6 hours)

Experiential-Learning 2.5 : Assessment of Qiwām

(Total duration of Activity: 6 hours)

Students will explore the significance of Qiwām by studying historical texts, analyzing current industry standards, and interacting with Unani experts. They will engage in discussions comparing traditional and modern assessment methods, fostering critical thinking. (2 hours)

Students will then conduct field surveys in pharmacies, interact with Unani practitioners, and review classical formulations to assess Qiwām. They will observe and analyze variations in consistency, stability, and therapeutic efficacy, presenting their findings through presentations, discussions, or reflective assignments. (4 hours)

Modular Assessment

Assessment method	**Hour**

The assessment will be for 75 marks . Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Assessment will be based on the presentation-25 marks Practical Viva-25 marks Project work: 25 marks or SAQ: 5 questions (1 question from each unit)-25 marks Presentation done during Experiential learning-50 marks or Any practical in converted form can be taken for assessment-25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-50 marks	6

A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 3 : 'Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation عمل تدبیر، تصفیہ اور ترکیب ادویہ کا عمومی و اطلاقی پہلو						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the aims, objectives, and general methods of 'Amal-i-Tadbīr wa Tasfiya along with their effects on crude drugs. Analyze the classification and principles of formulation for dosage forms, including solid, liquid, semisolid, and gaseous forms. Illustrate the applied aspects of natural excipients, and coating materials, as well as the base formulations for ointment, cream, lotion, and other dosage forms.						
Unit 1 'Amal -i-Tadbīr wa Tasfiya عمل تدبیر و تصفیہ 3.1.1 Aims and Objectives of Tadbīr, Tasfiya, and Gasl. تدبیر ، تصفیہ و غسل کے اغراض و مقاصد 3.1.2 General method of Tadbīr, Tasfiya and their effect on drugs تدبیر و تصفیہ کا عمومی طریقہ اور دواؤں پر ان کے اثرات کا جائزہ 3.1.3 Amal -i- Tadbīr of following drugs: مندرجہ ذیل ادویہ کا طریقہ تدبیر Afyūn, Kamūn, Adharāqī, Shangraf, Habb us Salātīn, Turbud, Ghāriqūn, Saqmūniyā, Kibrīt, Sammul Fār, Bābchī, Chāksū, Balādur						

افیون، کمون، اذارافی، شنلرف، حب السلاطین، تربد، غاریقون، سقمونیا، کبریت، سم الفار، بانچی، چاکسو، بلادر

3.1.4 Amal -i- Tasfiya wa Ghasl of following drugs:

مندرجہ ذیل ادویہ کا طریقہ تصفیہ وغسل

Gandhak, Suhāga, Shorā, Sang-i-Jarāhat, Surma, Dar-i-Chikna, Chuna, Pāra, Elwa, Mome, Bahroza, Abrak, Muqil, Ravghan, Luk, Atyān

گندھک، سہاگہ،شورہ، سنگ جراحت، سرمہ، دارچکنہ، چونا، پارہ، ایلوہ، موم، بہروزہ، ابرک، مقل، روغن، لک، اطیان

References: 1,2,3,4,5,6,7,8,13,15,20,29,38,46,48,53,54,56

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe the aims and objectives of Tadbīr, Tasfiya and Gasl	3	Lecture	CC	Knows-how	L,L&GD,L&PPT
CO1,CO2	Demonstrate Amal -i- Tadbīr of following drugs: Afyūn, Kamūn, Adharāqī, Shangraf, Habb us Salātīn, Turbud, Ghāriqūn, Saqmūniyā, Kibrīt, Sammul Fār, Bābchī, Chāksū, Balādur and Amal -i- Tasfiya wa Ghasl of following drugs: Gandhak, Suhāga, Shorā, Sang-i-Jarāhat, Surma, Dar-i-Chikna, Chuna, Pāra, Elwa, Mome, Bahroza, Abrak, Muqil, Ravghan, Luk, Atyān	8	Practical3.1	PSY-SET	Shows-how	D,DIS,PT,PER,TBL
CO1,CO2	Illustrate the general methods of Amal -i- Tadbīr, Amal -i- Tasfiya wa Ghasl and their effects on drug	10	Experiential-Learning3.1	PSY-MEC	Does	D,DIS,PER,TBL

Unit 2 Classification, principle of formulation of dosage form اشکال ادویہ کی اقسام اور اصول ترکیب

3.2.1 Classification اقسام

3.2.2 An overview of Solid, Liquid, Semisolid and Gaseous dosage forms along with their principle of formulation.

جامد، سیال، نیم جامد اور بخاری اشکال ادویہ کا عمومی جائزہ اور ان کی ترکیب تیاری کے اصول

References: 1,2,3,4,5,6,7,8,13,15,18,29,38,40,46,54,57

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe the principles of formulation of dosage forms	5	Lecture	CC	Knows-how	L,L&PPT
CO1,CO2	Demonstrate solid, liquid, semisolid, and gaseous forms with example for each	6	Practical3.2	PSY-GUD	Shows-how	D,ML,PT,PER
CO1,CO2,CO5	Integrate the scientific interpretation of solid, liquid, semisolid, and gaseous dosage forms	8	Experiential-Learning3.2	CAP	Knows-how	BS,DIS,FV,PT

Unit 3 Method of preparation of dosage form: اشکال ادویہ کی ترکیب تیاری

3.3.1 Method of preparation of solid dosage form

جامد اشکال ادویہ کی ترکیب تیاری

3.3.1.1 Habb, Qurs, Dharūr, Kuhal, Shiyāf, Ḥamūl, Firzaja

حب ، قرص، ذرور، کحل، شیاف، حمول،فرزجہ

3.3.2 Prepartion method of semi solid dosage form

نیم جامد اشکال ادویہ کی ترکیب تیاری

3.3.2.1 Ma'jūn, Iṭrīfal, Jawārish, Khamīra, La'ūq, Anoshdārū, Dawā' al-Misk, Labūb, Zar'ūnī, Barsha'shā', Gulqand

معجون، اطریفل، جوارش، خمیرہ، لعوق، انوشدارو، دواء المسک، لبوب، زرعونی، برشعشاء، گلقند

3.3.2.2 Marham, Qayrūṭī, Ḍimād , Khiḍāb

مرہم ، قیروطی، ضماد، خضاب

3.3.3 Preparation method of liquid dosage form

سیال اشکال ادویہ کی ترکیب تیاری

3.3.3.1 Sharbat, Joshānda, Khīsānda, Zulāl, Sikanjabīn, Ḥalīb, Mazīj

شربت، جوشاندہ، خیساندہ، زلال، سکنجبین، حلیب، مزیج

3.3.3.2 Ṭilā‘, Naṭūl, Ghasūl, Ābzan, Pāshoya

طلاء، نطول، غسول، آبزن، پاشویہ

3.3.4 Preparation method of Gaseous dosage form

بخاری اشکال ادویہ کی ترکیب تیاری

3.3.4.1 Inkibāb, Bakhūr, Shamūm, Lakhlakha

انکباب، بخور، شموم، لخلخہ

3.3.5 Natural Excipient

قدرتی تشکیلی مواد

3.3.6 Binders, Sweeteners, colourants, flavours and coating materials

رابطات،اجزاء شکریہ، اجزاء لونیہ، اجزاء عطریہ اور مواد توریق

3.3.7 Ratio of Sweetener, colorant, flavours in Murakkabāt

مرکبات میں اجزاء شکریہ، اجزاء لونیہ اوراجزاء عطریہ کا تناسب

3.3.8 Coating (‘Amal-i-Tawrīq) عمل توریق

3.3.9 Description of base of ointment, cream, lotion, Qayrūṭī, Ḍimād and Shiyāf

مرہم، کریم ،لوشن، قیروطی، ضماد اور شیاف میں مستعمل اساس کا بیان

References: 1,2,3,4,6,7,8,13,14,15,20,29,30,31,32,38,40,57

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO4	Describe the methods of preparation for solid, semisolid, liquid, and gaseous dosage forms	2	Lecture	CC	Knows-how	DIS,L,L&PPT
CO1,CO2	Demonstrate the preparation methods for solid, semisolid, liquid, and gaseous dosage forms, including practical demonstrations of coating techniques and the preparation of bases for ointments, creams, lotions, Qayrūṭī, Ḍimād, and Shiyāf.	6	Practical3.3	PSY-ORG	Shows-how	D,EDU,PT,PER
CO1,CO2,CO3,CO4	Explore natural excipients, the role of binders, sweeteners, colourants, flavours, and coating materials, and understand their ratios in formulations	8	Experiential-Learning3.3	CAN	Knows-how	D,DIS,PER,SDL

Practical Training Activity

Practical 3.1 : Amal -i- Tadbīr

(Total duration of Activity: 8 hours)

The teacher will guide students through the practical aspects of Amal-i-Tadbīr for drugs such as Afyūn, Kamūn, Adharāqī, Shangraf, Habb us Salātīn, Turbud, Ghāriqūn, Saqmūniyā, Kibrīt, Sammul Fār, Bābchī, Chāksū, and Balādur, as well as Amal-i-Tasfiya wa Ghasl for substances like Gandhak, Suhāga, Shorā, Sang-i-Jarāhat, Surma, Dar-i-Chikna, Chuna, Pāra, Elwa, Mome, Bahroza, Abrak, Muqil, Ravghan, Luk, and Atyān. (6 hours)

The teacher will use practical demonstrations, multimedia presentations, and interactive discussions to illustrate these procedures. Under supervision, students will engage in hands-on training, either individually or in groups, to perform each process. The teacher will encourage close observation, repeated practice, and critical analysis of how each technique influences the properties of the drugs. Group discussions, presentations, and collaborative learning activities will be integrated to consolidate their understanding and allow students to present their findings. (2 hours)

Practical 3.2 : Dosage forms

(Total duration of Activity: 6 hours)

The teacher will facilitate an interactive session where students actively classify dosage forms into solid, liquid, semisolid, and gaseous categories. This will be done through engaging methods such as video clips, demonstrations, presentations, and group discussions. (2 hours). To enhance participation, students will work to explore and identify real-life examples of each dosage form. They will then collaborate to create visual charts or detailed assignments showcasing their classifications, ensuring a hands-on practical. Additionally, students may use mobile learning resources to supplement their understanding and present their findings creatively, fostering deeper engagement with the topic.(4 hours)

Practical 3.3 : Preparation methods for solid, semisolid, liquid, and gaseous dosage forms

(Total duration of Activity: 6 hours)

The teacher will facilitate hands-on training to help students understand and apply the preparation methods for solid, semisolid, liquid, and gaseous dosage forms. Through guided practical demonstrations, group discussions, and interactive learning sessions, students will explore various formulation techniques. Special focus will be placed on preparing bases for ointments, creams, lotions, Qayrūṭī, Ḍimād, and Shiyāf, with students preparing formulations individually and in groups using standard procedures. (3 hours)

The teacher will also guide students in practicing coating techniques using live demonstrations, PPTs, video clips, and edutainment tools. Practical activities will be used to enhance student proficiency in formulation, consistency evaluation, and process optimization, ensuring a comprehensive experiential learning experience. (3 hours)

Experiential learning Activity

Experiential-Learning 3.1 : General methods of Amal -i- Tadbīr, Amal -i- Tasfiya wa Ghasl and their effects on drug

(Total duration of Activity: 10 hours)

Students will explore the general methods of Amal-i-Tadbīr and Amal-i-Tasfiya wa Ghasl through historical references, expert interactions, and multimedia resources. They will critically analyze the impact of these processes on the efficacy, safety, and stability of Unani drugs. (4 hours)

By participating in group discussions, case study analysis, and digital exploration, students will describe how these techniques transform raw drugs. They will present their understanding through PPTs, video clips, demonstrations, or interactive sessions. (6 hours)

Experiential-Learning 3.2 : Scientific interpretation of solid, liquid, semisolid, and gaseous dosage forms

(Total duration of Activity: 8 hours)

Students will explore the scientific basis of solid, liquid, semisolid, and gaseous dosage forms through real-world observations, case studies, and expert interactions. They will critically examine the connection between classical Unani concepts and modern pharmaceutical advancements. (3 hours)

Through PPT presentations, video analysis, live demonstrations, and group discussions, students will integrate scientific interpretations of various dosage forms. They will document observations from industry visits, study formulation techniques, and present their insights using collaborative learning methods and mobile-based tools. (5 hours)

Experiential-Learning 3.3 : Natural excipients, the role of binders, sweeteners, colourants, flavours, and coating materials, and understand their ratios in formulations

(Total duration of Activity: 8 hours)

Students will explore natural excipients through real-world case studies, market surveys, and interactions with industry experts. They will critically analyze the roles, ratios, and applications of binders, sweeteners, colorants, flavors, and coating materials in Unani formulations. (3 hours) By examining actual formulations, reviewing regulatory guidelines, and participating in expert discussions, students will investigate the selection and function of excipients. They will present their findings through PPTs, video clips, demonstrations, or group discussions to deepen their understanding of formulation efficacy. (5 hours)

Modular Assessment	
Assessment method	**Hour**
The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Practical Viva-25 marks Project work: 25 marks Or SAQ: 5 questions -25 marks Direct observation of procedural skills -25 marks Or Any practical in converted form can be taken for assessment-25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-25 marks	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 4 : 'Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the concept of 'Amal-i-Takhmīr including the process, principles, and preparation of fermented products. Explore the preparation methods and characteristics of special Unani drugs, including Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, and Tutia.						
Unit 1 'Amal-i-Takhmīr عمل تخمیر 4.1.1 Introduction of Fermentation and Fermented Products عمل تخمیر اور اس سے تیار شدہ اشیاء کا تعارف 4.1.1.1 Nabīdh نبیذ 4.1.1.2 Dar Bahra دربہرہ 4.1.1.3 Khamr)شراب(خمر 4.1.1.4 Fuqqā فقاع 4.1.1.5 Sirka سرکہ 4.1.1.6 Ābkāma آبکامہ **References:** 1,2,3,4,6,7,8,15,20,29,38,57,60						

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Describe Amal-i-Takhmīr	4	Lecture	CC	Knows-how	L,L&PPT ,L_VC
CO1,CO2,CO4	Demonstrate preparation of Nabīdh, Dar Bahra, Khamr, Fuqqā, Sirka, Ābkām correct this one	10	Practical4.1	PSY-GUD	Shows-how	DIS,FC,PER,SDL
CO1,CO2,CO4,CO6	Integrate the principles of 'Amal-i-Takhmīr' with hands-on preparation and observation of traditional fermented beverages such as Nabīdh, Dar Bahra, Khamr, Fuqqāʿ, Sirka, and Ābkāma while exploring fermentation and developing practical skills in preparation and analysis.	10	Experiential-Learning4.1	CS	Does	BS,D,DIS,JC,PER

Unit 2 Preparation of some special drugs بعض مخصوص ادویہ کی نوعیت ترکیب

4.2.1 Preparation of some special drugs:

بعض مخصوص ادویہ کی نوعیت ترکیب

4.2.1.1 Sindūr سیندور

4.2.1.2 Dārchikna دارچکنہ

4.2.1.3 Raskapūr رسکپور

4.2.1.4 Safeda Kāshgharī سفیدہ کاشغری

4.2.1.5 Zangār زنگار

4.2.1.6 Tūtia توتیا

4.2.1.7 Hīrā Kasīs ہیرا کسیس

4.2.1.8 Kajlī کجلی

References: 1,2,6,7,13,15,20,29,46,48,56

3A	3B	3C	3D	3E	3F	3G

CO1,CO2,CO3,CO4	Describe some special drugs such as Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, Tūtia, Hīrā Kasīs and Kajlī.	6	Lecture	CC	Knows-how	L&GD,L&PPT ,L_VC,ML
CO1,CO2,CO4	Demonstrate the preparation of special drugs such as Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, Tūtia, Hīrā Kasīs and Kajlī	10	Practical4.2	PSY-GUD	Shows-how	D,JC,ML,PER
CO1,CO2,CO4	Demonstrate method of preparation for special drugs such as Sindūr, Dārchikna, Raskapūr, Safeda and Kāshgharī.	10	Experiential-Learning4.2	PSY-ORG	Does	D,DIS,JC,ML,PAL
CO1,CO2	Demonstrate method of preparation for special drugs such as Zangār, Tūtia, Hīrā Kasīs and Kajlī.	6	Experiential-Learning4.3	PSY-ORG	Does	D,DIS,PER,SDL

Practical Training Activity

Practical 4.1 : Preparation of Nabīdh, Dar Bahra, Khamr, Fuqqā, Sirka, Ābkām correct this one

(Total duration of Activity: 10 hours)

The teacher will conduct a practical session on the preparation of Nabīdh, Dar Bahra, Khamr, Fuqqā, Sirka, and Ābkām using an interactive and hands-on approach. The session will begin with engaging presentations through PPTs, video clips, or live demonstrations to explain traditional methods and processes involved in these preparations. (4 hours)

The teacher will then guide students through hands-on training, supervising the preparation of these formulations while encouraging collaborative learning. Students will be prompted to document their observations, analyze ingredients and fermentation techniques, and connect their findings with both scientific and Unani principles. The session will conclude with a teacher-led reflective discussion, where students will share experiences, challenges, and key takeaways. (6 hours)

Practical 4.2 : Preparation of Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, Tūtia, Hīrā Kasīs and Kajlī

(Total duration of Activity: 10 hours)

The teacher will facilitate hands-on training for the preparation of special drugs such as Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, Tūtia, Hīrā Kasīs, and Kajlī. The session will begin with an interactive discussion on the historical background, therapeutic applications, and preparation methods of these drugs. This will be followed by demonstrations using PPTs, video clips, or live practical sessions to support student understanding. Students will then engage in the step-by-step preparation process under the teacher's supervision to ensure experiential learning. (6 hours)

The teacher will guide students in documenting observations, addressing challenges, and refining techniques throughout the process. To foster collaborative learning, students will present their findings, while the teacher facilitates discussion and comparative analysis of the different drugs prepared. The session will conclude with a reflective discussion on key takeaways. (4 hours)

Experiential learning Activity

Experiential-Learning 4.1 : Principles of ‘Amal-i-Takhmīr’ with hands-on preparation and observation of traditional fermented beverages
(Total duration of Activity: 10 hours) Students will explore traditional fermentation methods by studying historical texts, interacting with experts, and observing real-world practices. They will critically discuss the significance, processes, and applications of fermented beverages in Unani medicine. (5 hours) They will integrate the principles of ‘Amal-i-Takhmīr’ by observing and documenting the fermentation of Nabīdh, Dar Bahra, Khamr, Fuqqāʿ, Sirka, and Ābkāma. Students will record changes, maintain observation journals, and share their insights through PPTs, video clips, demonstrations, or group discussions to enhance their understanding and practical skills. (5 hours)
Experiential-Learning 4.2 : Method of preparation for Sindūr, Dārchikna, Raskapūr, Safeda and Kāshgharī.
(Total duration of Activity: 10 hours) Students will be introduced to the theoretical foundations of selected special Unani drugs. The students will explain their key ingredients, traditional preparation methods, and therapeutic uses. Through interactive presentations, group discussions, and video demonstrations, students will be encouraged to think critically and creatively about how these traditional methods can be adapted using modern techniques. (3 hours) During the practical segment, students will take the lead in preparing and modifying Unani drugs such as *Sindūr*, *Dārchikna*, *Raskapūr*, *Safeda*, and *Kāshgharī*. Working in collaborative groups, they will experiment with innovative preparation techniques, share their results through group presentations, and reflect on their learning by maintaining journals or recording short video clips. This hands-on approach will strengthen their practical skills and promote analytical thinking, preparing them for real-world applications in Unani medicine. (7 hours)
Experiential-Learning 4.3 : Method of preparation for Zangār, Tūtia, Hīrā Kasīs and Kajlī.
(Total duration of Activity: 6 hours) Students will be introduced to the theoretical foundations of selected special Unani drugs. The students will explain their key ingredients, traditional preparation methods, and therapeutic uses. Through interactive presentations, group discussions, and video demonstrations, students will be encouraged to think critically and creatively about how these traditional methods can be adapted using modern techniques. (3 hours) During the practical segment, students will take the lead in preparing and modifying Unani drugs such as Zangār, Tūtia, Hīrā Kasīs and Kajlī. Working in collaborative groups, they will experiment with innovative preparation techniques, share their results through group presentations, and reflect on their learning by maintaining journals or recording short video clips. This hands-on approach will strengthen their practical skills and promote analytical thinking, preparing them for real-world applications in Unani medicine. (3 hours)
Modular Assessment

Assessment method	**Hour**

The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Practical Viva-25 marks Project work: 25 marks Or Any practical in converted form can be taken for assessment-25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-25 marks	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 5 : Unani Nutraceuticals یونانی اغذیہ						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the concept, introduction, and classification of Unani nutraceuticals, focusing on Ghidhā' Dawā'ī and Dawā' Ghidhāī along with their significance in Unani medicine. Explore the preparation methods and principles for specialized Unani diets.						
Unit 1 Unani Nutraceuticals یونانی مخصوص اغذیہ 5.1.1 Introduction and concept of Unani Nutraceutical. طب یونانی کی مخصوص غذائے دوائی کا تعارف اور تصور **References:** 1,2,3,6,7,20,21,22,23,24,25,26,27,28,29,38,44,45,47,55,57,60						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**
CO1,CO2,CO4,CO5	Describe Unani Nutraceuticals	3	Lecture	CK	Knows-how	L&GD,L&PPT ,L_VC
CO1,CO2,CO4,CO5	Demonstrate the concept of Unani Nutraceuticals.	7	Practical5.1	PSY-GUD	Shows-how	D,DIS,PER
CO1,CO2,CO4,CO5	Expound Unani Nutraceuticals and their concept	10	Experiential-Learning5.1	CAP	Knows-how	BS,D,FC,IBL,TBL
Unit 2 Ghidhā' Dawā'ī and Dawā'Ghidhāī غذاءدوائی اوردواءغذائی						

5.2.1 Introduction of Ghidhā’ Dawā’ī and Dawā’Ghidhāī

غذاء دوائی اور دواء غذائی کا تعارف

References: 1,2,3,4,5,6,7,8,13,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,38,44,45,46,47,52,55,57,60

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe Ghidhā’ Dawā’ī and Dawā’ Ghidhāī	3	Lecture	CC	Knows-how	L&PPT
CO1,CO2,CO4,CO5	Demonstrate Ghidhā’ Dawā’ī and Dawā’ Ghidhāī	5	Practical5.2	PSY-GUD	Shows-how	DIS,FC,PT,PrBL,TPW
CO1,CO2,CO4,CO5	Illustrate Ghidhā’ Dawā’ī and Dawā’Ghidhāī	6	Experiential-Learning5.2	AFT-CHR	Does	BS,FC,IBL,PT,PrBL,TPW

Unit 3 Preparation of Special diets مخصوص غذاؤں کی ترکیب تیاری

5.3.1 Preparation of some Special diets. مخصوص اغذیہ کی ترکیب تیاری

5.3.2 Mā’al-Sha‘īr, Kashk al-Sha‘īr, Mā’al-Laḥm, Mā’ al-Rā’ib, Mā’al-‘Asal, Mā’al-Uṣūl, Mā’ al-Buzūr, Mā’al-Fawākih, Mā’al-Buqūl, Mā’al-Jubn, Panīr Māya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Qalya,. Ḥarīra, Khabīs

ماء الشعیر، کشک الشعیر، ماء اللحم، ماء الرائب، ،ماء العسل، ماء الاصول، ماء البزور، ماء الفواکہ، ماء البقول، ماء الجبن، پنیر مایہ، سکنجبین، اسفیداج، سکباج، مصوص،قلیہ، حریرہ، خیص

References: 1,2,4,5,6,7,8,13,14,15,19,20,21,22,23,24,25,26,27,28,29,31,32,38,42,44,45,46,47,52,54,55,56,57,60

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe preparation of special diets: Mā’al-Sha‘īr, Kash al-Sha‘īr, Mā’al-Laḥm, Mā’ al-Rā’ib, Mā’al-‘Asal, Mā’al-Uṣūl, Mā’ al-Buzūr, Mā’al-Fawākih, Mā’al-Buqūl, Mā’al-Jubn, PanīrMāya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Tarīna, Qalya,. Ḥarīra, Khabīs	4	Lecture	CS	Knows-how	FC,L&PPT ,L_VC
CO1,CO2,CO4,CO5	Demonstrate some Special diets: Mā’al-Sha‘īr, Kashk al-Sha‘īr, Mā’al-Laḥm, Mā’ al-Rā’ib, Mā’al-‘Asal, Mā’al-Uṣūl, Mā’ al-Buzūr, Mā’al-Fawākih, Mā’al-Buqūl, Mā’al-Jubn, Panīr Māya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Qalya, Ḥarīra, Khabīs	8	Practical5.3	PSY-GUD	Shows-how	D,ML,PER,PrBL,TPW

CO1,CO2,CO4,CO5	Illustrate the scope for the preparation of some special diets	10	Experiential-Learning5.3	CE	Knows-how	DL,DIS,PER,TPW,TBL

Practical Training Activity

Practical 5.1 : Concept of Unani Nutraceuticals.

(Total duration of Activity: 7 hours)

The teacher will guide students in understanding the concept of Unani Nutraceuticals. This will include the use of multimedia tools such as video clips and presentations, group discussions, and practical demonstrations. Under the teacher's supervision, students will actively participate in hands-on activities to enhance their learning experience. *(3 hours)*

To further reinforce their understanding, the teacher will instruct students to prepare a detailed chart or assignment that visually and descriptively presents the classification, sources, and health benefits of Unani Nutraceuticals. This activity, closely monitored by the teacher, will help students connect theoretical knowledge with practical application. *(4 hours)*

Practical 5.2 : Ghidhā' Dawā'ī and Dawā' Ghidhāī

(Total duration of Activity: 5 hours)

The teacher will engage students in understanding *Ghidhā' Dawā ī* and *Dawā' Ghidhā ī* by organizing practical learning activities. Relevant content will be delivered through teacher-led PowerPoint presentations, video clips, and live demonstrations to provide conceptual clarity and visual understanding. (2 hours)

The teacher will facilitate group discussions where students will critically analyze and distinguish between *Ghidhā' Dawā ī* and *Dawā' Ghidhā ī* using real-life examples. To reinforce learning, the teacher will guide students in preparing visual representations such as charts or assignments. Furthermore, the teacher will coordinate collaborative, case-based and project-based learning tasks, helping students explore the significance of medicinal foods and food-based medicines in Unani medicine. These activities will culminate in team discussions led by the teacher, focusing on the classification and evaluation of Unani formulations based on their therapeutic and nutritional properties. (3 hours)

Practical 5.3 : Mā'al-Sha'īr, Kashk al-Sha'īr, Mā'al-Laḥm, Mā' al-Rā'ib, Mā'al-'Asal, Mā'al-Uṣūl, Mā' al-Buzūr, Mā'al-Fawākih, Mā'al-Buqūl, Mā'al-Jubn, Panīr Māya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Qalya, Ḥarīra, Khabīs

(Total duration of Activity: 8 hours)

In the Saidla lab, the teacher will guide students through the formulation of various special diets, such as *Mā'al-Sha'īr*, *Kashk al-Sha'īr*, *Mā'al-Laḥm*, *Mā' al-Rā'ib*, *Mā'al-'Asal*, *Mā'al-Uṣūl*, *Mā' al-Buzūr*, *Mā'al-Fawākih*, *Mā'al-Buqūl*, *Mā'al-Jubn*, *Panīr Māya*, *Sikanjabīn*, *Asfīdāj*, *Sikbāj*, *Masūs*, *Qalya*, *Ḥarīra*, and *Khabīs*. The teacher will demonstrate the step-by-step preparation methods through live demonstrations, supported by video clips and presentations, ensuring clarity in understanding. Students will

then replicate these formulations in groups under the teacher's close supervision, focusing on accurate ingredient selection, proportioning, and processing techniques. (6 hours)

The teacher will assign each student a specific formulation to execute individually, in accordance with traditional Unani principles. Students will carry out ingredient measurement, mixing, and processing while observing changes throughout the preparation. The teacher will provide practical training in core techniques such as decoction, infusion, fermentation, and emulsification, tailored to the type of formulation being prepared. Students will document observations, note variations, and participate in discussions led by the teacher on the therapeutic applications of each diet. (1 hour)

Under the teacher's guidance, students will evaluate the consistency, taste, and texture of the prepared diets, assessing their clinical and nutritional significance. In the concluding session, students will present their findings, reflect on challenges encountered, and offer suggestions for refining the formulation process. This hands-on, teacher-led approach will strengthen students' technical abilities and practical understanding of Unani therapeutic diet preparation and application. (1 hour)

Experiential learning Activity

Experiential-Learning 5.1 : Unani Nutraceuticals and their concept

(Total duration of Activity: 10 hours)

Students will actively engage in an interactive learning environment designed to deepen their understanding of Unani nutraceuticals. Through multimedia presentations, video clips, and guided discussions, they will explore core concepts while developing inquiry-based learning and critical thinking skills with the support of the teacher. (4 hours)

Students will participate in a variety of learning activities such as group discussions, brainstorming sessions, and team-based projects. They will create and present PowerPoint presentations, analyze video demonstrations, and take part in edutainment-based exercises. These collaborative methods will promote better retention and practical application of knowledge related to Unani nutraceuticals. (6 hours)

Experiential-Learning 5.2 : Ghidhā' Dawā'ī and Dawā'Ghidhāī

(Total duration of Activity: 6 hours)

Students will explore the Unani concepts of Ghidhā' Dawā'ī (food as medicine) and Dawā' Ghidhā'ī (medicine as food) by analyzing their relevance and application in Unani pharmacy. Through interactive sessions and critical discussions, they will deepen their conceptual understanding. (3 hours)

They will justify these concepts through engaging activities such as PPTs, video clips, demonstrations, presentations, group discussions, and brainstorming, team-based tasks, and project-based learning will support collaborative exploration and real-world application. (3 hours)

Experiential-Learning 5.3 : Scope for the preparation of some special diets

(Total duration of Activity: 10 hours)

Students will explore Unani dietary principles by studying classical texts and aligning them with modern nutritional needs. They will investigate the formulation of special diets and analyze the therapeutic benefits of specific ingredients through teacher-guided discussions. (3 hours) Students will engage in research, collaborative analysis, and structured planning to develop Unani-based special diets. Their findings will be presented through PPTs, video clips, demonstrations, group discussions, and hands-on learning using mobile resources. Activities like brainstorming, project-based learning, and team-based learning will further enhance their understanding. (7 hours)

Modular Assessment	
Assessment method	**Hour**
The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Viva-25 marks Presentation on any topic of Module: 25 marks Or SAQ: 5 questions -25 marks Project work -25 Or Any practical in converted form can be taken for assessment-25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-25 marks	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 6 : Ihrāq wa Taklīs احراق وتکلیس						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the historical background, aims, objectives, and scope of Ihrāq wa Taklīs, including the classification of metals, non-metals, minerals, and animals used in the preparation of Kushtajāt, and the changes occurring during the calcination process. Explore the process and principles of calcination, including traditional and modern techniques, materials used and the role of heat, with a focus on heating grades and types of put in both classical and modern contexts. Illustare the preparation and assessment of Kushtajāt using classical methods and modern analytical tools to evaluate quality and efficacy.						
Unit 1 Historical Background تاریخی پس منظر 6.1.1 Historical Background تاریخی پس منظر 6.1.2 Introduction, Aims, Objectives and Scope of Ihrāq wa Taklīs احراق وتکلیس کا تعارف، اغراض ومقاصد اور دائرہ کار 6.1.3 Drugs used for Kushtasāzī . کشتہ سازی میں مستعمل ادویہ 6.1.4 Metals, non-Metals, minerals and animals used in Kushta. کشتہ سازی میں مستعمل دھات، اپدھات، معدنیات اور حیوانات 6.1.5 Changes during the calcination process.						

عمل تکلیس کے دوران ہونے والے تغیرات

References: 1,2,3,6,7,8,10,11,12,13,15,16,17,36,37,38,41,46,48,49,50,54,58

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe the historical background, aims, objectives and drugs used for Kushtasāzī	2	Lecture	CC	Knows-how	L&GD,L&PPT ,L_VC,PrBL,TBL
CO1,CO2,CO4,CO5	Evaluate the scope of Ihrāq wa Taklīs	2	Practical6.1	CE	Shows-how	CBL,DIS,PrBL,TBL
CO1,CO2,CO4,CO5	Appraise the changes during the calcination process	3	Experiential-Learning6.1	CAN	Knows-how	BS,D,PT,PER,PrBL,TBL

Unit 2 Process of Calcination عمل تکلیس

6.2.1 Process of Calcinations عمل تکلیس کے مراحل

6.2.2 Principles اصول

6.2.3 General description عمومی ہدایات

6.2.4 Material used -Būta, Crucible, Gil-i-Hikmat, Kaprotī

مستعمل اشیاء :بوتہ، کروسبل، گِل حکمت، کپڑوتی

6.2.5 Method for Kushtasāzī کشتہ سازی کا طریقہ

6.2.6 Traditional روایتی

6.2.7 Muffle Furnace مفل فرنیس

6.2.8 Heating Grades in Calcination

عمل تکلیس میں حرارت کی درجہ بندی

6.2.9 Type of put (Heat) پٹ کی اقسام

References: 1,2,3,4,5,6,7,8,11,12,15,37,38,41,43,46,48,58

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe the process of calcination, its principles and general description	2	Lecture	CK	Knows-how	L,L&GD,L&PPT ,L_VC
CO1,CO2,CO4,CO5	Demonstrate the materials used in calcination: Būta, crucible, Gil-i-Hikmat and Kaprotī	3	Practical6.2	PSY-GUD	Shows-how	DIS,FC,ML,PER,PrBL,TBL
CO1,CO2,CO4,CO5	Illustarte the methods for Kushtasāzī: traditional and muffle furnace, Heating Grades and Type of put	5	Experiential-Learning6.2	PSY-MEC	Does	BS,D,ML,PER,PrBL,TBL

Unit 3 Preparation of Kushtajāt کشتہ جات کی تیاری

6.3.1 Preparation of following Kushtajāt:

Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, Hajrul Yahūd.

درج ذیل کشتہ جات کی تیاری :فولاد، صدف، مرجان، قلعی، گودنتی، جست، نقرہ، خبث الحدید، پوست بیضہ مرغ، حجر الیہود

References: 1,2,3,4,5,6,7,8,11,12,13,15,36,37,38,39,40,41,48,52,57,58

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe the preparation of following Kushtajāt: Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Jast, Khabsul Hadīd, Post Bayḍa Murgh, Hajrul Yahūd	3	Lecture	CAP	Knows-how	BS,FC,JC,L,L&PPT ,L_VC
CO1,CO2,CO4,CO5	Demonstrate the method of preparation of the following Kushtajāt: Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, and Hajrul Yahūd	6	Practical6.3	PSY-GUD	Shows-how	DIS,FC,ML,PT,PER,PrBL
CO1,CO2,CO4,CO5	Illustrate scientific evaluation of the method of calcination	8	Experiential-Learning6.3	CAP	Knows-how	BS,D,DIS,JC,ML,PER,PBL,PrBL,TBL

Unit 4 Assessment of Kushtajāt کشتہ جات کا تجزیہ

6.4.1 Assessment of Kushtajāt

6.4.2 Classical methods

6.4.2.1 Thumb and Index Finger Test

6.4.2.2 Floating Test

6.4.2.3 Wall Stick Test

6.4.2.4 Loss of Metallic Lustre

6.4.3 Tests for specific Kushtajāt

6.4.4 Particle size analysis of Kushtajāt

6.4.5 Toxicity of Kushtajāt

References: 1,2,3,4,6,7,8,17,36,37,38,41,43,46,48,49,50,54,58

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4,CO5	Describe the assessment of Kushtajāt: classical methods and tests for specific Kushtajāt	3	Lecture	CC	Knows-how	DIS,L&PPT
CO1,CO2,CO4,CO5	Demonstrate the particle size analysis of Kushtajāt	9	Practical6.4	PSY-GUD	Shows-how	DL,DIS,PER
CO1,CO2,CO4,CO5	Illustrate the toxicity of Kushtajāt	10	Experiential-Learning6.4	CAN	Knows-how	D,DIS,PER,PBL,PrBL,TPW

Practical Training Activity

Practical 6.1 : The scope of Ihrāq wa Taklīs

(Total duration of Activity: 2 hours)

The teacher will facilitate an interactive session on the scope of Ihrāq wa Taklīs through a structured presentation, case-based discussions, and project-based learning activities, encouraging students to explore the topic from multiple perspectives. (1 hour)

Under the teacher's guidance, students will actively participate in group discussions, analyze real-world applications, and engage in collaborative learning exercises. As part of the practical component, the teacher will assign the task of preparing detailed charts or structured assignments that clearly illustrate the scope, examples, and applications of Ihrāq wa Taklīs. Guided discussions and hands-on tasks will help students develop a comprehensive and analytical understanding of the topic. (1 hour)

Practical 6.2 : Materials used in calcination: Būta, crucible, Gil-i-Hikmat and Kaprotī

(Total duration of Activity: 3 hours)

The teacher will facilitate student engagement with materials used in calcination—Būta, crucible, Gil-i-Hikmat, and Kaprotī—through hands-on activities. The session will begin with a teacher-led PowerPoint presentation, live demonstrations, or interactive discussions to introduce the physical properties and significance of each material. (1 hour)

Under the teacher's guidance, students will closely observe and analyze the characteristics and roles of these materials in the calcination process. The teacher will then organize group-based tasks in which students create detailed charts or assignments outlining the composition, function, and applications of each material. This structured activity will promote hands-on learning and collaborative understanding. (2 hours)

Practical 6.3 : Method of preparation of Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, and Hajrul Yahūd

(Total duration of Activity: 6 hours)

The teacher will guide students in the practical preparation of Kushtajāt, including Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, and Hajrul Yahūd, through demonstrations supplemented by a structured presentation.(1 hour)

Students will actively participate in hands-on training, where they will follow step-by-step procedures for the purification, calcination, and final preparation of each Kushta under supervision. They will be assigned specific tasks such as weighing ingredients, maintaining required temperature conditions, and monitoring changes in physical properties. Each student will be involved in crucial stages, including the selection of raw materials, application of heat, and assessment of the final product to ensure proper formation of Kushta. Emphasis will be placed on precision, adherence to classical Unani methods, and understanding critical quality parameters. Through guided practice, students will gain proficiency in preparing these Kushtajāt while developing the necessary skills to execute the process independently.(5 hours)

Practical 6.4 : Particle size analysis of Kushtajāt

(Total duration of Activity: 9 hours)

The teacher will guide students through hands-on training in the particle size analysis of Kushtajāt. A brief demonstration will be conducted to introduce the methodology, followed by the distribution of necessary instruments and materials. Under the teacher's supervision, students will perform the analysis, record their observations, and interpret the results independently. (6 hours)

The teacher will encourage students to compare different samples, discuss observed variations, and analyze the relevance of particle size in relation to the efficacy and safety of Kushtajāt. Throughout the session, the teacher will monitor progress, provide clarifications, and facilitate reflective discussions to reinforce key concepts related to particle size distribution in Unani pharmaceutics. (3 hours)

Experiential learning Activity

Experiential-Learning 6.1 : Changes during the calcination process

(Total duration of Activity: 3 hours)

Students will explore the concept of calcination in Unani pharmacy, understand its significance, and observe as well as analyze the changes that occur during the process. Interactive discussions and critical thinking will support deeper engagement with the topic. (1 hour)

Students will demonstrate the observed changes during calcination through PowerPoint presentations, video clips, group discussions, brainstorming sessions, or project-based learning. Through collaboration and analysis, they will gain a deeper understanding of the process and its pharmaceutical applications. (2 hours)

Experiential-Learning 6.2 : Methods for Kushtasāzī: traditional and muffle furnace, Heating Grades and Type of put

(Total duration of Activity: 5 hours)

Students will begin your learning experience with an exploration of Kushtasāzī, covering traditional and muffle furnaces, heating grades, and types of put. Through multimedia tools, demonstrations, and discussions, you will be encouraged to think critically and collaborate with your peers. (1 hour)

Students will actively engage in learning Kushtasāzī methods by working with PowerPoint presentations, video clips, group discussions, brainstorming, and mobile learning. You will analyze different heating techniques, share your insights, and apply your knowledge in team-based activities. (4 hours)

Experiential-Learning 6.3 : Scientific evaluation of the method of calcination

(Total duration of Activity: 8 hours)

Students will be guided through the theoretical foundations of the calcination process, facilitating learning through interactive discussions and insights into its scientific evaluation. This will encourage students to question, reflect, and engage critically with the subject matter. (2 hours)

Students will then actively explore various methods of calcination by integrating scientific principles using PowerPoint presentations, video clips, demonstrations, and group discussions. Working in teams, they will present their findings, and participate in learning activities to build a strong conceptual and practical understanding of calcination in Unani pharmacy. (6 hours)

Experiential-Learning 6.4 : Toxicity of Kushtajāt	
(Total duration of Activity: 10 hours) Students will begin their learning journey with a structured exploration of Kushtajāt toxicity. Through case studies, multimedia resources, and interactive sessions, they will be introduced to key references and encouraged to think critically about the safety concerns and regulatory challenges associated with Kushtajāt. (4 hours) Building on this foundation, students will take an active role in analyzing the toxicity of Kushtajāt using Power Point presentations, video clips, and group discussions. They will participate in case study analysis, brainstorming sessions, and collaborative team or project-based activities to deepen their understanding of toxicity management and safety protocols within Unani pharmacy. (6 hours)	
Modular Assessment	
Assessment method	**Hour**
The assessment will be for 50 marks. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Viva-25 marks Case Base assessment: 25 marks Or SAQ: 5 questions -25 marks Project work -25 marks Or Direct observation of procedural skills-50 marks Or Any practical in converted form can be taken for assessment-25 marks and	4

Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-25 marks	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 7 : Applied aspect of Murakkabat مرکبات کا عملی پہلو						
Module Learning Objectives **(At the end of the module, the students should be able to)** Describe the principles and preparation of Unani Murakkabat, including their importance, determination of temperament of Murakkab and guidelines for preservatives and precious substances like minerals, silver, gold, musk, amber, and saffron. Develop skills in prescription writing, focusing on drug selection criteria, key terminologies, and the ethical responsibilities of pharmacy professionals, along with effective pharmacy management. Illustrate the concepts of posology, including dose calculation based on age and weight, detailed analysis of selected formulations for different systems, and methods for proper storage to ensure the shelf life of Murakkabat.						
Unit 1 Unani Formulation یونانی مرکبات 7.1.1 Need and Importance of Unani Murakkabāt یونانی مرکبات کی افادیت و اہمیت 7.1.2 Pre-requisite of of formulation and mixing ترکیب ادویہ سے پیشترابتدائی اعمال اور باہم ادویہ کی آمیزش کا طریقہ کار 7.1.3 Method to find out temperament and dose of Murakkabāt مرکبات کا مزاج اور مقدار خوراک کے تعین کا طریقہ						

7.1.4 Factors affecting the Quality of finished products and their remedial mesures

مرکبات کے معیار پر اثرانداز ہونے والے عوامل اور ان کا تدارک

7.1.5 General principle of weight, ratio and mixing of additives, excipients and preservative in preparation of Murakkabāt

معین اجزاء، مواد تشکیل اور محافظ ادویہ کا وزن،تناسب اور ان کی آمیزش کے عمومی اصول اور طریقہ کار

7.1.6 Prepartory method and mixing of precious stone, minerals, silver, gold foil, mushk, amber and zafran

قیمتی حجریات ، معدنیات، ورق طلاء، ورق نقرہ، مشک، عنبراور زعفران کی مرکبات میں شمولیت کا طریقہ

7.1.7 Defects in Murakkabāt and their corrective measures

قوامی مرکبات کے نقائص اور ان کی اصلاح

References: 1,2,3,4,5,6,7,8,13,14,15,20,29,30,31,32,33,35,38,51,53,54,56,57,60

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO4	Describe the need and importance of Unani Murakkabāt, factors affecting the quality of finished products and their remedies, and the general principles of weight, ratio, and mixing of additives, excipients, and preservatives in Murakkab preparation	5	Lecture	CC	Knows-how	L&PPT ,ML
CO1,CO2,CO3,CO4	Demonstrate the method to determine the temperament and dose of Murakkab and pre-requisite of formulation and mixing	10	Practical7.1	PSY-GUD	Shows-how	D,DIS,JC,LS,ML,PT,PER
CO1,CO2,CO4	Demonstrate the defects in Murakkabāt and their corrective measures	10	Experiential-Learning7.1	PSY-ADT	Does	D,DIS,JC,ML,PL,PT,PER

Unit 2 Principle of Nuskha Nawesi (Prescription Writing) اصول نسخہ نویسی

7.2.1 Principle of Nuskha Nawesi (Prescription Writing)

اصول نسخہ نویسی

7.2.2 Criteria for drug selection-

انتخاب ادویہ کے اصول

7.2.3 Degree of Temperament درجات مزاج

7.2.4 Terminologies used in prescription

نسخہ نویسی میں مستعمل اصطلاحات

7.2.5 Duties and Ethics for Pharmacy Professionals.

فن صیدلہ کے ماہرین کے فرائض واخلاقیات

7.2.6 Management of Pharmacy صیدلیہ کا نظم ونسق

References: 1,2,5,6,7,20,30,31,32,33,35,38,42,45,54,57

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Describe the principle of Nuskha Nawesi (prescription writing), criteria for drug selection, and terminologies used in prescriptions	5	Lecture	CC	Knows-how	DIS,L&PPT ,L_VC,ML,PER
CO1,CO2,CO4	Demonstarte the duties and ethics of pharmacy professionals	10	Practical7.2	CAN	Shows-how	D,DL,DIS,ML,PER,TPW
CO1,CO2,CO4	Describe the management of a pharmacy	10	Experiential-Learning7.2	CC	Knows-how	BS,DIS,JC,LS,ML,PL,PER,TPW

Unit 3 Posology علم اوزان ادویہ

7.3.1 Posology علم اوزان ادویہ

7.3.2 Definition تعریف

7.3.3 Factors affecting Posology

علم الاوزان پر اثر انداز ہونے والے عوامل

7.3.4 Dose Calculation based on age and weight

عمر اور وزن کی بنیاد پر مقدارخوراک کا تعین

7.3.5 Selection of five Murakkabat for each system and their detailed description on the basis of their active constituents of ingredients

7.3.6 Storage and shelflife of Murakkabat

مرکبات کی ذخیرہ اندوزی اور مدت تاثیر

References: 1,2,3,4,6,7,8,20,29,46,51,54,56

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Describe posology and the factors affecting it	5	Lecture	CC	Knows-how	L&PPT ,L_VC
CO1,CO2,CO4	Demonstrate dose calculation based on age and weight, and select five Murakkabāt for each system with a detailed description of their active constituents	10	Practical7.3	PSY-GUD	Shows-how	D,JC,LS,ML,PL,PER,TPW
CO1,CO2,CO4	Illustrate the storage techniques of Murakkabāt	10	Experiential-Learning7.3	PSY-ADT	Shows-how	D,DIS,EDU,ML,PER
CO1,CO2,CO4	Illustrate the shelf life of Murakkabāt	9	Experiential-Learning7.4	PSY-MEC	Shows-how	D,DIS,EDU,ML,PER

Practical Training Activity

Practical 7.1 : Method to determine the temperament and dose of Murakkab and pre-requisite of of formulation and mixing

(Total duration of Activity: 10 hours)

The teacher will initiate a focused hands-on training session to help students determine the temperament and dosage of *Murakkabāt*, while also introducing the essential prerequisites for formulation and mixing. Through guided practical exercises, students will apply their theoretical understanding to real formulation scenarios, ensuring conceptual clarity under teacher supervision. (2 hour)

The teacher will conduct detailed demonstrations using PowerPoint presentations, video clips, and live practicals, allowing students to visually grasp each step before attempting replication. These demonstrations will serve as a foundation for skill-building and accurate application of methods. (4 hours)

Facilitated group discussions led by the teacher will encourage collaborative learning, as students examine various formulations, assess their temperaments, and calculate precise doses according to Unani principles. The teacher will moderate discussions to ensure accurate interpretation and integration of key concepts. (2 hours)

In the final phase, the teacher will guide students through the step-by-step preparation and mixing of selected formulations, emphasizing adherence to procedural prerequisites. This direct, task-based engagement will enable students to gain confidence and accuracy in determining temperament, dose, and formulation techniques essential for effective *Murakkabāt* preparation. (2 hour)

Practical 7.2 : The duties and ethics of pharmacy professionals

(Total duration of Activity: 10 hours)

The teacher will facilitate an engaging session on the duties and ethics of pharmacy professionals using a combination of visual presentations, video clips, demonstrations, or interactive discussions. Students will actively participate in group discussions and collaborative activities to explore the principles of professional conduct in pharmacy practice.(4 hours)

As a practical activity, students will be assigned to create a detailed chart or structured assignment that illustrates key ethical responsibilities and professional duties of pharmacy professionals. This task will require them to research, analyze real-world scenarios, and present their findings in a structured manner, ensuring a hands-on understanding of ethical decision-making and professional accountability in pharmacy practice.(6 hours)

Practical 7.3 : Dose calculation based on age and weight, and with a detailed description of their active constituents

(Total duration of Activity: 10 hours)

The teacher will lead a hands-on training session where students will learn to calculate doses based on age and weight using standard Unani formulas and practical case scenarios. Through direct supervision, the teacher will ensure correct application of principles as students work individually and in small groups. Guidance will also be provided in compiling a detailed chart of five *Murakkabāt* for each body system, with a focus on active constituents and therapeutic relevance. (5 hours)

To deepen learning, the teacher will facilitate student engagement with classical Unani texts and pharmacological references. Collaborative efforts will be monitored closely to ensure the accuracy of dose calculations and identification of active ingredients. The session will conclude with structured presentations, during which the teacher will provide critical feedback and promote reflective discussion. (5 hours)

Experiential learning Activity

Experiential-Learning 7.1 : Defects in Murakkabāt and their corrective measures
(Total duration of Activity: 10 hours) Students will begin by gaining a clear conceptual understanding of common defects found in *Murakkabāt* (compound formulations). They will explore the causes behind these defects and discuss effective corrective measures. The session will promote interactive dialogue, allowing students to ask questions, share thoughts, and choose appropriate demonstration methods. (3 hours) In the next phase, students will actively lead the learning process by identifying and presenting various defects in *Murakkabāt*. They may use PowerPoint presentations, video clips, live demonstrations, edutainment formats, or group discussions to communicate their findings. Through critical analysis, peer collaboration, and solution-oriented thinking, students will enhance their understanding of formulation quality and improve their communication and problem-solving skills. (7 hours)
Experiential-Learning 7.2 : Management of a pharmacy
(Total duration of Activity: 10 hours) Students will explore the fundamentals of pharmacy management in an interactive environment guided by the teacher. Key topics such as inventory control, regulatory compliance, and customer handling will be introduced through engaging discussions and real-life case studies that promote critical thinking. (3 hours) In the extended learning phase, students will take the lead by demonstrating pharmacy management concepts using PowerPoint presentations, video clips, role-playing activities, group discussions, and mobile learning tools. They will work together to analyze real-world scenarios, propose effective solutions, and present their ideas, developing a deeper and more practical understanding of day-to-day pharmacy operations. (7 hours)
Experiential-Learning 7.3 : Storage of Murakkabāt
(Total duration of Activity: 10 hours) Students will be introduced to the core principles of storing *Murakkabāt*. There interactive discussions and multimedia tools—such as videos and visual aids—to help grasp key concepts and engage deeply with the topic. (3 hours) Building on this foundation, students will actively participate in various learning formats including Power Point presentations, video clips, live demonstrations, edutainment activities, group discussions, and mobile learning. They will explore storage techniques and examine relevant regulatory guidelines. By analyzing best practices and sharing insights, students will develop practical knowledge and skills for real-world application in Unani Pharmacy. (7 hours)
Experiential-Learning 7.4 : Shelf life of Murakkabāt
(Total duration of Activity: 9 hours)

Students will be introduced to the core principles of shelf life *Murakkabāt* using interactive discussions and multimedia tools—such as videos and visual aids—to help grasp key concepts and engage deeply with the topic. (4 hours) Building on this foundation, students will actively participate in various learning formats including Power Point presentations, video clips, live demonstrations, edutainment activities, group discussions, and mobile learning. They will explore techniques, identify factors affecting shelf life, and examine relevant regulatory guidelines. By analyzing best practices and sharing insights, students will develop practical knowledge and skills for real-world application in Unani Pharmacy. (5 hours)

Modular Assessment	
Assessment method	**Hour**
The assessment will be for 75 marks per credit. Keep a structured marking pattern. Use different assessment methods in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the Modular grade point as per Table 6 C. Viva-50 marks Project work -25 Or SAQ: 5 questions -25 marks Direct observation of procedural skills-50 marks Or Any practical in converted form can be taken for assessment 25 marks and Any experiential, such as portfolios/reflections/presentations can be taken as an assessment-50 marks	6

Table 4 : Practical Training Activity

(*Refer table 3 of similar activity number)

Practical No*	Practical name	Hours
1.1	Chronological Development of Ilmul Saidla wa Murakkabāt	2
1.2	Kunāsh, Bayād, Qarābādīn, Unani Pharmacopoeia of India (UPI) and National Formulary of Unani Medicine(NFUM)	4
1.3	Traditional Knowledge Digital Library (TKDL)	4
1.4	Definition, Functions, Objectives Hospital Pharmacy, Clinical Pharmacy and Community Pharmacy	4
1.5	Principles and applied aspects of pharmaceutical procedures	6
2.1	Classical Distillation Apparatus	6
2.2	Infusion, Decoction, Maceration, Percolation, ‘Uṣāra, Rubb, Satt, ‘Amal-i-Ta‘sīr, Ta‘sīr -i-Musalsal	8
2.3	Extraction methods of fixed oils	6
2.4	Grades of Safūf.	6
2.5	Brix and grades of Qiwām according to different dosage forms	4
3.1	Amal -i- Tadbīr	8
3.2	Dosage forms	6
3.3	Preparation methods for solid, semisolid, liquid, and gaseous dosage forms	6
4.1	Preparation of Nabīdh, Dar Bahra, Khamr, Fuqqā, Sirka, Ābkām correct this one	10
4.2	Preparation of Sindūr, Dārchikna, Raskapūr, Safeda Kāshgharī, Zangār, Tūtia, Hīrā Kasīs and Kajlī	10
5.1	Concept of Unani Nutraceuticals.	7
5.2	Ghidhā’ Dawā’ī and Dawā’ Ghidhāī	5
5.3	Mā’al-Sha‘īr, Kashk al-Sha‘īr, Mā’al-Laḥm, Mā’ al-Rā’ib, Mā’al-‘Asal, Mā’al-Uṣūl, Mā’ al-Buzūr, Mā’al-Fawākih, Mā’al-Buqūl, Mā’al-Jubn, Panīr Māya, Sikanjabīn, Asfīdāj, Sikbāj, Masūs, Qalya, Ḥarīra, Khabīs	8
6.1	The scope of Ihrāq wa Taklīs	2

6.2	Materials used in calcination: Būta, crucible, Gil-i-Hikmat and Kaprotī	3
6.3	Method of preparation of Fawlād, Sadaf, Marjān, Qala'ī, Gawdantī, Jast, Nuqra, Khabsul Hadīd, Post Bayḍa Murgh, and Hajrul Yahūd	6
6.4	Particle size analysis of Kushtajāt	9
7.1	Method to determine the temperament and dose of Murakkab and pre-requisite of of formulation and mixing	10
7.2	The duties and ethics of pharmacy professionals	10
7.3	Dose calculation based on age and weight, and with a detailed description of their active constituents	10

Table 5 : Experiential learning Activity

(*Refer table 3 of similar activity number)

Experiential learning No*	Experiential name	Hours
1.1	Scope of Ilmul Saidla wa Murakkabāt	4
1.2	Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H)	6
1.3	Govt E. Portal: Shodhganga, Herbal / Unani drug data base	3
1.4	Location and organize management of Hospital Pharmacy	3
1.5	Taqṭī', Taqshīr, Daqq wa Radd, Saḥq, Nakhl, Tajfīf, Ta'ṣīr, Ta'rīq/Taqṭīr, Tabkhīr,Tabalwur Iqlā, Taṣfiya, Tarwīq, Taṣwīl, Tarshīḥ, Irghā, Taḥmīṣ, Tadhīn, Tashwiya, Taqliya, Taḥlīl, Taṣ'īd, Tadkhīn, Itfā, Iḥrāq, Taklīs, Taḥbīb, Takhmīr, Dhanāb.	10
2.1	Rūh and Jawhar	7
2.2	Soxhlet Apparatus, Reflux method and Cold method of extraction	8
2.3	Classical apparatus for oil extraction	8
2.4	Size reduction equipment	10
2.5	Assessment of Qiwām	6
3.1	General methods of Amal -i- Tadbīr, Amal -i- Tasfiya wa Ghasl and their effects on drug	10
3.2	Scientific interpretation of solid, liquid, semisolid, and gaseous dosage forms	8
3.3	Natural excipients, the role of binders, sweeteners, colourants, flavours, and coating materials, and understand their ratios in formulations	8
4.1	Principles of 'Amal-i-Takhmīr' with hands-on preparation and observation of traditional fermented beverages	10
4.2	Method of preparation for Sindūr, Dārchikna, Raskapūr, Safeda and Kāshgharī.	10
4.3	Method of preparation for Zangār, Tūtia, Hīrā Kasīs and Kajlī.	6
5.1	Unani Nutraceuticals and their concept	10
5.2	Ghidhā' Dawā'ī and Dawā'Ghidhāī	6

5.3	Scope for the preparation of some special diets	10
6.1	Changes during the calcination process	3
6.2	Methods for KushtasāzĪ: traditional and muffle furnace, Heating Grades and Type of put	5
6.3	Scientific evaluation of the method of calcination	8
6.4	Toxicity of Kushtajāt	10
7.1	Defects in Murakkabāt and their corrective measures	10
7.2	Management of a pharmacy	10
7.3	Storage of Murakkabāt	10
7.4	Shelf life of Murakkabāt	9

Table 6 : Assessment Summary: Assessment is subdivided in A to H points
6 A : Number of Papers and Marks Distribution

Subject Code	Paper	Theory	Practical	Total
UNIPG-AB-IS	1	100	200	300

6 B : Scheme of Assessment (Formative and Summative Assessment)

Credit frame work

UNIPG-AB-IS consists of 7 modules totaling 16 credits, which correspond to 480 Notional Learning Hours. Each credit comprises 30 Hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Formative Assessment : Module wise Assessment:will be done at the end of each module. Evaluation includes learners active participation to get Credits and Marks. Each Module may contain one or more credits.

Summative Assessment: Summative Assessment (University examination) will be carried out at the end of Semester II.

6 C : Calculation Method for Modular Grade Points (MGP)

Module Number & Name (a)	Credits (b)	Actual No. of Notional Learning Hours (c)	Attended Number of notional Learning hours (d)	Maximum Marks of assessment of modules (e)	Obtained Marks per module (f)	MGP =d*f/c*e*100
M1. Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات	2	60		50		
M2. Applied Aspect of Classical Method and Equipment روایتی طریقے، آلات اور ان کا اطلاقی پہلو	3	90		75		
M3. ‘Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation عمل تدبیر تصفیہ اور ترکیب ادویہ کا عمومی و اطلاقی پہلو،	2	60		50		
M4. ‘Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب	2	60		50		
M5. Unani Nutraceuticals یونانی اغذیہ	2	60		50		
M6. Ihrāq wa Taklīs احراق و تکلیس	2	60		50		
M7. Applied aspect of Murakkabat مرکبات کا عملی پہلو	3	90		75		
MGP = ((Number of Notional learning hours attended in a module) X (Marks obtained in the modular assessment) / (Total number of Notional learning hours in the module) X (Maximum marks of the module)) X 100						

6 D : Semester Evaluation Methods for Semester Grade point Average (SGPA)

SGPA will be calculated at the end of the semester as an average of all Module MGPs. Average of MGPS of the Semester For becoming eligible for Summative assessment of the semester, student should get minimum of 60% of SGPA

SGPA = Average of MGP of all modules of all papers = add all MGPs in the semester/ no. of modules in the semester Evaluation Methods for Modular Assessment

A S.No	B Module number and Name	C MGP
1	M1.Ilmul Saidla wa Murakkabāt علم الصیدلہ و مرکبات	C 1
2	M2.Applied Aspect of Classical Method and Equipment روایتی طریقے، آلات اور ان کا اطلاقی پہلو	C 2
3	M3.'Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation عمل تدبیر، تصفیہ اور ترکیب ادویہ کا عمومی و اطلاقی پہلو	C 3
4	M4.'Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب	C 4
5	M5.Unani Nutraceuticals یونانی اغذیہ	C 5
6	M6.Ihrāq wa Taklīs احراق و تلئیس	C 6
7	M7.Applied aspect of Murakkabat مرکبات کا عملی پہلو	C 7
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7) / Number of modules(7)

S. No	Evaluation Methods
1.	Method explained in the Assessment of the module or similar to the objectives of the module.

6 E : Question Paper Pattern

MD/MS Unani Examination
UNIPG-AB-IS
Sem II
Time: 3 Hours ,**Maximum Marks:** 100
INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	Application-based Questions (ABQ)	1	20	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Analytical based structured Long answer question (LAQ)	4	10	40
				100

6 F : Distribution for summative assessment (University examination)

S.No	List of Module/Unit	ABQ	SAQ	LAQ
(M- 1) Ilmul Saidla wa Murakkabāt علم الصیدلہ ومرکبات (Marks: Range 5-20)				
1	**(U-1)** Ilmul Saidla wa Murakkabāt علم الصیدلہ ومرکبات	No	Yes	Yes
2	**(U-2)** Classical Pharmacopoeias and Authoritative Books قدیم اور موجودہ مستند قرابادین اور معتبر کتابیں	No	Yes	Yes
3	**(U-3)** Govt. E Portal گورنمنٹ ای پورٹل	Yes	Yes	No
4	**(U-4)** Classification of Ilmul Saidla علم الصیدلہ کی درجہ بندی	Yes	Yes	Yes
5	**(U-5)** A'māl-i-Dawāsāzī(Pharmaceutical Procedures) اعمال دواسازی	Yes	Yes	Yes
(M- 2) Applied Aspect of Classical Method and Equipment روایتی طریقے، آلات اور ان کا اطلاقی پہلو (Marks: Range 5-20)				
1	**(U-1)** Distillation and Sublimation تعریق وتصعید	No	Yes	Yes
2	**(U-2)** Classical Extraction methods روایتی طریقہ تعصیر	Yes	Yes	Yes
3	**(U-3)** Oil extraction Methods: روغن کشید کرنے کا طریقہ	Yes	Yes	No
4	**(U-4)** Applied aspects, methods and equipment used in Safūfsāzī سفوف سازی میں مستعمل آلات اور طریقہ کار کا اطلاقی پہلو	Yes	Yes	Yes
5	**(U-5)** Qiwāmi Madda, Qiwāmi Murakkab, قوامی مادہ، قوامی مرکب	Yes	Yes	Yes
(M- 3) 'Amal -i- Tadbīr wa Tasfiya of Unani Drugs along with general and applied aspect of preparation عمل تدبیر، تصفیہ اور ترکیب ادویہ کا عمومی واطلاقی پہلو (Marks: Range 5-20)				
1	**(U-1)** 'Amal -i-Tadbīr wa Tasfiya عمل تدبیر وتصفیہ	Yes	Yes	Yes
2	**(U-2)** Classification, principle of formulation of dosage form اشکال ادویہ کی اقسام اور اصول ترکیب	No	Yes	Yes
3	**(U-3)** Method of preparation of dosage form: اشکال ادویہ کی ترکیب تیاری	Yes	Yes	Yes
(M- 4) 'Amal-i-Takhmīr and Preparation of some special drugs عمل تخمیر اور چند مخصوص دواؤں کی نوعیت ترکیب (Marks: Range 5-20)				
1	**(U-1)** 'Amal-i-Takhmīr عمل تخمیر	Yes	Yes	Yes

2	**(U-2)** Preparation of some special drugs بعض مخصوص ادویہ کی نوعیت ترکیب	No	Yes	Yes
(M- 5) Unani Nutraceuticals یونانی اغذیہ (Marks: Range 5-20)				
1	**(U-1)** Unani Nutraceuticals یونانی مخصوص اغذیہ	No	Yes	Yes
2	**(U-2)** Ghidhā' Dawā'ī and Dawā'Ghidhāī غذاء دوائی اور دواء غذائی	No	Yes	No
3	**(U-3)** Preparation of Special diets مخصوص غذاؤں کی ترکیب تیاری	Yes	Yes	Yes
(M- 6) Ihrāq wa Taklīs احراق و تکلیس (Marks: Range 5-20)				
1	**(U-1)** Historical Background تاریخی پس منظر	No	Yes	Yes
2	**(U-2)** Process of Calcination عمل تکلیس	Yes	Yes	No
3	**(U-3)** Preparation of Kushtajāt کشتہ جات کی تیاری	No	Yes	Yes
4	**(U-4)** Assessment of Kushtajāt کشتہ جات کا تجزیہ	Yes	Yes	No
(M- 7) Applied aspect of Murakkabat مرکبات کا عملی پہلو (Marks: Range 5-20)				
1	**(U-1)** Unani Formulation یونانی مرکبات	Yes	Yes	Yes
2	**(U-2)** Principle of Nuskha Nawesi (Prescription Writing) اصول نسخہ نویسی	Yes	Yes	Yes
3	**(U-3)** Posology علم اوزان ادویہ	Yes	Yes	Yes

6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)

Instructions for the paper setting.

1. 100 marks question paper shall contain:-
• Application Based Question: 1 No (carries 20 marks)
• Short Answer Questions: 8 Nos (each question carries 05 marks)
• Long Answer Questions: 4 Nos (each question carries 10 marks)
2. Questions should be drawn based on the table 6F.
3. Marks assigned for the module in 6F should be considered as the maximum marks. No question shall be asked beyond the maximum marks.
4. Refer table 6F before setting the questions. Questions should not be framed on the particular unit if indicated “NO”.
5. There will be a single application-based question (ABQ) worth 20 marks. No other questions should be asked from the same module where the ABQ is framed.
6. Except the module on which ABQ is framed, at least one Short Answer Question should be framed from each module.
7. Long Answer Question should be analytical based structured questions assessing the higher cognitive ability.
8. Use the Blueprint provided in 6G or similar Blueprint created based on instructions 1 to 7

Blueprint		
Question No	**Type of Question**	**Question Paper Format**
Q1	**Application based Questions** 1 Question 20 marks All compulsory	M1.U3 **Or** M1.U4 **Or** M1.U5 **Or** M2.U2 **Or** M2.U3 **Or** M2.U4 **Or** M2.U5 **Or** M3.U1 **Or** M3.U3 **Or** M4.U1 **Or** M5.U3 **Or** M6.U2 **Or** M6.U4 **Or** M7.U1 **Or** M7.U2 **Or** M7.U3
Q2	**Short answer Questions** Eight Questions 5 Marks Each All compulsory	1. M1.U1 **Or** . M1.U2 **Or** . M1.U3 **Or** . M1.U4 **Or** . M1.U5 2. M2.U1 **Or** . M2.U2 **Or** . M2.U3 **Or** . M2.U4 **Or** . M2.U5 3. M3.U1 **Or** . M3.U2 **Or** . M3.U3 4. M4.U1 **Or** . M4.U2 5. M5.U1 **Or** . M5.U2 **Or** . M5.U3 6. M6.U1 **Or** . M6.U2 **Or** . M6.U3 **Or** . M6.U4 7. M7.U1 8. M7.U2 **Or** . M7.U3
Q3	**Analytical Based Structured Long answer Questions** Four Questions 10 marks each All compulsory	1. M1.U1 **Or** . M1.U2 **Or** . M1.U4 **Or** . M1.U5 **Or** . M2.U1 **Or** . M2.U2 **Or** . M2.U4 **Or** . M2.U5 2. M3.U1 **Or** . M3.U2 **Or** . M3.U3 **Or** . M4.U1 **Or** . M4.U2 3. M5.U1 **Or** . M5.U3 **Or** . M6.U1 **Or** . M6.U3 4. M7.U1 **Or** . M7.U2 **Or** . M7.U3

6 H : Distribution of Practical Exam (University Examination)

S.No	Heads	Marks
1	Major Practicals (Long Practical)-One practical	80
2	Minor Practical/ Short Procedure/Spotters: Minor Practical: 20 Marks- One Minor Practical Procedure: 20 Marks- One Procedure Spotters: 20 Marks -Five Spotters	60
3	Viva: Internal Examiner: 20 Marks External Examiner: 20 Marks	40
4	Logbook (Activity Record)	10
5	Practical Record	10
Total Marks		**200**

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Abbreviations

Domain		T L Method		Level	
CK	Cognitive/Knowledge	L	Lecture	K	Know
CC	Cognitive/Comprehension	L&PPT	Lecture with PowerPoint presentation	KH	Knows how
CAP	Cognitive/Application	L&GD	Lecture & Group Discussion	SH	Shows how
CAN	Cognitive/Analysis	L_VC	Lecture with Video clips	D	Does
CS	Cognitive/Synthesis	REC	Recitation		
CE	Cognitive/Evaluation	SY	Symposium		
PSY-SET	Psychomotor/Set	TUT	Tutorial		
PSY-GUD	Psychomotor/Guided response	DIS	Discussions		
PSY-MEC	Psychomotor/Mechanism	BS	Brainstorming		
PSY-ADT	Psychomotor Adaptation	IBL	Inquiry-Based Learning		
PSY-ORG	Psychomotor/Origination	PBL	Problem-Based Learning		
AFT-REC	Affective/ Receiving	CBL	Case-Based Learning		
AFT-RES	Affective/Responding	PrBL	Project-Based Learning		
AFT-VAL	Affective/Valuing	TBL	Team-Based Learning		
AFT-SET	Affective/Organization	TPW	Team Project Work		
AFT-CHR	Affective/ characterization	FC	Flipped Classroom		
		BL	Blended Learning		
		EDU	Edutainment		
		ML	Mobile Learning		
		ECE	Early Clinical Exposure		
		SIM	Simulation		
		RP	Role Plays		
		SDL	Self-directed learning		
		PSM	Problem-Solving Method		
		KL	Kinaesthetic Learning		
		W	Workshops		
		GBL	Game-Based Learning		
		LS	Library Session		
		PL	Peer Learning		
		RLE	Real-Life Experience		

		PER	Presentations		
		D-M	Demonstration on Model		
		PT	Practical		
		X-Ray	X-ray Identification		
		CD	Case Diagnosis		
		LRI	Lab Report Interpretation		
		DA	Drug Analysis		
		D	Demonstration		
		D-BED	Demonstration Bedside		
		DL	Demonstration Lab		
		DG	Demonstration Garden		
		FV	Field Visit		
		JC	Journal Club		
		Mnt	Mentoring		
		PAL	Peer Assisted Learning		
		C_L	Co Learning		