

USER MANUAL III

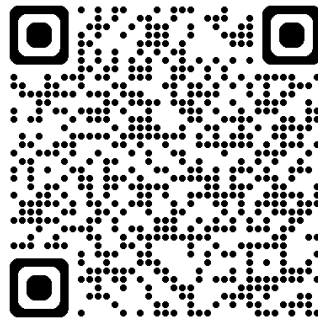
COURSE CURRICULUM FOR THIRD PROFESSIONAL Bachelor of Siddha Medicine and Surgery (B.S.M.S.) (PRESCRIBED BY NCISM)

(Applicable from 2021-22 batch, from the academic year 2024-25as onwards
for 5 batches or until further notification by NCISM, whichever is earlier)



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**BOARD OF UNANI, SIDDHA AND SOWA RIGPA
NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI- 110026**



National Commission for Indian System of Medicine

The National Commission for Indian System of Medicine is the statutory body constituted under NCISM Act, 2020 vide gazette notification extraordinary part (ii) section (i) dated 21.09.2020.

An Act..

- to provide for a medical education system that improves access to quality and affordable medical education, ensures availability of adequate and high quality medical professionals of Indian System of Medicine in all parts of the country;
- that promotes equitable and universal healthcare that encourages community health perspective and makes services of such medical professionals accessible and affordable to all the citizens;
- that promotes national health goals;
- that encourages such medical professionals to adopt latest medical research in their work and to contribute to research;
- that has an objective periodic and transparent assessment of medical institutions and facilitates maintenance of a medical register of Indian System of Medicine.
- for India and enforces high ethical standards in all aspects of medical services;
- that is flexible to adapt to the changing needs and has an effective grievance redressal mechanism and for matters connected therewith or incidental thereto

Ref. No 20-4/2021-NCISM

Dated: 21.08.2023

FOREWORD



The Siddha system of medicine is one of the oldest medical systems, practiced from time immemorial in the southern part of our country. The knowledge, wisdom, and practice of ancient Siddhars (saints and sages of Tamils and the founders of Siddha) had been transmitted through Guru-Seedar Paramparai, carefully guarded and documented later in palm-leaf manuscripts in the name of Siddhars, including well-prominent eighteen Siddhars.

Siddha started from community practice in ancient times by expanding its horizons from Viathyam to Vaatham, Yogam, Jnanam, Jothidam, and other Saththirams. The system has grown immensely in calibre, travelled many centuries to become institutionalized, regulated, and established as a stream of Indian traditional medicine, and has become an integral part of the national health delivery system. Currently switching over to systematic, standardized, and evidence-based approaches with perpetual scientific inputs, documentation, and research.

Now, under the provisions of the National Commission for Indian System of Medicine Act, 2020, Siddha underwent significant reforms aligning with National Education Policy 2020, global trends, and future needs. Now we are in the era of competency-based, dynamic curriculum incorporated with modern scientific advancements. More emphasis is given on activity-based learning/outcome-based learning, and horizontal-vertical integration to provide holistic quality education. This will again change in the future with the horizontal model of teaching. We must keep ourselves ready to be attuned to time and subsequent change.

The present syllabus is student-centric. Activity-based learning is designed to promote the competency level of the students. The enormous effort taken by the syllabus framing committees under the able leadership of the President of the Board of Unani Siddha & Sowa-Rigpa, Dr K. Jagannathan is clearly visible in this document. I congratulate the entire team & Dr K. Jagannathan for the same.

On behalf of the commission, I request all teaching faculties to give this document a serious reading, discuss it with their colleagues, understand the concepts, contents, and methods, and implement them for the benefit of the students. No need to mention it here; your feedback is very valuable for us.



Vaidya Jayant Deopujari



डॉ. के.जगन्नाथन
अध्यक्ष
Dr. K. Jagannathan
President



यूनानी, सिद्धा और सोवा-रिग्पा बोर्ड
भारतीय चिकित्सा पद्धति राष्ट्रीय आयोग
भारत सरकार
Board of Unani, Siddha & Sowa-Rigpa
National Commission For Indian System of Medicine
Government of India

D.O. No./02/P.BUSS/2025

FOREWORD

The National Commission for Indian System of Medicine under the NCISM Act, 2020, is marching ahead to bring revolutionary changes since its establishment (June 11, 2021) in medical education, healthcare services, research, etc., that are appropriate to the present context and the future. Determining the standards of education and evolving a competency-based dynamic curriculum to develop appropriate skills, knowledge, attitudes, values, and ethics among the students is one of the main functions of the Board of Unani Siddha and Sowa-Rigpa (BUSS), the autonomous board under NCISM.

The commission started working by aiming for 2030 and aligning with the National Education Policy 2020 and global trends. Accordingly, under the provision of the Act, the Minimum Standards of Undergraduate Siddha Education Regulations 2022 (NCISM MSE-Siddha UG 2022) has been notified in the gazette with significant reforms including the reversal of ratio of didactic teaching and practical/activity oriented demonstrative teaching and training to 1:2; the implementation of online elective courses to motivate a multi-disciplinary approach; the introduction of formative assessment to ensure individual attention, improvisation and progression; the execution of early clinical exposure to leverage clinical skills; updating the curriculum with relevant modern scientific advancements and technological developments etc.

The objective of the BSMS program is to produce compassionate and proficient clinicians. For this purpose, a well-structured syllabus is indispensable to teaching and training the students to accomplish course objectives and outcomes and, by the way, program objectives and outcomes. To attain this, the commission introduced a competency-based dynamic curriculum. Before framing the curriculum and syllabus, NCISM/BUSS consulted stakeholders (undergraduate students, interns, postgraduate students, and teaching faculties) methodically to get their inputs and insights and by conducting thought experiments for teaching faculties.

Third professional subjects are clinically oriented, and they link with foundational, pre-clinical, and para-clinical subjects of the first and second professional subjects. To bring continuity and connectivity to the subjects, integrated teaching (horizontal and vertical) is also brought into the curriculum. Clinical subjects stand as the cornerstone of Siddha medicine, bridging the gap between theoretical knowledge and real-world application. As healthcare continues to evolve, the demand for skilled professionals who can apply clinical principles with precision, empathy, and innovation. These subjects provide an essential foundation for aspiring clinicians, guiding them to not only understand the underlying science but also hone the practical skills needed to deliver quality patient care. The topics explored in third professional subjects will equip students with the tools to diagnose, treat, and manage a wide range of conditions and explore the Siddha healthcare system as evidence-based through research and innovations. Assessment is another major issue in education. Conducting objective-oriented examinations and maintaining uniformity in examining all students is a major challenge. To address both issues, the blueprint of the questions and the weightage and structure of the practical and clinical are also clearly defined in the present syllabus.

My heartfelt thanks to Shri Vaidya Jayanth Deopujari, the Chairman of NCISM, who is the mastermind behind the current educational reforms and offered constant support in curriculum development activities. My sincere thanks to Dr. Mohan Joshi, the chief coordinator, Curriculum Development Programme-Siddha, and his team of HSET experts, phase coordinators, chairman, co-chairman, coordinator, expert members, and external experts of all subject committees for their active participation in all twelve stages of the curriculum development program and their contributions in shaping this futuristic syllabus. This is my sincere request to teachers: to understand the objectivity of the subject and to put forth maximum efforts to achieve the same. I would also like to request that the heads of the institutions prepare dynamic timetables so that various activities specified in the syllabus may be accommodated and conducted effectively and efficiently.

Reform-Perform-Transform: Finally, to say, NCISM has brought several reforms in education appropriately; as per the curriculum and syllabus, teaching faculties shall **perform** to execute, and if doing so, we could **transform** Siddha medical education to a higher level to fulfil future demands.

01-03-2025

Prof. Dr. K. Jagannathan, MD (Siddha), PhD
President, BUSS, NCISM

Prologue

Since 2021-22 admitted batch NCISM had accepted competency/outcome based dynamic curriculum(CBDC/OBDC). This is an educational framework that centres around clearly defined learning outcomes or objectives. In this approach, the curriculum is designed and structured based on the desired knowledge, skills, and competencies that students should attain by the end of a course or program. Instead of focusing solely on content delivery, outcome-based curriculum emphasizes the demonstrable results of learning.

The process involves identifying specific learning outcomes, aligning instructional strategies and assessments to these outcomes, and continuously assessing students' progress and achievement. This approach enhances transparency, as both educators and students have a clear understanding of the intended learning goals. Outcome-based curriculum fosters active learning, critical thinking, and practical application of knowledge, better preparing students for real-world challenges. It also allows for continuous improvement by incorporating feedback and adapting the curriculum to meet evolving educational needs.

competency/outcome based dynamic curriculum(CBDC/OBDC) is structured around the alignment of several key elements: General Abilities (GA), Program Learning Outcomes (PLO), and Course Learning Outcomes (CLO). Mapping these elements helps ensure a coherent and effective educational framework.

Graduate Attributes (GA) encompass a set of skills and attributes that students should develop across their academic journey. These abilities often include critical thinking, communication, teamwork, ethical awareness, and more. They represent the overarching qualities that students should possess upon graduation.

Program Learning Outcomes (PLO) are specific statements that articulate what students should achieve by the time they complete a program of study. PLOs reflect the essential knowledge, skills, and competencies relevant to a particular field. They guide the curriculum design by outlining the program's intended outcomes.

Course Learning Outcomes (CLO) are detailed objectives for individual courses within the program. They break down the broader PLOs into specific, measurable statements that define what students should be able to do after completing a particular course.

Mapping involves aligning GA, PLO, and CLO to ensure a seamless progression of learning. It ensures that each course's CLOs contribute to achieving the program's PLOs, and that both are in line with the development of GA. Mapping ensures that the curriculum is coherent, progressive, and that students are consistently building the desired skills and knowledge. This alignment aids in assessment and evaluation, as well as in demonstrating the effectiveness of the educational program in producing graduates with the intended abilities and outcomes.

Graduate Attributes (GA): -

- GA 1. Competent and skilled Siddha physician / surgeon with profound knowledge of Siddha medicine along with the contemporary advances in the field of Siddha.
- GA 2. Erudite and accomplished practitioner well versed in Vinnavar Maruthuvam (Divine treatment), Maanida Maruthuvam (Rational treatment) and Asura Maruthuvam (Siddha surgical treatment)
- GA 3. Siddha scholar excels his expertise in personalised medicine based on Siddha fundamental principles such as Imbootham (five elements), Mukkutram (three humors), Yakkai ilakkanam (body temperament) and Ninety six thatwas.
- GA 4. Institutionally trained Siddha physicians confirm the diagnosis through “Envagai thervu including Naadi, Neerkkuri and Neikkuri” and treat Noi (disease) and Noi Mudhal (root cause of the disease) simultaneously.
- GA 5. Experienced in handling 32 types of internal medicines and 32 types of external treatment methods so as to provide inclusive / holistic treatment.
- GA 6. Dexterous and skilled at providing Siddha special treatments like Varma therapy, Thokkanam therapy, Yoga therapy, Kaya kalpa therapy and other surgical procedures.

- GA 7. Community educator who is aware of Siddha principles and disciplines of disease prevention, way to maintain community health and National health policies / programs.
- GA 8. Ensures wellness of the people through lifestyle regulations based on Siddhar's "Unave Marunthu; Marunthe Unavu (food is medicine, medicine is food)" and Pini anugaa Vidhi (preventive medicine) concepts.
- GA 9. Talented in converting the knowledge of basic medical sciences to application level in clinical diagnosis, manipulation techniques and treatment procedures.
- GA 10. Siddha Graduate is capable to elucidate the meaning of Tamil verses from ancient Siddha manuscripts.
- GA 11. Critical thinker, problem solver, decision maker, counselor, good communicator, proactive leader and lifelong learner.
- GA 12. Professional who has qualities of researcher, academician, and entrepreneur.

Program Learning Outcomes (PO)

- PO 1. Demonstrate the skills of a physician/surgeon in Siddha medicine along with the knowledge of contemporary advances in the field of Siddha.
- PO 2. Showcase disease management with Vinnavar Maruthuvam (Divine treatment), Maanida Maruthuvam (rational treatment), and Asura Maruthuvam (Siddha surgical treatment).
- PO 3. Apply individualised medicine practice based on Siddha fundamental principles such as Imbootham (five elements), Mukkutram (three humors), Yaakkaiilakkanam (body temperament/constitution), Ninety-six thatwas, and so on.
- PO 4. Demonstrate diagnosis through "Envagaithervu including Naadi, Neerkkuri and Neikkuri" and treat Noi (disease) and Noi Mudhal (root cause of the disease) simultaneously.

- PO 5. Prescribe disease-specific treatment from 32 different types of internal and external medicine.
- PO 6. Perform Siddha special treatments such as Varma therapy, Thokkanam therapy, Yoga therapy, Kaya kalpa therapy and Siddha surgical procedures under Aruvai, Agni and Kaaram.
- PO 7. Educate people on Siddha disciplines of disease prevention, community health and National health policies / programs.
- PO 8. Prescribe lifestyle modifications and preventive medicine and measures as a part of holistic treatment.
- PO 9. Demonstrate the use of anatomy, physiology, biochemistry, microbiology, pharmacology, and other disciplines in clinical diagnosis, treatment, and interdisciplinary research.
- PO 10. Elucidate the meaning of Tamil verses and contents from ancient Siddha manuscripts and translate them into English.
- PO 11. Demonstrate qualities of critical thinking, problem solving, and decision-making.
Demonstrate behaviour as a good communicator and counselor.
Demonstrate the qualities of a proactive leader.
Demonstrate the behaviour of a lifelong learner.
- PO 12. Exhibits behavior as a researcher, academician, and entrepreneur.

GA 1 to GA 12 are matched with PO 1 to PO 12.

User Manual of I professional B.S.M.S. was released with I professional curriculum in March 2022. II professional curriculum includes new TL methods and New Assessment methods, was released in August 2023. The User Manual for III professional B.S.M.S is released with enhanced structure of curriculum and customized for III professional curriculum.

User manual III


Welcome to new curriculum of NCISM for III Professional B.S.M.S..

This is an introduction before reading the curriculum files for III professional courses. These instructions will help reader to easily retrieve the information from the document. This document involves many familiar and less familiar terms. Faculties of First and second years have gone through User manuals for the respective years. This manual is customised as per the Third B.S.M.S. curriculum with changed structure.

First Page: Contains Name, Code, Year and “QR code” for accessing the syllabus webpage on NCISM official website.


Second page is Summary page for the Course. The Page will provide at a glance information of Lecture and non-Lecture hours, Distribution of hours as per papers, Distribution of Marks (Theory and Practical).

**COURSE CURRICULUM FOR THIRD PROFESSIONAL BSMS
(PRESCRIBED BY NCISM)**




**Varman, Puramaruthuvam and Sirappumaruthuvam
(Varman, External Therapy and Special Medicine)**

(SUBJECT CODE : SIDUG-VPS)
(Applicable from 2021-22 batch, from the academic year 2024-25 onwards for 5 batches or until further notification by NCISM, whichever is earlier)



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BOARD OF UNANI, SIDDHA AND SOWA RIGPA
NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE
NEW DELHI-110026



NCISM
III Professional SIDDHA MARUTHUVA ARIGNAR
(Bachelor of Siddha Medicine and Surgery)
Subject Code : SIDUG-VPS
Varman, Puramaruthuvam and Sirappumaruthuvam
(Varman, External Therapy and Special Medicine)

Summary

Total number of Teaching hours: 460				
Lecture (LH) - Theory		160	160(LH)	
Paper I	80			
Paper II	80			
Non-Lecture (NLHT)		90	300(NLH)	
Paper I	45			
Paper II	45			
Non-Lecture (NLHP)		210		
Paper I	105			
Paper II	105			

Examination (Papers & Mark Distribution)

Item	Theory Component Marks	Practical Component Marks			
		Practical	Viva	Elective	IA
Paper I	100	100	20	10 (Set-TB)*	20
Paper II	100				
Sub-Total	200	150			
Total marks	350				

Important Note :- The User Manual III BSMS 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 III 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 curriculum write to syllabus2sid@ncismindia.org

Preface is specific to the course, emphasizing importance of course in the curriculum, the Teaching Learning methods and outcome of the course.

Next table is Index. All the major tables are indexed.

Curriculum: The curriculum is defined as the guideline of the academic content covered by an education system while undergoing a particular program. Curriculum has a wider scope which

covers the knowledge, attitude, behaviour, manners, performance & skills that are imparted or inculcated in a student. It contains every aspect from objectives to assignments. This is outcome-based approach of the curriculum.

Graduate attributes reflect the particular quality and feature or characteristics of an individual, including the knowledge, skills, attitudes and values that are expected to be acquired by a graduate through studies at the higher education institution.

The graduate attributes include capabilities that help strengthen learners' abilities for widening current knowledge base and skills, gaining new knowledge and skills, undertaking future studies, performing well in a chosen career and playing a constructive role as a responsible citizen in the society.

Program learning Outcomes deal with the general aspect of graduation for a B.S.M.S. program, and the competencies and expertise a graduate will possess after completion of the program. Name of the Programme: Bachelor of Siddha Medicine and Surgery (B.S.M.S.)

As per new MSE, This programme (B.S.M.S.) is divided in three Professional years of 1.5 years each, followed by 1 year of internship. III professional B.S.M.S. has Seven courses (Subjects).

Course Code and Name of Course

Course code: is an abbreviation of selected alphabets given to the course (subject).

Name of the course: Complete name of the course is indicated in the table in each course.

Equivalent term as per MSE-2022

Sl. No.	Subject Code	Subject	Equivalent Terms
1.	SIDUG - MM	Maruthuvam	Medicine
2.	SIDUG - VPS	Varmam, Puramaruthuvam and Sirappumaruthuvam	Varmam, External Therapy and Special Medicine
3.	SIDUG – AM	Aruvai including Kan, Kathu, Mookku, Thondai, Pal and Thol Maruthuvam	Surgery including Ophthalmology, ENT, Dentistry and Dermatology
4.	SIDUG – SMM	Sool and Magalir Maruthuvam	Obstetrics and Gynaecology
5.	SIDUG – KM	Kuzhanthai Maruthuvam	Paediatrics
6.	SIDUG - RM	Research Methodology and Medical Statistics	
7.	Electives (Minimum Three) Subjects		

Next table explains Course learning outcomes (CO) and they are matched with Programme learning outcomes.(PO)

Table 1- Course learning Outcome and mapped Program learning outcomes.

SR1 CO No	A1 Course learning Outcome (CO) SIDUG-.....: At the end of the course SIDUG-....., the student should be able to-	B1 Course learning Outcome mapped with program learning outcomes.

SR1: Course learning Outcome are numbered in column SR1. CO<Number> for the SIDUG-.....: These number will be used in the table 3 in column A3.

A1: Course Learning Outcome (CO) :

Course Learning outcomes (CO) is a detailed description of, what a student must be able to do at the completion of a course. CO helps the learner to understand the reason for pursuing the course. Learner can visualize the learning (it may be knowledge, Skills or attitude) at the end of the course.

Learning outcome is measurable and involves the structuring of two parts, a verb and an object. The verb phrase describes the intended cognitive process or what the learner is intended to do, and the object phrase describes the knowledge students are expected to acquire or construct.

B1: **Program learning Outcomes (POs)** matched with **Course learning outcomes (CO)**

B.S.M.S. is a programme and outcomes for this are explained in earlier section. This column explains CO in column A1 matched with the appropriate PO<number> written in row in front of COs

Table 2: Contents of the Course-

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours Theory	F2 Non- Lecture hours Practical

Table 2 explains contents of course. List of topics and distribution according to term and marks.

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours Theory	F2 Non-Lecture hours Practical

A2: List of topics SIDUG-.....: List of the topics (main and subtopics) those are included in the course.

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours Theory	F2 Non-Lecture hours Practical

B2: Term – The course is of three terms of six months each. Topics in A2 are to be covered in three terms. This column indicates topics to be covered as per each term. Indicated by 1,2,3.

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours Theory	F2 Non-Lecture hours Practical

C2: Marks: This column indicates distribution of marks for the topic or group of topics in the course. Useful for considering the weightage of the topic in the course.

Term wise distribution is indicated in column B2 and marks distribution in C2.

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours Theory	F2 Non-Lecture hours Practical

As per MSE, Teaching hours are divided into lecture and non-lecture hours.

D2 explains Lecture Hours allotted for the course. E2 and F2 explains NLHT and NLHP i.e. Non Lecture Theory and Non Lecture Practical respectively,

(Teaching Hours for Third Professional B.S.M.S. Subjects)

Sl.No.	Subject Code	Name of subject	Number of teaching hours		
			Lectures	Non-lectures	Total

8.	SIDUG - MM	Maruthuvam (Medicine) Paper I & Paper II	160	300	460
9.	SIDUG - VPS	Varmam, Puramaruthuvam and Sirappumaruthuvam (Varmam, External Therapy and Special Medicine) Paper I & Paper II	160	300	460
10.	SIDUG - AM	Aruvai including Kan, Kathu, Mookku, Thondai, Pal and Thol Maruthuvam (Surgery including Ophthalmology, ENT, Dentistry and Dermatology) Paper I & Paper II	140	270	410
11.	SIDUG - SMM	Sool and Magalir Maruthuvam (Obstetrics and Gynaecology) Paper I & Paper II	110	240	350
12.	SIDUG - KM	Kuzhanthai Maruthuvam (Paediatrics) Paper I & Paper II	110	240	350
13.	SIDUG - RM	Research Methodology and Medical Statistics	60	90	150
14.	Avasara Casualty)	Maruthuvam (Emergency Medicine or Casualty)	-	60	60
Total			740	1500	2240

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours Theory	F2 Non-Lecture hours Practical

D 2 Lecture hours: Lecture is an exposition of a given subject or discourse on a particular subject delivered before an audience or class. Lecture is commonest method used in the classroom for teaching. Now it is supplemented with A/V aids. Expectations from the lecture are interactive lectures. Interactive teaching method is a teaching process which is conducted through the interaction between the teacher and the learner. It is within the existing learning conditions, aiming to transfer common knowledge, skills, and values to the student.

These can be brief segments within a larger lecture-based class and can include a single or mix of several different Teaching learning and student engaging techniques. Total number of hours required to complete the topic are indicated in the column.

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non- Lecture hours Theory	E2 Non- Lecture hours Practical

E2 and F2 Non Lecture Hours (NLHT and NLHP):- Practical-Learning means knowledge gained by implementing theory in real-life activities. This way of learning helps students to remember the topic for a long time and also to master it. Practical-learning makes the study more enjoyable, with the highest engagement in the topic.

Learning can be with various ways. Based on objectives like Disseminate knowledge, Develop capability to use ideas, to test ideas, to generate ideas, Facilitate the personal development of students, self directed learning.

Common methods like Reading, Handouts, Guest lectures, using library and other learning resources, Case studies, Work experience, Projects, Demonstrations, Group working, Simulations, Workshops, Discussion & debates, Essay writing, tutorials, Presentations, compilations, feedback on written work. Some others like Peer assessment, Research projects, Workshops on techniques of creative problem solving. Team based learning like Group working, Action learning, field work. Generating ideas with Lateral thinking, Brainstorming, Mind-mapping, Creative writing, drawing. Others like Problem solving, Experiential learning, Role play, Mentors, Reflective logs and diaries, independent study/ self-directed learning, Work placement, Portfolio development etc.

Activities based on relevance are expected as a part of learning experience. Time required for these activities along with different newer Teaching learning methods supported by various Audio visual aids can be considered as **non-lecture hours**. These hours are indicated as per topic list in this column.

Table 3: Learning objectives (Theory) of Course SIDUG-.....:

A3 Course outcome	B3 Learning Objective (At the end of the session , the students should be able to)	C3 Domain/ sub	D3 M K / D K / N K	E3 Level	F3 T-L method	G3 Assessm ent	H3 Assessm ent Type	I3 Term	J3 Integrat ion	K3 Type
Topic 1 Name of Topic (LH : , NLHT: , NLHP: hours)										
CO1		CK	M K	K	L&P PT, L	T-OBT, VV- Viva	F&S	1	V-DG	LH
CO1		CAN	D K	K	D, PrBL	CL-PR, T-OBT, PUZ,	F&S	2	-	NLHT 1.1
CO1		PSY- GUD	M K	K	PrBL , CBL, X- Ray	P-SUR, RK, PRN	F&S	3	-	NLHP 1.1
Non Lecture Hour Theory										
S.No	Name				Description of Theory Activity					
NLHT 1.1										
Non Lecture Hour Practical										
S.No	Name				Description of Practical Activity					
NLHP 1.1										

Table 3 Learning objectives of course SIDUG-.....: contents. This table contains eleven columns. This comprehensive table explains Topic and subtopic wise points in the table 2. Matched lecture and non lecture hours explained as per D2, E2 and F2 columns of table 2. It also explains learning Objective of the topic, Domain and subdomain as per Blooms Taxonomy, level, appropriate Teaching learning Method, assessment method, type of assessment and Integration for teaching. It additionally describes ways of dissemination like Lecture, NLHT and NLHP.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/ Sub	D3 Must to know/ desirable to know/ Nice to know	E3 Level Does/ Shows how/ Knows how/ Knows	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

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A3 indicates Course learning outcome (CO): - CO are explained in Column A1. Topic list is explained in column A2. This column A3 explains relation of Topic in list and course outcome denoted corresponding CO number. One topic and Objectives for topic may contribute in one or more than one CO s. They are also denoted in this column.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students	C3 Domain /sub	D3 Must to know/ desirable to know/ Nice to know	E3 Level Does/ Shows how / Knows	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
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ts shoul d be able to)			how / Kno w						
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)									

B3 Learning Objectives: - Learning objectives are clearly written, specific statements of observable learner behaviour or action that can be measured upon completion of an educational activity. It is a description of what the learner must be able to do upon completion of an educational activity. A well-written learning objective outlines the knowledge, skills and/or attitude the learners will gain from the educational activity. One Topic covers one or many learning objectives. They are noted in Column B3. Each objective start with a verb. Before that line in the first cell “At the end of the session, the student should be able to” is common to all the statement.

A3 Cour se outco me	B3 Learni ng Objec tive (At the end of the sessio n, the studen ts shoul d be able to)	C3 Domain /Sub	D3 Must to know/ desirab le to know/ Nice to know	E3 Lev el Doe s/ Sho ws how / Kno ws how / Kno w	F3 T-L meth od	G3 Assess ment	H3 Formati ve /summa tive	I3 Ter m	J3 Integra tion	K3 Typ e
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

C3 indicates **Domain of learning**. Benjamin Bloom has identified three domains of educational activities. The three domains are Cognitive, psychomotor and affective. Cognitive is for mental skills (Knowledge), Psychomotor is for manual or physical skills (Skills) while Affective is for growth in feelings or emotional areas (Attitude), They are also indicated by KSA (Knowledge, Skills and Attitude). All activities related to teaching and learning are aligned to these domains of learning.

Cognitive domain involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories. They are in ascending order. Lowest level is Knowledge (Recall), followed by Comprehension, Application, Analysis, Synthesis and Evaluation in the pyramid. They starting from the simplest to the most complex.

Cognitive/Knowledge- This level involves the foundational understanding of facts, concepts, and information. It includes recalling specific details, definitions, and essential terms, showcasing the ability to remember and recognize information.

Cognitive/Comprehension -At this level, individuals grasp the meaning of information, rephrase it in their own words, and interpret it. They demonstrate understanding by explaining concepts, summarizing content, and translating complex ideas into simpler terms.

Cognitive/Application - This level focuses on using learned knowledge to solve practical problems or perform specific tasks. It involves applying principles, concepts, or methods in real-world scenarios, demonstrating the ability to transfer theoretical understanding into practical use.

Cognitive/Analysis - At the analysis level, individuals break down complex ideas into smaller parts, identifying patterns, relationships, and causes. They delve deeper into information, evaluating components and recognizing connections between various elements.

Cognitive/Synthesis - Synthesis involves combining separate elements or concepts to form a new, cohesive whole. Individuals at this level create original interpretations, develop new ideas, or generate solutions by integrating different pieces of information.

Cognitive/Evaluation-This level entails making judgments and assessments about the value, validity, or quality of information, theories, methods, or solutions. Individuals critically analyze and compare ideas, weigh evidence, and form reasoned conclusions based on established criteria.

These cognitive levels represent a progression from basic understanding to critical thinking and creative synthesis, showcasing the depth of intellectual engagement in the learning process.

Psychomotor domain includes physical movement, coordination, and use of the motor skill areas. Development of these skills requires practice and is measured in terms of speed, precision, procedures, or techniques in execution. The seven major categories listed in order are Perception, Set, Guided response, Mechanism, Complex Overt Response, Adaptation and Origination.

Perception - This category involves becoming aware of and recognizing stimuli. It's the foundational level where individuals start to notice and identify relevant cues.

Set - Set refers to mentally preparing oneself to execute a specific physical action. It includes getting ready and understanding what needs to be done.

Guided Response - At this level, individuals follow instructions and perform tasks under guidance or supervision. They demonstrate basic motor skills based on clear directions.

Mechanism - Mechanism is about performing tasks with improved coordination and efficiency. Individuals gain better control over their movements and actions.

Complex Overt Response - Complex overt response involves executing intricate and coordinated actions with smoothness and precision. It's a step beyond basic mechanics, indicating a higher level of proficiency.

Adaptation - Adaptation entails modifying movements and responses based on changing conditions or unexpected situations. Individuals display flexibility and the ability to adjust their actions.

Origination - Origination is the highest level, involving the ability to create new movements, techniques, or approaches. Individuals at this stage innovate, improvise, and develop novel solutions.

These categories represent a hierarchical progression in motor skill development, starting from basic awareness and progressing to the ability to innovate and create new movements.

Affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories listed in order are: Receiving, Responding, Valuing, Organization and Internalizing values (characterization).

Affective/Receiving - This level involves being open to and aware of certain stimuli or information. It signifies a willingness to pay attention and acknowledge ideas, opinions, or feelings from others.

Affective/Responding - At this level, individuals actively respond to the stimuli they've received. This might include expressing opinions, showing interest, or participating in discussions related to the received information.

Affective/Valuing - Valuing reflects the development of a personal connection and attachment to certain values, ideas, or feelings. Individuals at this level begin to attach significance and importance to what they've received and responded to.

Affective/Organization - Organization entails the organization of values and beliefs into a coherent and consistent framework. Individuals at this level structure their values, aligning them with each other and with their own personal identity.

Affective/Characterization - Characterization is the highest affective level, representing the internalization and embodiment of values. Individuals at this level consistently demonstrate their values through actions and behavior, making these values an integral part of their identity. These affective levels illustrate a progression from simple awareness and acknowledgment to a deep integration of values into one's identity and actions.

These are denoted in column C3 e.g., Cognitive/Knowledge.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain /sub	D3 Must to know/ desirable to know/ Nice to know	E3 Level Doe s/ Shows how / Knows how / Know w	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

D3 : Considering the Course outcome, Learning objective, level of learner(UG/ PG etc), topics are classified into Must to know, Desirable to know and Nice to know. This classification is essential to focus depth of the teaching, allotted time and efforts in teaching. It reflects in Teaching learning Methods and assessment. Must know should be covered in depth, Desirable to know as an introduction and Nice to know should be a sensitization.

A3 Course outcome	B3 Learning Objective	C3 Domain /sub	D3 Must to know/ desirable to	E3 Level Doe s/	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
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	(At the end of the session, the students should be able to)		know/ Nice to know	Shows how / Knows how / Know						
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

E3 Levels of competencies in Clinical practice. It is based on Millar's Pyramid. It is divided in four levels. Lower two levels are Know and Know how based on Cognitive. Top two Shows and does for behaviour. Lower three levels are useful in UG. In any topic based on the Domain and importance, Level, Teaching and learning activities as well as Assessment methods are planned. These levels for each objective in topic are noted in Column E3.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/Category	D3 Must to know/desirable to know	E3 Level Desirable to know / Knows how / Know	F3 T-L method	G3 Assessment	H3 Formative/summative	I3 Term	J3 Integration	K3 Type
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

F3 T – L Methods: - Teaching learning methods. Teaching learning methods are planned based on Topic need, Domain, Importance, Level to be assessed. This column indicates traditional methods like lecture as well as interactive methods.

Lecture method is an educational presentation delivered by an instructor to a group of students with the help of instructional aids and training devices. In lecture method, the teacher orally presents the course material in an organized way to the students. Lectures may contain varying level of student participation, and the students take notes. Lecturing is one of the oldest methods of teaching used by the teachers of higher education. Lecture method gives more importance to content presentation, where the teacher is active and the students are passive, but the monotony of teaching will be overcome by various methods of Interactivity and Audio-visual aids. It is fastest and easiest way of large group teaching. Lecture method helps to motivate, clarify doubt, review the understanding by verbal and nonverbal responses.

- **Lecture with PowerPoint (PPT):** The instructor uses PPT slides to deliver structured content visually. These slides can include key points, diagrams, images, and concise explanations. PPT enhances understanding by presenting complex information in a digestible format. The visual appeal maintains student engagement and aids in retention. However, it's important to balance slides with verbal explanations to ensure active participation and prevent a passive learning environment.
- **Group Discussions:** After the lecture or specific segments, students engage in group discussions. This allows them to share their interpretations, ask questions, and explore the material collaboratively. Group discussions promote critical thinking, diverse perspectives, and the application of concepts to real-world scenarios. It's an opportunity for students to actively process information, voice opinions, and learn from their peers' insights.
- **Video Clips:** Integrating relevant video clips enhances learning by providing visual context and real-world examples. Videos can depict medical procedures, historical events, scientific experiments, or interviews with experts. Visual demonstrations offer an additional layer of understanding and cater to different learning styles. After watching a video, students can analyze, discuss, and relate the content back to the lecture material.
- **Interactivity and Engagement:** This combined approach fosters active participation. Students interact with the PPT slides, engage in meaningful discussions, and connect with video content. These interactive elements cater to various learning preferences and encourage students to take ownership of their learning journey.
- **Comprehensive Learning:** Each component of the approach contributes uniquely. Lectures with PPT provide a foundation of knowledge, group discussions encourage critical thinking, and video clips offer practical context. The synthesis of these methods enriches the overall learning experience.
- **Effective Time Management:** Group discussions and video clips can be strategically placed within the lecture to break the session into manageable segments. This prevents information overload and provides opportunities for reflection.
- **Technology Integration:** Leveraging technology such as video-sharing platforms and collaboration tools for group discussions enhances accessibility and participation, especially in hybrid or online learning environments.
- **Assessment and Evaluation:** The integrated approach allows instructors to assess students' understanding through their participation in discussions, responses to video-related questions, and their ability to connect concepts from the lecture and videos.

In lecture, various other methods can be included. A large classroom can be converted to small groups. Converting large classrooms into smaller ones. It's about making a comfortable space for discussions and learning. In smaller classrooms, students can talk more easily, ask questions, and work closely with others. It's a place where everyone's voice can be heard, and students can really get into the subjects they are studying. This change makes learning more interactive and personal, helping students connect better with their peers and teachers. Turning big classrooms into smaller ones comes with several advantages for their learning experience:

Personal Connection -In a smaller space, students can interact more closely with their classmates and teachers. This creates a sense of community and makes it easier to ask questions and share their thoughts

Active Participation -Smaller classrooms encourage everyone to get involved in discussions and activities. Student won't feel lost in a crowd, and their voice matters.

Deeper Understanding With fewer people around, student can have more in-depth conversations about the subjects they are studying. Students will have the chance to explore ideas from different angles.

Focused Learning - it's easier to stay focused on the lesson. Distractions are reduced, allowing students to engage more fully with the material.

Increased Collaboration - Working closely with classmates in a smaller space promotes teamwork. students can share ideas, solve problems together, and learn from each other.

Better Feedback - Teachers can pay more attention to individual students in a smaller classroom. This means student can get more personalized feedback on their progress.

Inclusive Environment - Smaller settings often feel more inclusive and welcoming. Students' are more likely to feel like a valued part of the group.

Active Learning:-Activities like group discussions, debates, and hands-on exercises are more effective in small classrooms. Students' are actively involved in their learning journey.

Discussions - Guiding discussions is a teaching method that offers both incredible rewards and some challenges. It's a way to encourage critical thinking in a dynamic manner. By using discussions as a central teaching technique, we can prompt active thought and engagement. Even large groups can be transformed into smaller ones, creating an opportunity for more interactive activities. While leading discussions can be demanding, it's also incredibly satisfying as it nurtures a deeper understanding of the subject and enhances collaborative learning.

Brainstorming - Imagine a storm of ideas where creativity flows freely! Brainstorming is an exciting teaching technique that encourages you to generate a bunch of fresh ideas in a short time. This happens in a group setting, where no idea is considered wrong. It's all about sparking

innovative thinking and finding new solutions. Students, by sharing their ideas and hearing others', get to explore a wide range of perspectives. This method nurtures their creativity and helps you approach challenges with a creative and open mind. is used as one of the teaching methods. the students participate by responding or presenting views on the topic. This technique encourages new ideas among students.

Inquiry-Based Learning Inquiry-Based Learning begins with the art of questioning, as students either spontaneously generate queries or are guided to do so. These questions serve as the catalyst for exploration, leading students to seek answers through research, engaging activities, and collaborative efforts. This approach fosters an environment where students actively shape their learning, nurturing curiosity, critical thinking, and teamwork as they navigate the journey of discovery.

Problem-based learning (PBL) is a student-centered approach in which students learn about a subject by working in groups to solve an open-ended problem. This problem is what drives the motivation and the learning.

Case-Based Learning - Similar to the methods discussed earlier, Case-Based Learning also involves diving into real-life situations. Here, students engage with a case, often drawn from clinical practice or real-life scenarios, as a starting point for learning. These cases encourage students to apply their knowledge and think critically. They analyze the situation, consider different angles, and propose solutions. This approach transforms learning into a practical adventure where students put their knowledge to the test by solving genuine problems.

Project-Based Learning - Project-Based Learning takes students on a different kind of journey. Instead of just learning from books, they spend a longer time, like a week, working on a single project. This project is a chance for them to put their learning to use and show what they've learned. They set goals for what they want to achieve, work on the project, and then present their work to their classmates. It's like a hands-on experience where they learn by doing.

Team-Based Learning (TBL) - In Team-Based Learning, learning is a team effort. Students prepare for class on their own, then come together in small groups to apply what they've learned. It's like a structured group activity where everyone contributes. The cool part is that it encourages students to be ready before class and helps them use what they've learned in a practical way. It's all about teamwork and applying knowledge to solve problems.

Flipped Classroom - Imagine learning in reverse! Flipped classrooms do just that. Before class, students do their homework by watching videos or reading materials provided by the teacher. Then, when they come to class, instead of a regular lecture, they dive into discussions

and ask questions. It's like the classroom is flipped – what used to happen in class now happens at home, and the classroom becomes a hub for interaction and deeper understanding.

Blended Learning - Blended learning mixes things up in a cool way. It's like a blend of the traditional classroom and technology. Some parts of the learning happen online, and some still take place in class. It's a bit like the flipped classroom, but with a twist. This approach uses the power of technology and mixes it with good old classroom interactions, making learning more flexible and exciting.

Edutainment - Learning becomes fun with edutainment! It's all about mixing education and entertainment. Teachers use cool methods like videos, slideshows, demos, and discussions to keep students engaged and excited. Learning feels less like a chore and more like an adventure. Edutainment makes sure that students not only learn but also have a blast doing it.

Simulation-Based Learning offers a dynamic educational method where students can put their learned skills into action within lifelike scenarios. This approach transforms abstract concepts into tangible experiences through hands-on practice. Whether it's practicing with simulated patients or real ones in a controlled clinical setting, such as a clinical skills lab, students learn to make informed decisions as they navigate through various scenarios. This method not only enhances their technical skills but also cultivates critical thinking and decision-making abilities, preparing them for real-world challenges in the medical field.

Role plays form the foundation of dramatic engagement and offer a unique approach to learning. This technique involves assuming different roles and enacting scenarios or problems, providing a safe space to practice responses and actions. Students by stepping into these roles, work through situations and refine their approaches in a risk-free environment. This approach is highly effective in nurturing cognitive, emotional, and communication skills. Through role plays, students not only grasp theoretical knowledge but also develop a practical understanding of how to apply it in real-life scenarios. This interactive method empowers them to enhance their problem-solving abilities, emotional intelligence, and effective communication techniques, preparing them for the complexities of the real world.

Self-directed learning Self-directed learning is a transformative process where individuals take charge of their own learning journey. This involves evaluating their learning needs, setting goals, actively engaging in the learning process, and evaluating their progress. In this method, students not only acquire crucial subject matter knowledge but also develop essential skills for lifelong learning. With the aid of numerous online tools, e-learning platforms, and Massive Open Online Courses (MOOCs) aligned with the syllabus, students have the opportunity to curate their learning experience. They by selecting topics of relevance and significance, tailors

their learning to their interests and needs. Self-directed learning not only cultivates subject expertise but also hones skills such as self-discipline, time management, critical thinking, and independent decision-making. Through this approach, students become architects of their education, gaining knowledge and skills that extend far beyond the classroom.

Problem solving method: - Human beings face multi-dimensional problems in their lives, and they try to solve these problems in a particular way in the light of their previously gained knowledge and experiences. In this regard, it is essential for the students to be prepared for future or near future challenges by facing real life, or real like, problems in their learning environment, and finding appropriate solution of these problems. Many similar methods like Critical thinking, creative thinking can be part of this activity.

Kinesthetic Learning students perform hands-on physical activities rather than listening to lectures or watching demonstrations. Kinesthetic learning, values movement and creativity, is most commonly used types of instruction. Students are expected to do, make or create something. Poster making, model making, Chart making, Video Clip making. Many such activities can be part of learning.

Workshops offer an interactive and concentrated approach to learning, where students delve into specific topics and emerge with refined skills. These sessions not only foster skill development but also cultivate effective communication and ethical values. Through hands-on activities and discussions, students gain practical insights that align with program outcomes, bridging theoretical learning with real-world application. Workshops empower students with the tools and values needed for success in their medical journey.

Game-Based Learning Game-Based Learning introduces a captivating dimension to education, where students embark on quests to achieve specific goals. This approach seamlessly merges learning objectives with the excitement of earning points or badges, akin to video games. Students by immersing themselves in interactive challenges, become problem solvers, navigating through scenarios and deciphering complex concepts in pursuit of achievement. Incorporating elements of gamification, this method engages students in a dynamic learning experience. As they conquer challenges, they develop critical thinking skills, strategize solutions, and deepen their subject understanding. This interactive journey not only enhances their knowledge but also fosters a sense of accomplishment and enthusiasm, transforming learning into an exciting adventure.

Library sessions extend learning beyond the classroom, offering students access to a treasure trove of resources. In these sessions, students dive into books, journals, and digital databases, honing their research skills and discovering a world of information. Library sessions empower

students to explore topics in depth, supporting their academic growth and critical thinking abilities.

Peer Learning /Collaborative learning - Peer learning, a collaborative teaching method, encourages students to learn from each other. Students by working together on projects, discussions, and problem-solving activities, exchange ideas, clarify doubts, and enhance their understanding. This approach nurtures teamwork, communication, and diverse perspectives, transforming learning into a collective journey.

Real-Life Experience - Real-life experiences bring classroom learning to life. Students engage with the practical application of their studies, whether through internships, clinical rotations, or hands-on activities. These experiences bridge the gap between theory and practice, equipping students with the skills and insights necessary for their future professions.

Symposium - A symposium is a dynamic forum where experts and students come together to discuss and share insights on a specific topic. Through presentations, discussions, and debates, symposiums provide a platform for diverse perspectives and in-depth exploration. This collaborative approach encourages critical thinking and a comprehensive understanding of the subject matter.

Tutorial - Tutorials offer a personalized learning experience, allowing students to work closely with educators in small groups. In these sessions, students can clarify doubts, delve deeper into topics, and receive individualized guidance. Tutorials foster a supportive environment for asking questions and seeking clarification, enhancing overall comprehension.

Presentations - Presentations empower students to convey their ideas effectively to an audience. Whether through visual aids or verbal delivery, students develop communication skills and the ability to synthesize complex information. Presentations not only showcase knowledge but also cultivate confidence and public speaking abilities.

Practicals/ Hands-On Engagement. Practical sessions transform theoretical knowledge into practical skills. Through hands-on activities, experiments, and simulations, students gain a tangible understanding of concepts. Practicals enhance critical thinking, problem-solving, and decision-making abilities, preparing students for real-world challenges.

X-ray identification is a skill that enables medical professionals to decipher diagnostic images and uncover vital information. Through practice and guidance, students learn to identify anatomical structures, anomalies, and potential medical conditions. This skill sharpens observation abilities and cultivates a deep understanding of medical imaging techniques.

Case diagnosis involves analyzing patient data, symptoms, and medical history to arrive at accurate diagnoses. Students engage in critical thinking and problem-solving as they piece

together information to identify the underlying health issue. This method not only enhances medical knowledge but also sharpens analytical and decision-making skills.

Lab Report Interpretation - Interpreting lab reports is essential for medical professionals to understand patient health. Students learn to analyze data from various tests, translating numbers and values into actionable medical insights. This skill fosters proficiency in understanding medical reports and aids in making informed clinical decisions.

Drug analysis equips students with the ability to comprehend the effects of pharmaceutical substances on the human body. Through research and practical exploration, students gain insights into drug interactions, mechanisms, and potential side effects. This skill contributes to safe and effective patient care, highlighting the crucial intersection of pharmacology and patient well-being.

Demonstrations, often referred to as demos, are potent tools for interactive learning. They present practical examples, clarifying complex concepts by providing hands-on experiences. Models, whether physical or digital, are a common subject for demos, allowing students to engage directly with abstract ideas and gain a deeper understanding. Through model demonstrations, students can visualize relationships, simplify intricate theories, and foster active participation, making learning both engaging and effective. Demonstrations are powerful tools that bridge the gap between theoretical knowledge and practical application. They provide students with visual and hands-on experiences, enhancing their understanding of complex concepts. Whether conducted at the bedside, in a lab, or in a garden, demonstrations bring learning to life by allowing students to witness theories in action.

Bedside demonstrations take learning beyond the classroom and into the realm of patient care. By observing medical procedures, assessments, and interactions with patients at the bedside, students gain practical insights that textbooks alone cannot provide. This method enhances clinical understanding, communication skills, and empathy, fostering a holistic approach to healthcare.

Lab demonstrations provide a hands-on experience to explore scientific principles in action. Through experiments and simulations, students witness concepts coming to life, deepening their comprehension and analytical skills. Lab demonstrations bridge theory and application, fostering critical thinking and an intimate understanding of scientific processes.

Garden demonstrations connect students with the natural world, particularly in fields like botany and herbal medicine. By observing plant growth, species identification, and cultivation techniques, students gain practical knowledge about plants' medicinal properties. Garden

demonstrations offer a sensory and interactive learning experience, enriching students' understanding of nature's role in healthcare.

Field visits offer students a firsthand experience of real-world contexts related to their studies. Whether exploring ecosystems, healthcare facilities, or historical sites, these excursions bring theoretical concepts to life. Field visits foster a deeper understanding by allowing students to observe and interact with their environment, gaining practical insights that textbooks cannot provide. This experiential approach enhances knowledge retention, critical thinking, and a well-rounded perspective on the subject matter.

Encouraging the combination of field visits across diverse subjects can elevate the learning experience for students. Orchestrating such integrated educational visits, teachers can effectively highlight the connections between different subjects. This approach not only enhances students' comprehension of various disciplines but also prepares them for the interdisciplinary nature of real-world scenarios. Through these combined experiences, students can gain a more comprehensive and practical understanding of their field of study.

Systematic Literature Review Training – Students learn to critically evaluate and synthesize existing research using structured frameworks like PRISMA. They identify gaps, assess study quality, and compile evidence systematically. This method enhances their ability to conduct meta-analyses and evidence-based research. Practical exercises ensure hands-on experience in organizing and reporting literature.

Research Proposal Writing Workshops – Students draft research proposals, learning to define objectives, hypotheses, and methodologies. They receive guidance on structuring proposals, addressing ethical concerns, and selecting suitable study designs. Peer feedback and expert reviews refine their scientific writing skills. This method prepares them for grant applications and independent research projects.

Critical Appraisal Sessions – Students analyze research articles using appraisal tools like CASP and STROBE to assess validity and bias. They learn how to differentiate high-quality studies from flawed ones by evaluating methodology and data interpretation. This process strengthens their ability to critically assess and apply research findings. Discussions and case studies enhance their practical understanding of research integrity.

Data Analysis Practicum – Hands-on training using statistical software like SPSS and R enables students to analyze datasets. They apply statistical tests, interpret results, and present findings with proper justification. This method improves their ability to make data-driven decisions and avoid misinterpretation. Real-world datasets and case-based exercises enhance practical skills.

Ethical Dilemma Case Discussions – Students explore real-world ethical challenges in research, such as informed consent, plagiarism, and conflicts of interest. They engage in debates and role-playing exercises to develop ethical decision-making skills. This method fosters awareness of regulatory guidelines and ethical responsibilities in research. Case-based learning ensures deep engagement with ethical principles.

Grant Writing and Funding Simulation – Students simulate writing research grants, developing skills in budgeting, proposal structuring, and justifying their research. They learn how to address funding agency requirements and reviewer expectations. Peer reviews and expert feedback refine their grant-writing techniques. This prepares them for real-world funding applications and academic careers.

Mock Peer-Review Exercise – Students review each other's research papers using standard peer-review guidelines, learning to provide constructive criticism. They gain insights into the publication process and common reviewer expectations. This exercise enhances their critical thinking and scientific writing skills. Role-playing as reviewers helps them understand the importance of objectivity and ethical reviewing.

Research Dissemination Training – Students practice presenting their research findings in different formats, including oral presentations, posters, and policy briefs. They learn how to tailor content for academic, professional, and public audiences. Training in effective communication and visual representation enhances research impact. Feedback from peers and faculty strengthens their presentation skills.

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Bibliometric and Citation Analysis – Students explore research impact metrics like the h-index, i10 index, and citation tracking. They learn how to use databases like Scopus and Google Scholar to assess publication influence. This method helps them understand the importance of citations and research visibility. Practical exercises involve analyzing citation trends and research productivity.

Traditional Knowledge Digital Library (TKDL) Exploration – Students navigate TKDL to explore traditional medical knowledge and identify research gaps. They learn how to integrate traditional wisdom with modern scientific methodologies. Case studies highlight intellectual property rights and ethical considerations in traditional medicine research. This method promotes interdisciplinary research and innovation in evidence-based Science.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/Category	D3 Must to know/ desirable to know/ Nice to know	E3 Level Does/ Shows how / Knows how / Knows	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

G3 Assessments: This column indicates method of assessment for the given Topic. Various types of assessment methods are given as per domain. For assessment of cognitive domain MCQ, extended matching items, SAQ, LAQ, Essay writing, modified essay questions (MEQs), Constructed Response Questions (CRQs), case study, open book test etc. can be conducted. Using different assessment methods in education is really important. Each method helps teachers understand how well students are learning. Some methods check basic knowledge, like multiple-choice questions, while others like essays show how well students can think and explain. When teachers use a mix of methods, they can see different skills that students have. This also helps students who learn in different ways. Plus, using different methods helps students learn new things and be ready for real-life situations. So, by using different ways to check what students know, teachers can see the whole picture of how well students are learning and growing.

1. Diverse assessment methods enhance evaluation fairness and effectiveness.
2. Methods target different learning aspects, from basic knowledge to critical thinking.
3. Various methods accommodate diverse student learning styles and strengths.
4. Different approaches foster a wide skill range, from problem-solving to collaboration.
5. Assessment methods reflecting real-world scenarios bridge theory and practice.
6. Varied methods minimize bias and offer accurate insight into students' abilities.
7. Methods like essay writing promote higher-order thinking and skills.
8. Mixing methods maintains student motivation and engagement.

Theory Extended Matching Item (EMI): Theory Extended Matching Items present students with scenarios or clinical cases along with a list of possible responses. Students are tasked with matching the most suitable response to each scenario, thereby demonstrating their comprehension of theoretical concepts in practical contexts. This assessment method not only evaluates students' ability to recall information but also tests their application of knowledge to real-world situations, encouraging critical thinking and decision-making skills.

Theory Essay Writing: Theory essay writing provides students with an opportunity to explore topics in-depth. By crafting well-structured essays, students not only showcase their theoretical understanding but also their ability to analyze, synthesize, and present coherent arguments. This method assesses not just knowledge retention but also the higher-order cognitive skills of analysis, evaluation, and effective communication.

Theory Modified Essay Questions (MEQs): Theory Modified Essay Questions challenge students to address complex scenarios that require the integration of theoretical concepts. By applying their theoretical knowledge to practical situations, students demonstrate their aptitude for critical thinking, problem-solving, and decision-making. This method goes beyond surface-level understanding, probing into students' ability to synthesize information and apply it effectively.

Theory Constructed Response Questions (CRQs): Theory Constructed Response Questions require students to provide detailed written responses to specific prompts. This method assesses not only students' comprehension of theoretical material but also their capability to apply that knowledge to real-world scenarios. CRQs demand thoughtful analysis and application of theories, providing insights into students' ability to translate theoretical concepts into practical solutions.

Theory Case Study – This method evaluates students' ability to analyze real-world or hypothetical scenarios using theoretical knowledge. It tests critical thinking, problem-solving, and decision-making skills by requiring students to apply concepts to case-specific challenges.

Theory Open Book Test – Students are allowed to refer to books, notes, or research materials while answering application-based questions. This assessment measures their ability to interpret, analyze, and synthesize information rather than rely on rote memorization.

Practical Viva – An oral examination where students respond to questions related to practical concepts, techniques, and clinical procedures. It assesses their depth of understanding, reasoning skills, and ability to articulate knowledge clearly.

Practical Recitation – Students verbally present concepts, procedures, or theoretical frameworks to demonstrate comprehension. This method strengthens retention, communication skills, and the ability to explain concepts logically.

Practical Enact – A hands-on assessment where students demonstrate clinical techniques, diagnostic methods, or procedural skills in a controlled setting. It evaluates accuracy, efficiency, and adherence to standard protocols.

Practical Role Play – Students assume specific roles (e.g., doctor, patient, researcher) to simulate real-life clinical or research interactions. This method tests communication skills, patient management, and clinical decision-making.

Practical Model – Students create physical or conceptual models to represent complex concepts, processes, or disease mechanisms. It assesses creativity, application of knowledge, and the ability to simplify intricate ideas.

Practical Poster – A visual assessment where students design posters to present research findings, clinical cases, or scientific concepts. It evaluates their ability to summarize information effectively and present it in an engaging manner.

Practical Case Taking – Students conduct structured patient interviews, document case history, and analyze symptoms using diagnostic frameworks. This assessment develops clinical reasoning, patient interaction skills, and diagnostic accuracy.

Practical Identification – Students recognize and classify herbs, instruments, pathological specimens, or anatomical structures. This method tests observational skills, theoretical knowledge, and the ability to distinguish key characteristics.

Practical Problem Solving – Students analyze real or simulated clinical problems and propose solutions based on scientific principles. It assesses critical thinking, decision-making, and the ability to apply theoretical knowledge to practical situations.

Conducting Interview – Students engage in structured or semi-structured interviews with patients, experts, or research participants. This method evaluates their communication, data collection, and interpersonal skills.

Scenario-Based Assessment – Students respond to clinical or research-based scenarios that require them to analyze, interpret, and make decisions. It measures their ability to apply theoretical knowledge to real-life contexts.

Case-Based Assessment – Students work through detailed case studies to diagnose, plan treatment, or recommend interventions. This approach evaluates their analytical skills, decision-making, and practical application of concepts.

Structured LAQ (Long Answer Question) – A structured, guided long-answer format where students respond to comprehensive questions with specific components. It assesses depth of understanding, analytical ability, and structured reasoning.

Practical Exam: Practical exams assess hands-on skills and application of theoretical knowledge in real-world settings. Students demonstrate their proficiency in performing tasks relevant to their field of study, showcasing their ability to apply concepts learned in practice.

Presentation: Presentations require students to communicate their understanding of a topic to an audience. This method enhances public speaking and communication skills, while also assessing the student's grasp of the subject matter and their ability to synthesize information effectively.

Practical Performance: Practical performance evaluations gauge students' competency in applying acquired skills. Whether in a laboratory, clinical setting, or workshop, students are observed as they execute tasks, demonstrating their proficiency and practical application of knowledge.

Practical Survey: Practical surveys involve students collecting data from real-world scenarios. They learn how to design surveys, gather information, and analyze results. This method offers a hands-on experience in data collection and analysis, aligning theory with practical research skills.

Role Play: Role-playing scenarios assess students' ability to apply theoretical concepts to real-life situations. It tests their problem-solving, communication, and interpersonal skills by immersing them in simulated scenarios.

Model: Using models, students demonstrate their understanding of complex structures, systems, or processes. This hands-on approach assesses their ability to manipulate and interact with physical representations of theoretical concepts.

Poster: Poster presentations require students to visually present information, combining textual and visual elements. This method evaluates their capability to organize and convey complex concepts in a clear and concise manner.

Case Taking: Assessing students' interactions with simulated patients or cases evaluates their clinical and communication skills. It demonstrates their ability to gather information, diagnose, and recommend appropriate solutions.

Identification: Identification tasks assess students' knowledge of different elements, such as specimens, objects, or components relevant to their field. It evaluates their recognition and categorization skills.

Problem Solving: Practical problem-solving tasks replicate real-world challenges. Students apply their theoretical understanding to find solutions, showcasing their critical thinking and analytical skills.

Quiz: Quizzes serve as efficient assessments, evaluating students' grasp of core concepts and reinforcing theoretical fundamentals through repeated practice. They prompt ongoing review, aiding memory consolidation and providing immediate feedback on knowledge gaps.

Puzzles: Problem-solving puzzles push students to apply theoretical understanding in innovative ways. By challenging them to unravel intricate scenarios, these assessments nurture critical thinking, analytical skills, and adaptive reasoning.

Class Presentation: Presentations offer a multifaceted assessment platform. They not only gauge students' depth of subject knowledge but also hone their verbal communication, organization, and public speaking abilities, fostering well-rounded development.

Debate: Debates immerse students in dynamic discussions, honing research skills, critical analysis, and effective articulation of viewpoints. They encourage in-depth exploration of theoretical topics while evaluating persuasive capabilities.

Word Puzzle: Word puzzles inject an element of entertainment into vocabulary acquisition. Alongside assessing knowledge of essential terms, these puzzles stimulate cognitive connections, making learning engaging and memorable.

Online Quiz: Online quizzes blend technology with assessment, catering to tech-savvy learners. They provide immediate insights into students' understanding, making it a convenient tool for self-assessment and targeted improvement.

Online Game-Based Assessment: Game-based assessments leverage the allure of gaming to evaluate learning outcomes. By embedding educational objectives into interactive games, they enhance engagement while measuring knowledge application.

Making of Model: Crafting models bridges the gap between theory and practicality, evaluating students' ability to translate abstract concepts into tangible representations. This method fosters creativity, attention to detail, and spatial understanding.

Making of Charts: Designing charts showcases students' data interpretation and presentation skills. These assessments demand clarity in conveying complex information visually, assessing their ability to communicate effectively.

Making of Posters: Posters amalgamate creativity and communication skills. Crafting visually compelling representations of theoretical concepts evaluates students' visual design abilities and their capacity to synthesize and present information.

Interactions: Interactions foster dynamic engagement by assessing students' ability to communicate, collaborate, and respond effectively to diverse situations. These interactions can encompass discussions, debates, and role plays, evaluating their interpersonal and teamwork skills.

Critical Reading of Papers: Critical reading of papers hones students' analytical skills as they assess research articles. This method evaluates their capacity to extract meaningful insights, identify strengths and limitations, and engage with scholarly literature.

Creativity Writing: Creative writing assessments tap into students' imaginative prowess, challenging them to apply theoretical concepts in innovative ways. This approach fosters expression, original thinking, and the synthesis of diverse ideas.

Clinical Video Cases: Clinical video cases provide a virtual insight into real-world scenarios, testing students' diagnostic and decision-making skills. By evaluating their ability to analyze and respond to complex patient situations, this assessment mirrors clinical practice.

Simulated Patients: Simulated patients offer a controlled environment for students to interact with lifelike scenarios. This assessment method assesses clinical skills, communication, empathy, and the application of theoretical knowledge in a practical context.

Patient Management Problems: Patient management problems simulate real clinical challenges, evaluating students' ability to diagnose, treat, and manage patient conditions. This method assesses their clinical reasoning and application of theoretical concepts.

Checklist-Based Assessments: Checklist-based assessments provide structured evaluation criteria for various skills or tasks. They offer a systematic way to measure performance against predefined standards, ensuring comprehensive coverage of essential competencies.

OSCE (Objective Structured Clinical Examination): OSCE evaluates clinical skills through a series of stations, each focusing on specific tasks. This method rigorously assesses students' ability to perform practical procedures, communicate effectively, and demonstrate critical thinking under timed conditions.

OSPE (Objective Structured Practical Examination): OSPE evaluates practical skills in controlled settings. It involves multiple stations, each assessing specific skills or techniques, providing a well-rounded assessment of students' proficiency.

Mini-CEX (Mini Clinical Evaluation Exercise): Mini-CEX evaluates clinical skills through direct observation in real clinical settings. It provides immediate feedback on students' performance, assessing clinical decision-making, patient interaction, and problem-solving.

DOPS (Direct Observation of Procedural Skills): DOPS assesses procedural skills under supervision. Trained assessors directly observe and evaluate students' performance, ensuring competence in performing practical tasks and procedures.

CWS (Case-Writing Skills): CWS assesses students' ability to construct comprehensive clinical cases. It evaluates their understanding of clinical concepts, communication skills, and their capacity to present complex medical scenarios.

Rating Scales: Rating scales provide a structured approach to evaluating students' performance across predefined criteria. They offer a quantifiable assessment of skills, behaviors, or competencies, allowing for consistent and standardized evaluation.

Record Keeping: Record keeping assessments focus on accurate documentation of clinical encounters, procedures, and patient interactions. This method evaluates students' attention to detail, organization, and communication skills in maintaining comprehensive records.

Compilations: Compilations involve students gathering and presenting a collection of their work or accomplishments. This assessment method showcases their achievements, growth, and learning journey, offering a holistic view of their progress.

Portfolios: Portfolios are curated collections of students' work that showcase their achievements, reflections, and growth over time. This method encourages self-assessment, critical thinking, and the documentation of diverse learning experiences.

Log Book: Log books provide a chronological record of students' practical experiences, activities, and accomplishments. This assessment method offers insight into their hands-on training, clinical exposure, and the development of practical skills.

Trainers' Report: Trainers' reports offer valuable insights into students' performance from the perspective of educators or supervisors. These assessments provide an external perspective on students' progress, clinical skills, and overall competence.

Self-Assessment: Self-assessment encourages students to reflect on their own learning and performance. By evaluating their strengths, weaknesses, and areas for improvement, students take an active role in their educational journey.

Peer Assessment: Peer assessment involves students evaluating their peers' work, performance, or contributions. This method encourages collaboration, teamwork, and a deeper understanding of assessment criteria.

360-Degree Evaluation: 360-degree evaluation gathers feedback from multiple sources, including trainers, peers, and self-assessment. This comprehensive approach provides a well-rounded view of students' competencies, behaviours, and interactions.

Theory: Theory exams assess students' understanding of fundamental concepts and principles. They often require comprehensive written responses that showcase students' knowledge, critical thinking, and ability to communicate ideas clearly.

MCQ (Multiple Choice Questions): MCQs evaluate a wide range of content efficiently. They test students' recall, application, and analytical skills, offering a diverse assessment of their understanding.

MCQ Guidelines for Good Quality Questions in University Exams

1. **Clarity and Precision:** Questions should be clear, concise, and free from ambiguity to ensure students understand them without confusion.
2. **Single Correct Answer:** Each question should have only one best answer, avoiding multiple correct options or vague alternatives.
3. **Relevant and Application-Based:** Questions should align with the curriculum, focusing on conceptual understanding, clinical application, and problem-solving rather than rote memorization.
4. **Balanced Difficulty Level:** A mix of easy, moderate, and difficult questions should be included to assess different cognitive levels.
5. **Avoid Tricky or Misleading Questions:** Questions should test knowledge and comprehension, not confuse students with unnecessarily complex wording or deceptive choices.
6. **Plausible Distractors:** Incorrect answer choices should be reasonable yet clearly distinguishable from the correct answer to test true understanding.
7. **Grammatically Correct and Neutral:** The question stem and answer choices should be grammatically correct, free from bias, and not hint at the correct answer.
8. **No Negative Wording:** Avoid double negatives or confusing phrasing that may mislead students (e.g., "Which of the following is NOT true?").
9. **Avoid Double-Barreled Questions:** Questions should test only **one concept at a time** rather than combining multiple ideas into a single question, which may lead to confusion.
10. **Logical Answer Order:** Options should follow a logical sequence (e.g., numerical order, alphabetical order) to maintain readability and fairness.
11. **Adequate Coverage:** The MCQs should represent the full syllabus proportionally, ensuring all key topics are assessed systematically.

SAQ (Short Answer Questions): SAQs require concise written responses to specific prompts. They assess students' ability to provide focused answers, showcasing their comprehension and application of key concepts.

SAQ (Short Answer Questions) Guidelines for University Exams

1. **Clarity and Precision:** Questions should be direct, concise, and unambiguous, clearly stating what is expected in the answer.
2. **Single Concept Focus:** Each question should assess a single concept or topic, avoiding multiple ideas in one question.
3. **Defined Answer Length:** Expected responses should be brief and to the point, typically within **3-5 sentences or bullet points**, aligned with the marks allotted.
4. **Application-Oriented:** SAQs should assess **understanding, reasoning, and application** rather than just factual recall.
5. **Logical Structuring:** Questions should be sequenced progressively, covering basic concepts first before moving to applied aspects.
6. **Balanced Coverage:** Ensure a proportional distribution of SAQs across different syllabus topics for a **comprehensive assessment**.
7. **Avoid Double-Barreled Questions:** Each question should focus on **one aspect at a time** rather than combining multiple queries, which may lead to incomplete or unclear answers.
8. **Use of Directive Words:** Action verbs such as **define, list, explain, differentiate, justify, describe** should be used to clearly indicate the expected response format.
9. **Objective and Fair Assessment:** Questions should have clear, structured answers with a **well-defined marking scheme** for consistent evaluation.
10. **Avoid Ambiguous or Tricky Questions:** The language should be simple and precise to ensure **all students can interpret the question correctly** without confusion.

LAQ (Long Answer Questions): LAQs assess in-depth understanding and critical analysis. Students are expected to provide detailed, structured responses that demonstrate their grasp of complex topics.

LAQ (Long Answer Questions) Guidelines for University Exams

1. **Clarity and Precision:** Questions should be clearly framed, ensuring they are specific, unambiguous, and aligned with the subject's learning objectives.
2. **Comprehensive and Structured:** Each question should assess a broad concept with a structured response format, including **introduction, explanation, analysis, application, and conclusion** to ensure logical flow.
3. **Defined Answer Length:** Responses should be well-organized, typically spanning **5-7 paragraphs or structured bullet points**, based on the marks allotted.
4. **Application-Oriented:** Questions should encourage **critical thinking, reasoning, and real-world application** rather than relying solely on factual recall.
5. **Logical Sequencing:** LAQs should be arranged progressively, covering **fundamental concepts, theoretical understanding, and applied aspects** to test a deeper level of knowledge.
6. **Balanced Coverage:** Questions should be distributed proportionally across different topics to ensure a **comprehensive assessment** of the subject.
7. **Avoid Overlapping and Double-Barreled Questions:** Each question should focus on **one well-defined theme**, avoiding multiple unrelated aspects that may lead to confusion.
8. **Use of Directive Words:** Questions should use action verbs such as:
 - **Explain** the role of a specific process or principle.
 - **Describe** the key components of a concept.
 - **Discuss** advantages, limitations, and applications.
 - **Justify** an argument or perspective with supporting evidence.
 - **Compare and contrast** two related concepts.
9. **Objective and Fair Assessment:** A **well-defined marking scheme** should be used, ensuring consistency in evaluating depth of understanding, coherence, and clarity in responses.
10. **Avoid Ambiguous or Tricky Questions:** The language should be **clear, precise, and free from misleading terms**, ensuring students can accurately interpret and answer the question.

Practical Exams: Spotting, Identifications, Clinical Cases, Hands-On Skills

Spotting and Identifications: These assessments test students' ability to identify and label specific elements, such as anatomical structures or specimens. They focus on recognition and recall of visual information.

Clinical Cases: Clinical case exams present scenarios resembling real patient encounters. Students diagnose, analyze, and propose treatment plans based on the provided information, demonstrating clinical reasoning and decision-making skills.

Hands-On Skills: Practical assessments involve performing specific procedures or tasks. Students demonstrate psychomotor skills, accuracy, and attention to detail, showcasing their competence in applying theoretical knowledge in real-world settings.

Viva Exams: General and Structured

General Viva: General viva exams involve oral questioning on various subjects. Students must articulate their knowledge, reasoning, and problem-solving abilities in response to questions posed by examiners.

Structured Viva: Structured viva exams have predetermined questions and evaluation criteria. This focused approach ensures consistent assessment across students and covers specific learning objectives.

Incorporating these common examination methods ensures a comprehensive evaluation of students' theoretical knowledge, practical skills, clinical reasoning, and communication abilities. These diverse assessments promote a well-rounded understanding of students' capabilities.

A3 Course outcome	B3 Learning Objective (At the end of the session, the students should be able to)	C3 Domain/Category	D3 Must to know/ desirable to know/ Nice to know	E3 Level Doe s/ Shows how / Knows how / Know	F3 T-L method	G3 Assessment	H3 Formative /summative	I3 Term	J3 Integration	K3 Type
Topic 1- <Topic point > (Lecture:- <Number> hours, Non lecture <Number> hours)										

The H3 Formative and Summative Assessment Chart highlights the assessment methods specified in column G3 that are applicable for both formative and summative evaluation. While some topics are designated solely for formative assessment, a majority of the subjects are

intended for both formative and summative evaluation. This dual approach ensures a comprehensive and ongoing assessment of students' progress and understanding across various topics. The integration of formative assessment aids in continuous improvement and learning enhancement, while summative assessment provides a final evaluation of students' knowledge and skills in those areas. This balanced combination contributes to a thorough assessment strategy that promotes effective learning outcomes and comprehensive evaluation of students' overall performance.

I3 Term wise distribution is again indicated in column.

The concept of Integration in J3 focuses on consolidating students' understanding of similar topics that span multiple courses or subjects. Through integration, the knowledge and aspects related to a particular theme or topic are harmonized to offer a comprehensive approach. This collaborative effort involves multiple departments collaborating to deliver a unified learning experience for shared topics. Opportunities for both horizontal (H) and vertical integration (V) are identified in this column.

Horizontal Integration (H) pertains to courses within the same academic year i.e. III B.S.M.S. can collaborate to provide a cohesive learning experience for students. These departments by merging their expertise, can offer a holistic understanding of shared topics, enriching students' comprehension and cross-disciplinary perspectives.

Vertical Integration (V) primarily encompasses subjects that span across various academic years, ranging from the initial to the final years of study. This method facilitates a gradual and coherent progression of knowledge and proficiencies, reinforcing fundamental principles as students advance through their educational trajectory. Students by vertically integrating subjects across different years, are better prepared to grasp intricate concepts and apply their acquired knowledge throughout various stages of their learning journey. This comprehensive approach promotes a better understanding of the interrelatedness of subjects and cultivates a deeper appreciation of the curriculum

A3 Course outcome	B3 Learning Objective (At the end of	C3 Domain /sub	D 3 M K / D K / /	E3 Le vel	F3 T-L met hod	G3 Assess ment	H3 Assess ment Type	I3 Ter m	J3 Integra tion	K3 Type
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	the session, the students should be able to)		NK							
Topic 1 Name of Topic (LH : , NLHT: , NLHP: hours)										
CO1		CK	MK	K	L&P PT, L	T-OBT, VV- Viva	F&S	1	V- ISM,V- TST	LH
CO1		CAN	DK	K	L_V C, L&P PT, BS, DIS, L&G D	CL-PR, T-OBT, PUZ, Log book, RK	F&S	2	-	NLH T1.1
CO1		PSY- GUD	MK	K	PrB L, TBL, BS, DIS, LS	P-SUR, RK, PRN, M- POS, C-INT	F&S	3	-	NLH T1.2
Non Lecture Hour Theory										
S.No	Name				Description of Practical Activity					
NLHT 1.1										
NLHT 1.2										
Non Lecture Hour Practical										
S.No	Name				Description of Practical Activity					
NLH P1.1										

In Column K3, the Non-Lecture Theory (NLHT) and Non-Lecture Practical (NLHP) activities are numbered in alignment with the corresponding Learning Objectives listed in Column B3. Subsequent rows following the Learning Objectives contain these numbered NLHT and NLHP activities, providing detailed descriptions of both theoretical and practical components associated with each activity.

Since multiple TL methods are provided under NLHT and NLHP, their execution should be planned strategically, considering the total time allocated for each activity. Activities should be scheduled in a way that balances theoretical reinforcement with hands-on experience, ensuring that learners can apply their knowledge effectively.

Table 4 : NLHT Activity:- (*Refer table 3 of similar activity number)

Activity No.*	CO No	Activity Details
2.1		

Table indicates activity number, Course Outcome Number, Activity Details.
Table 4 summaries Non-Lecture theory activity List.

Table 5 : List of Practicals:- (*Refer table 3 of similar activity number)

Activity No.*	CO No	Practical Activity Details
2.1		

Table indicates activity number, Course Outcome Number, Practical Activity Details.

Table 5 Summaries Non-Lecture Practical Activity List.

Table 6: Assessment Summary: Assessment is subdivided in A to H points.

6 A-Number of Papers and Marks Distribution

Number of Papers and Marks Distribution for Third Professional B.S.M.S. Subjects

Sl.No	Subject	Papers	Theory	Practical or Clinical Assessment					Grand Total
				Practical or clinical	Viva	Electives	IA	Total	
1.	Maruthuvam (Medicine) Paper I & Paper II	2	200	100	20	10 (Set-TA)*	20	150	350
2.	Varmam, Puramaruthuvam and Sirappumaruthuvam (Varmam, External Therapy and Special Medicine)	2	200	100	20	10 (Set-TB)*	20	150	350

	Paper I & Paper II								
3.	Aruvai including Kan, Kathu, Mookku, Thondai, Pal and Thol Maruthuvam (Surgery including Ophthalmology, ENT, Dentistry and Dermatology) Paper I & Paper II	2	200	100	20	10 (Set-TC)*	20	150	350
4.	Sool and Magalir Maruthuvam (Obstetrics and Gynaecology) Paper I & Paper II	2	200	100	30	-	20	150	350
5.	Kuzhanthai Maruthuvam (Paediatrics) Paper I & Paper II	2	200	100	30	-	20	150	350
6.	Research Methodology and Medical Statistics	1	100	-	30	-	20	50	150
Grand Total									1900

6 B - Scheme of Assessment (Formative and Summative)

SR.NO.	PROFESSIONAL COURSE	FORMATIVE ASSESSMENT			Summative Assessment
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)	
1	III B.S.M.S.	3 PA & First TT	3 PA & Second TT	3 PA	UE*

PA: Periodical Assessment; TT: Term Test; UE: University Examinations.

***University Examination Shall be on entire syllabus.**

Theory i.e. Written by the MCQ, SAQ, LAQ as per MSE and Practical Examination by Practical / Clinical/ Viva.

Formative assessment as, it is assessment for learning, various other methods can be used. Considering cognitive, psychomotor and affective domain appropriate method as per column G3, appropriate method should be adopted.

(Refer above explanation of Formative assessment in G3 column)

Formative assessment should be frequent activity after teaching.

Records should be kept and cumulative marks should be forwarded to university as per table

Formative assessment is defined by two terms, Periodic Assessment and term test.

Periodic Assessment and Term Test - In table 6 C method for calculation of internal assessment marks is explained. Various periodic assessment methods are explained in the table 6 D.

6 C - Calculation Method for Internal assessment Marks (20 Marks)

Term	Periodical Assessment				Term Test	Term Assessment	
	A	B	C	D	E	F	G
	1 (20)	2 (20)	3 (20)	Average (A+B+C/3) (20)	Theory (MCQ + SAQ + LAQ) & Practical (Converted to 20)	Sub Total	Term Assessment
First						D+E	D+E/2
Second						D+E	D+E/2
Third					Nil	D	D
Final IA	Final Internal Assessment: Average of three Term Assessment marks as shown in 'G' column						

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods
1.	Practical / Clinical Performance
2.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3.	Open Book Test (Problem Based)
4.	Summary Writing (Research Papers/ Samhitas)
5.	Class Presentations; Work Book Maintenance
6.	Problem Based Assignment
7.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9.	Small Project
10.	Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3.

A detailed list of periodic assessment is given in this table. Chose one activities Indicated in

Table 3 - Column G3 as per Indicated I, II or III term in column I3 or any other as per objectives from this table.
Conduct periodic test for 15 marks.

Periodic assessment schedule (As applicable)

Exam type	Paper 1	Paper 2	Paper 3
Term 1			
PA1	Topic No -	Topic No	Topic No
PA 2	Topic No	Topic No	Topic No
PA 3	Topic No	Topic No	Topic No
TT	Topic No	Topic No	Topic No
PA 4	Topic No	Topic No	Topic No
PA 5	Topic No	Topic No	Topic No
PA 6	Topic No	Topic No	Topic No
TT	Topic No	Topic No	Topic No
PA 7	Topic No	Topic No	Topic No
PA 8	Topic No	Topic No	Topic No
PA 9	Topic No	Topic No	Topic No

This table outlines the topics assigned for Periodic Assessments (PA1–PA9) and Term Tests (TT) across different papers(if applicable). Ensure that assessments are conducted as per the given schedule, covering the specified topics systematically.

6 E Question Paper Pattern

III PROFESSIONAL B.S.M.S. EXAMINATIONS

SIDUG -

PAPER-1

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	MULTIPLE CHOICE QUESTIONS (MCQ)	20	1	20
Q 2	SHORT ANSWER QUESTIONS (SAQ)	8	5	40
Q 3	LONG ANSWER QUESTIONS (LAQ)	4	10	40
				100

Similar for Paper II and III (If applicable).

6 F Distribution of theory examination

				D Type of Questions “Yes” can be asked. “No” should not be asked.		
A List of Topics	B Term	C Marks	MCQ (1 Mark)	SAQ (5 Marks)	LAQ (10 Marks)	

Question paper Blue print is indicated as per Term, maximum marks allotted to topic and type of Questions.

A indicate List and name of topic and subtopic

B indicate Term

C indicate maximum marks allotted for topic or group of Topics.

D Distribution of type of question MCQ, SAQ, LAQ to be asked. “Yes” indicate can be asked. “No” indicate should not be asked.

6 G Instructions for UG Paper Setting & Blue print

- 1) For all subjects of III B.S.M.S.

Instructions for UG Paper Setting

1. All questions shall be **compulsory**.
2. Questions shall be drawn based on **Table 6F**, which provides the topic name, types of questions (MCQ(Multiple Choice Question), SAQ(Short Answer Question), LAQ(Long Answer Question)).
3. The **marks assigned** in Table 6F for each topic/group of topics shall be considered as the maximum allowable marks for that topic/group of topics.
4. Ensure that the **total marks allocated per topic/group of topics do not exceed** the limits specified in Table 6F.
5. **Refer to Table 6F** before setting the questions. Questions shall be framed only from topics where the type is marked as “**YES**”, and avoided if marked as “**NO**”.
6. Each **100-mark question paper** shall contain:
 - **20 MCQs**
 - **8 SAQs**
 - **4 LAQs**
7. **MCQs:**
 - Majority shall be drawn from the **Must to Know** part of the syllabus.
 - Questions from the **Desirable to Know** part of syllabus shall **not**

exceed 3.

- Questions from the **Nice to Know** part of syllabus shall **not exceed 2.**

8. SAQs:

- Majority shall be drawn from the **Must to Know** part of the syllabus.
- Questions from the **Desirable to Know** part of syllabus shall **not exceed 1.**
- No questions shall be drawn from the **Nice to Know** part of syllabus.
- SAQs shall assess **understanding, application, and analysis**, rather than simple recall.

9. LAQs:

- All LAQs shall be drawn exclusively from the **Must to Know** part of the syllabus.
- No questions shall be taken from the **Desirable to Know** or **Nice to Know** part of the syllabus.
- Number of LAQs should not exceed one per topic unless maximum marks exceed 20 for the topic.

11. Long Answer Questions shall be structured to assess higher cognitive abilities, such as application, analysis, and synthesis.

12. Follow the guidelines in User Manual III for framing MCQs, SAQs, and LAQs.

Note: Demo blueprint is also included in the curriculum for illustration purpose. The blueprint should be done based on instructions for QP setting (6G) and using 6F table.

A Question Sr. No	B Type of Question	C Question Paper Format
Q-1	Multiple choice Questions (MCQ) 20 Questions 1 mark each All compulsory	1. Topic No. 1/ Topic No.2 2. Topic No. 2/Topic No.1 3. Topic No. 3/ Topic No.4 4. Topic No. 4/ Topic No.3 5. Topic No. 5/ Topic No.8 6. Topic No. 6/ Topic No.9 7. Topic No. 7/ Topic No.10 8. Topic No. 8 9. Topic No. 9/Topic No.7 10. Topic No. 10/ Topic No.7 11. Topic No. 11 12. Topic No. 12 13. Topic No. 13 14. Topic No. 14

		15. Topic No. 15/ Topic No.14 16. Topic No. 16/ Topic No.15 17. Topic No. 17/ Topic No.15 18. Topic No. 18/ Topic No.19 19. Topic No. 19/ Topic No.19 20. Topic No. 20/ Topic No.21
Q-2	Short answer Questions (SAQ) Eight Questions 5 Marks Each All compulsory	1. Topic No. 1 2. Topic No. 3 3. Topic No. 6 4. Topic No. 7 5. Topic No. 14 6. Topic No. 19 7. Topic No. 20 8. Topic No. 21
Q-3	Long answer Questions (LAQ) Four Questions 10 marks	1. Topic No. 4 2. Topic No. 5 3. Topic No. 6 4. Topic No.15,16

6 H Distribution of Practical Exam

S N	Heads	Marks
1	Practical (Total Marks 100)	
	Heading 1	
	Heading 2	
	Heading 3	
	Heading 4	
2	Viva Voce	
3	Internal	
4	Electives (if applicable))	
	Total Marks	

6 H indicates Marks Distribution as per various heads. Practical, Viva. Internal assessment marks(IA) and Electives (If Applicable).

References books/ Resources

List of Learning Resources : (Textbook, e – resources, other)

Referenced according to Vancouver style

Book and Resources are given. The updated NCISM approved book list as per quality standard scale of NCISM will be periodically published on the website.

Implementation

- Select a topic as per term
- Read the objectives
- Think of Domain
- Decide lecture plan and prepare material A/V aids (PPT, Charts etc)
- Decide non lecture activities to be conducted. Prepare resources (Case, problem etc)
- Decide assessment method (formative) and prepare material if required (e.g. Quiz, puzzle, etc)
- Make lesson plan. (Template next page)
- Conduct session/practical

LESSON PLAN TEMPLATE

Name of College:			
Name of Department (s)			
Name of Course		Academic Year	Batch –
Learning Objectives:			
Instructional Method (Circle as appropriate) - Lecture /Seminar /Tutorial / Bedside Clinic / OPD Session / Community Visit / Hospital visit any other			
Duration - LH-		NLH	
Time	Activity Description	Resources/ A-V Aids	Assessment Method / s



**EXPERTS COMMITTEE FOR SYLLABUS FRAMING THIRD PROFESSIONAL
B.S.M.S.**

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Sr.No	Name & Designation	College	Position in the subject committee
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2.	Dr. Komalavalli @ Mehala, Professor	Govt. Siddha Medical College, Palayamkottai Tirunelveli-627002 Tamil Nadu.	Co-Chairperson
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4.	Dr.U.Chitra Lect-Gr-II	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu	Expert Member
5.	Dr. Stanly Thomas Associate professor	ATSVS Siddha Medical College, Munchirai, Pudukkadai P.O, Kanyakumari-629171 Tamil Nadu	Expert Member
6.	Dr. V. Isabell Rafeeda Lect-GrII	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu	Expert Member

7.	Dr. K. Kesavakumari Professor	Sri Sairam Siddha Medical College and Research Center, Sai Leo Nagar, Poonthandalam, West Tambaram, Chennai, Tamil Nadu - 600044	Expert Member
8.	Dr. Sangeeta Pravin Sawant , Assistant Professor	Tilak Ayurved Mahavidhyalaya Pune, Maharastra	HSET Expert
9.	Dr.K.Kanakavalli Principal	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Consultant Expert
10.	Dr. I. Sangeetha Assistant Professor (modern medicine)	National Institute of Siddha Tambaram Sanatorium Chennai-600047, Tamil Nadu	Consultant Expert
11.	Dr.Manoharan Professor (Rtd)	Govt. Siddha Medical College, Palayamkottai Tirunelveli-627002 Tamil Nadu.	Consultant Expert
12.	Dr.A.Karthikeyan Principal	Annai medical college of siddha and research centre, Kovilacheri, kumbakonam 612 503	Consultant Expert

2. Varmam, Puramaruthuvam and Sirappumaruthuvam

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3.	Dr.J. Anbuselvi Associate Professor	JSA Siddha Medical College & Research Centre, Pali, Ulundurpet Tamil Nadu-606104	Coordinator
4.	Dr.A. Jenifer Lancy Associate Professor	Santhigiri Siddha Medical College, Santhigiri (PO), Pothencode, Thiruvananthapuram – 695589, Kerala	Expert Member
5.	Dr. D. Amirtharaj Professor	Sri Sairam Siddha Medical College and Research Center, Sai Leo Nagar,	Expert Member

		Poonthandalam, West Tambaram, Chennai, Tamil Nadu - 600044	
6.	Dr.B.Kunthavi Assistant Professor	Nanda Siddha Medical College and hospital at Thiruvachi village Pitchandampalayam Post Erode - 638052 Tamil Nadu	Expert Member
7.	Dr.P. Sugumaran Professor	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Expert Member
8.	Dr K.S. Maanickha chelvi Research officer	Research officer (Siddha) CCRS Siddha Medicinal Plants Garden, SDO Quarters, Cauvery Nagar Mettur, Salem Dt.	External Expert
9.	Dr. Hemant Paradkar Associate Professor	APM Ayurved Mahavidyalaya Sion Mumbai	HSET Expert
10.	Dr.G.Thiyagarajan Joint Director (Retd.)	Opp. To S.I.S Queens Tower Avenue, Nellikuppam Road, Kayarambedu, Guduvancherry-603202, Distt. Chengalpattu, Tamilnadu	Consultant Expert
11.	Dr . Ramesh babu Siddha practioner	Sri siva sakthi siddha hospital 52/ 2D 1 Thiruvarangam nagar Kallakurichi Tk Kallakurichi Dt 606202	Consultant Expert
12.	Dr.Gopakumar (Rtd CCRS) Research officer - Scientist 4 Retd.	Sowbarnika, Thirunilan line,Thirumala p.o, Trivandrum, Kerala	Consultant Expert
13.	Dr. N. Jeya Sankar, Siddha Specialist and Medical Acupuncturist	#29, 4 th Cross Extension, Rainbow Nagar, Puducherry-605011	Consultant Expert
14.	Dr.D.Rajasankar, Siddha Practitioner	Cure siddha clinic and holistic medical research centre 4/150A, Tiruchendur road, Krishna puram Tirunelveli 11	Consultant Expert
15.	Dr. A. Amrose Fathima Yoga Practitioner	10, Rajalakshmi nagar Behind Vijay theatre Dindigul 3	Consultant Expert

16.	Dr.Sundar balasubramanian, Associate Professor Department of Radiation Medicine,	MSC318 Medical University of South Carolina 96 Jonathan Lucas Street Charleston, SC 29425, USA	Consultant Expert
17.	Dr.R.Raman Principal	Sudha Saseendran Siddha Medical College And Hospital, No:5/121B, Mecode, Kaliyakkavillai, Kanyakumari Dist., Tamil Nadu, Pin:629153.	Consultant Expert

3. Aruvai including Kan, Kathu, Mookku , Thondai, Pal and Thol Maruthuvam

Sr.No	Name & Designation	College	Position in the subject committee
1.	Dr. Jeyanthi R. Professor	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Chairperson
2.	Dr. P. Hariharan, Professor	Santhigiri Siddha Medical College, Santhigiri (PO), Pothencode, Thiruvananthapuram – 695589, Kerala	Co-Chairperson
3.	Dr. S. Sivanandan, Lecturer Gr. II	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Coordinator
4.	Dr. T. Aravinthan, Associate Professor	ATSVS Siddha Medical College, Munchirai, Pudukkandai P.O, Kanyakumari-629171 Tamil Nadu	Expert Member
5.	Dr.Yamuna R. Lecturer Gr. II	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Expert Member
6.	Dr. D.Subathra Lecturer	Nandha Siddha Medical College And Hospital, Erode - 638 052	Expert Member
7.	Dr. T.Thiyagasundaram Professor	Sri Sairam Siddha Medical College and Research Center, Sai Leo Nagar, Poonthandalam, West Tambaram, Chennai, Tamil Nadu – 600044	Expert Member
8.	Dr. Gaurav Sawarkar Professor	Mahatma Gandhi Ayurved College Hospital and Research Center, Wardha, Maharashtra	HSET Expert
9.	Dr.A.kumaravel	No 25 ,	Consultant Expert

	Principal(Rtd)	2nd street Ram nagar north extension Velacherry Chennai - 42	
10.	Dr.A.Swaminathan Asst.Medical officer	Govt Hospital Uthamapalayam. Theni dt .	Consultant Expert
11.	Dr V B Vijayakumar Senior medical officer - Siddha	Government Siddha Dispensary Attingal	Consultant Expert
12.	Dr.Vetrivel K Principal	JSA Siddha Medical College & Research Centre, Pali, Ulundurpet Tamil Nadu- 606104	Consultant Expert
13.	Dr.M.Shakeel Abbas Principal	Shri Indra Ganesan Institute of Medical Science, Siddha Medical College, Tiruchirappalli	Consultant Expert

4. Kuzhanthai Maruthuvam

Sr.No	Name & Designation	College	Position in the subject committee
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2.	Dr.F.R.Shameem Lecturer Gr.II	Govt. Siddha Medical College, Arumbakkam, Chennai- 106 Tamil Nadu.	Co-Chairperson
3.	Dr. A. Silambarasan Associate Professor	Velumailu Siddha Medical College, Sriperumbudur, Kanchipuram- 602105 Tamil Nadu	Coordinator
4.	Dr. R. Jeeva Gladys Associate Professor	Velumailu Siddha Medical College, Sriperumbudur, Kanchipuram- 602105 Tamil Nadu	Expert Member
5.	Dr.E.M.Manikgantan Associate Professor	The Tamilnadu Dr.MGR medical University, Guindy, Chennai	Expert Member
6.	Dr. Sajitha R D Principal	Maria Siddha Medical College And Hospital, Thottavaram,	Expert Member

		Moovatumugham P.O., Thiruvattar, Kanyakumari Dist. Tamil Nadu	
7.	Dr.D.Dyneswar Associate Professor	Excel Siddha Medical College and Research Centre, Pallakkapalayam, Komarapalayam, Namakkal District- 637303, Tamil Nadu	Expert Member
8.	Dr. Renu Bharat Rathi Professor	Mahatma Gandhi Ayurved College Hospital and Research Center, Wardha, Maharashtra	HSET Expert
9.	Dr.kalyanasundaram Professor(Rtd)	Alliance Orchid Springs,504 palm 6 Block, water canal road, Korattur, north, Chennai- 76	Consultant Expert
10.	Dr. P. Sathiyarajeswaran Assistant Director,Scientist IV	Siddha Regional Research Institute,CCRS Puduchery	Consultant Expert
11.	Dr Partheeban K Siddha practioner	Swabhimaan Holistic solution for Autism, Off ECR Road, after BP petrol bunk. Door No:7,Bhairavi Classic Builder Layout, O.H.T.Road, Sunnambu kalvai street, Kottivakkam, Chennai-600041	Consultant Expert
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5. Sool and Magalir Maruthuvam

Sr.No	Name & Designation	College	Position in the subject committee
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2.	Dr.A.Anbumalar, Lecturer Grade II	Govt. Siddha Medical College, Palayamkottai Tirunelveli- 627002 Tamil Nadu.	Co-Chairperson
3.	Dr. S. Mary Princess Sulekha. Professor	Sri Sairam Siddha Medical College and Research Center, Sai Leo Nagar, Poonthandalam, West Tambaram, Chennai, Tamil Nadu - 600044	Coordinator
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5.	Dr. G. Devigowthi Associate professor	Sivaraj Siddha Medical Colleges and Research Institute, SALEM, Siddhar Kovil Road, Thumbathulipatty, Salem, Tamil Nadu 636307	Expert Member
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8.	Dr. Rucha Ganu Associate Professor & HoD	Tilak Ayurveda Mahavidyalaya, Pune	HSET Expert
9.	Dr. M. Kalpana Asst. Medical Officer (Siddha),	Govt. Primary Centre, Gandamanur, Theni Dt. 626517	Consultant Expert
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6. Research Methodology and Medical Statistics

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3.	Dr. Shivashankar Rangaswamy Head of Department	Department of Hygiene and Research Methodology	Member
4.	Dr. R. Jeeva Gladys Reader	Department of Sool Mangalir Maruthuvam, Velumayilu Siddha Medical College, Kancheepuram, Tamil Nadu- 602105	Member
5.	Dr. Sumbul Rehman Assistant Professor	Department of Ilmul Advia. Ajmal Khan Tibbia College, Aligarh- 202002	Member
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