

# INTRODUCTION TO COMPETENCY BASED DYNAMIC CURRICULUM FOR FIRST BHMS PROFESSIONAL COURSE

(Applicable from Batch 2022-2023 onwards for 5 years or until further notification by  
National Commission for Homoeopathy whichever is earlier)



**HOMOEOPATHY EDUCATION BOARD**  
**NATIONAL COMMISSION FOR HOMOEOPATHY**  
**MINISTRY OF AYUSH, GOVERNMENT OF INDIA**

JAWAHAR LAL NEHRU BHARTIYA CHIKITSA AVUM HOMOEOPATHY ANUSANDHAN BHAVAN

No.61-65, Institutional Area, opp. 'D' block, Janak Puri, New Delhi-110 058

## INDEX

S.No	Description	Page Number
1	Foreword	02
2	Acknowledgement	03
1	Preamble	04
2	Steps Taken to Formulate CBDC Manual	07
3	Understanding The Competencies Table	20
4	Using The Competencies Table	23
5	Glossary	28

## FOREWORD

New Education Policy 2020 has a focus on developing and shaping the education system with focus on pedagogical approach. It mentions that with the quickly changing employment landscape and global ecosystem, it is becoming increasingly critical that children not only learn, but more importantly learn how to learn. Education thus, must move towards less content, and more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centered, discussion-based, flexible, and, of course, enjoyable.

In aligning with the NEP 2020, prime objective of National Commission for Homoeopathy is to provide a medical education system that improves access to quality and affordable medical education, ensures availability of adequate and high quality homoeopathic medical professionals in all parts of the country. We are amidst the shift from the traditional approaches of training to a focus on the application of learning through assessing competency acquired by the learner. The curriculum driven instructional model has been the standard method of teaching for more than century, but it is consistently failing to produce well educated citizens and lifelong learners. Medical sciences being high professional courses, there has to be a much greater emphasis on preventive healthcare and community medicine in all forms of healthcare education.

To achieve the prime objective, it's a pleasure and privilege to introduce transformation in curriculum of homoeopathy education which is competency based dynamic.

This curriculum guide can serve a number of purposes. The principal uses are,

- Foundation program in the very beginning after admissions will help students adapting the needs and for their preparedness for the whole course.
- Provide trainers with guidance and resources for conducting or supporting learning activities
- Provide learners with a resource that will support an 'instructor led' delivery and will be a useful reference for future application of the learning
- Providing learners and assessors with resources for understanding and completing assessments
- Serve as guide or resource for 'self-directed' learning

Each chapter is explicit and easy to digest, provides strategies to inspire conversation and action.

I hope teachers, administrators; leaders will find this guide as helpful for reworking our current educational system into a new, dynamic model of teaching & learning in all facets of Homoeopathy.

Dr. Anil Khurana,  
Chairperson

## ACKNOWLEDGEMENT

The task of formulating the Competency based Dynamic Curriculum (CBDC) in Homoeopathy has been a stupendous effort which would not have been possible without the vision, direction, and unstinting support of a number of eminent persons.

We can start with none other than the Honourable Prime Minister, Shri Narendra Modiji, who has envisioned the future of the youth through the formulation of the National Education Policy 2020 which has helped to bring about a paradigm shift from knowledge centric to competency-based education.

Honourable Minister of AYUSH, Shri Sarbananda Sonowalji and Minister of State for AYUSH, Dr Munjpara Mahendrabhai Kalubhai have taken effective steps for implementing the National Education Policy in the AYUSH sector. Secretary AYUSH, Vaidya Shri Rajesh Kotechaji has consistently emphasized the urgency, given the direction, and provided resources for structuring and implementing the changeover to Competency based Curriculum.

Chairperson of the National Commission of Homoeopathy (NCH), Dr Anil Khuranaji has been personally monitoring and encouraging us for taking orderly steps and planning for the formulation and implementation of the CBDC. All the esteem members of NCH have given their valuable suggestion while making the final draft of CBDC. Advisory Council of the National Commission for Homoeopathy has always supported the progressive changes which the NCH has been bringing about.

Dr Mangesh Jatkar, Member, Homoeopathy Education Board has kept a vigilant eye over the functioning of various committees constituted for formulating CBDC for First BHMS course. Dr. Rupali Bhalerao, for technical & editorial assistance to revamp this document and homoeopathy education board team including Dr. Kanika Malhotra for tirelessly working to meet every timeline of CBDC work.

Subject experts and convener for syllabus/curriculum designing, Dr K M Dhawale for formulating the syllabus and content which formed the base for this competency based dynamic curriculum.

Members of the core CBDC committee, Dr Munir Ahmed R, Dr Payal Bansal and Convener Dr. Bipin Jain for setting the framework and spending countless hours selflessly guiding this process. All the experts took out time and got trained in medical education technology and formulated the curriculum of their respective subject in record time. Team from Dr.D.Y.Patil Homoeopathic Medical College, Pune for contributing in the final shaping of this document.

Dr. Tarkeshwar Jain,  
President, Homoeopathy Education Board

## **PREAMBLE TO THE COMPETENCY BASED DYNAMIC CURRICULUM**

The National Commission for Homoeopathy (NCH) has undertaken major revisions in the educational regulations in the last year and has devised a new Syllabus to ensure that the student who completes the homoeopathic undergraduate course grows into a homoeopathic physician who is informed and capable of performing as a professional with competency to deliver services as required for addressing the health needs of the person and society at large. It is based on the premise that a correct adherence to homoeopathic principles and knowledge imparted will enable the physician to deliver results in all aspects of health, viz. preventive promotive, curative and rehabilitative.

There is a significant change in the approach and contents in the newly designed curriculum, with the intention of making it more coherent for the present and future needs of society. The designing of curriculum is based on the sound theories of educational methodology as applicable for the health professionals' education, and therefore, the outcomes are quite transparent and achievable.

The Homoeopathic Educational Board (HEB) is obliged by the NCH Act 26 (b) to "develop a competency based dynamic curriculum for Homoeopathy at all levels in accordance with the regulations made under this Act, in such manner that it develops appropriate skill, knowledge, attitude, values and ethics among the graduates, postgraduate and super-specialty students and enables them to provide healthcare, to impart medical education and to conduct medical research".

Competency based medical education (CBME) has been around in the medical world for more than three decades. It has undergone several revisions and adaptations through this period which has placed the NCH in an advantageous position to learn from the varied experiences of curriculum formulation, implementation and assessment.

It should be emphasized that the switch over to CBME involves a sea change in the understanding of the processes and outcomes for which all stakeholders need to be adequately sensitized and the teachers trained to minimize the difficulties inevitable in any transition. The following four pillars need a special mention to grasp the nature of the change being brought about (Frank Jason R, et al 2010).

1. The focus is on ensuring that the end user of the health care services is benefited. Hence it is important that the outcomes of the training are defined in clear terms so that the teacher, the student and the community are aware of what can be expected from the training.
2. The second logical focus is on bringing the abilities of the physician to the level when the outcomes defined above are realized. This involves the definition of the competencies required in the discharge of various functions of the physician. This would involve certain generic competencies such as problem solving or effective communication and certain specific ones related to the subject of study like. Anatomy, Materia Medica or others. This coupling of the outcome and abilities leads automatically to the third pillar.
3. We have been used to consider all training as time bound as the BHMS course is 5 1/2 years duration. But when we realize that the rate of mastering different abilities would vary from

student to student, we should de-emphasize the fixed period of training and instead look at how the student can be helped to master the specific competency.

4. The fourth pillar becomes the student herself/himself. The entire education and training become learner centred and hence the teacher takes a great effort in defining the outcomes, competencies, teaching and learning methods and most important of all, assessment which is predominantly formative and hence intends to shape the evolving capacities of the learner.

While formulating the competency based dynamic curriculum (CBDC) for the homoeopathy undergraduate, we must bear in mind the central role that homoeopathy philosophy and the principle of holistic care plays in the therapeutic actions of the homoeopathic interventions. This is a distinctive aspect which has hardly received the attention it deserves despite Hahnemann's clear recommendations in the first six Aphorisms of the Organon. The revised syllabus has brought this change and the formulation of the competency-based curriculum provides an opportunity to incorporate this approach at all levels of teaching and training. The implications lie in bringing about a sensitive and effective integration (horizontal/vertical/spiral) of all aspects of the syllabus throughout the five and half years of the undergraduate course.

There are five compelling factors that form the fulcrum to drive the change (Harris Peter, et al, 2010):

1. Design of curriculum: This needs careful attention due to its novelty. Homoeopathy, as a holistic discipline resting on the foundations of philosophy, needs a holistic approach from the first year itself. Several novel situations will need to be envisaged and catered to. And yet, a number of issues will remain. This is the dynamic nature of the enterprise, and we must be prepared to accept the well-known adage: Change, the only constant!
2. Teacher training: Our teachers have discharged the role of information providers and the teaching-learning process calls for a transformation in the role of the teacher (Sidhu Navdeep S. et al 2022). The future will need them to wear multiple hats and hence they will need to develop competencies viz. planner, facilitator, assessor, education manager, role model, etc, to be effective for these roles.
3. Assessment: Assessment practices must be based on a robust platform of validity, reliability, and objectivity, so that the tools of assessment blend fluidly with the academic flow. In this background, the focus is to shift the assessment approach from the monopoly of summative assessment to a significant allowance for formative assessment, which are supportive for learning and correction on-the-go.
4. Student issues: Along with the parents and the community, a significant re-orientation is called for while changing it from that of a 'last-minute' sprinter to a long range 'racer'! All stakeholders should be on the same page so that the processes can operate in a well-oiled manner. Glitches are to be expected when a largely 'rights' based social mind set has to shift gears to adopt a competency oriented one. Understanding that change needs patience and good will go a long way to make the latter orientation a way of life.
5. Systems: All educational systems from the colleges to universities need to incorporate the multiple changes within their systems. We are used to consider results as 'pass' and 'fail' with the latter carrying the stigma. While there is an

expressed need to wish to cater to all categories of learners – fast, normal, slow – the need to bring about changes in the systems is not so readily accepted. The institutions need to develop as 'learning organisations' that spur the 'growth mind-set' of its members – the teachers, students, and all those who are in the loop of curricular or co-curricular management.

The HEB considers the CBDC as a work in progress. Considerable thoughts and efforts are invested into the design and planning of the curriculum. But as has been mentioned above, this is a pioneering work and would always benefit from suggestions that spring from critical thinking and reflection subsequent to sincere attempts in implementation.

The next sections provide details of operational clarity to implement the program. Training of teachers is the key component which will make all the difference. The NCH is committed to make it happen and the cooperation of all stakeholders is earnestly solicited.

## References

1. Frank Jason R, et al (2010) Competency-based medical education: theory to practice, *Medical Teacher*, 32:8, 638-645, DOI: 10.3109/0142159X.2010.501190
2. Harris Peter, Linda Snell, Martin Talbot, Ronald M. Harden & for the International CBME Collaborators (2010) Competency-based medical education: implications for undergraduate programs, *Medical Teacher*, 32:8, 646-650, DOI: 10.3109/0142159X.2010.500703
3. Sidhu Navdeep S. et al (2022): Competency domains of educators in medical, nursing, and health sciences education: An integrative review, *Medical Teacher*, DOI: 10.1080/0142159X.2022.2126758

## **[I - STEPS TAKEN TO FORMULATE HOMOEOPATHY CBDC MANUAL**

In this section we will detail the process undertaken in the formulation of this manual. The account will be of use to the users viz. the academicians, teachers and students to better grasp the significance of the effort and the role that each would have to play. The subsequent section will outline the correct use of the manual in order to derive the maximum benefit.

### **I - Defining National and Institutional Goals and Programme Outcomes**

The process of identifying competency is a complex one. Defining the outcome clearly helps in defining the relevant competency thus enabling a person acquiring it with relative ease. In case of the medical graduate, the outcome or goal is determined by the health care needs of the community as perceived by the statutory authorities and the ability of the particular health care system to respond to this need. India has a pluralistic health tradition and the community accesses the several health care systems to fulfil their multiple health needs. Scientific evidence is generally relied upon to determine and differentiate the role of each system in providing health care. This, however, may not always be forthcoming to the required degree of precision.

Considering the above, the NCH has formulated broad national goals which a Homoeopathic graduate would be expected to be able to achieve.

#### **NATIONAL GOALS:**

At the end of undergraduate program, the medical student should be able to:

- a. Recognize the strength of homoeopathy, its applicability and limitations in health care of society and the individual.
- b. Learn the integration of medical services for effective delivery of health care.
- c. Recognize the purpose of the National Health Policy and "Health for all" as a national goal and health right of all citizens and undergo training to achieve the realization of this social responsibility
- d. Achieve competence in the practice of homoeopathy with holistic approach, encompassing promotive, preventive, curative and rehabilitative aspects of common diseases.
- e. Develop a scientific temper, acquire educational experience for proficiency in profession and promote healthy living based on the tenets of homoeopathy.
- f. Become an exemplary citizen by observing medical ethics and fulfilling social and professional obligations so as to respond to national aspirations.
- g. Develop skills to perpetuate homoeopathy & practice it with zeal so that it stands parallel to other scientific healing methods.

In order to realize these goals, Homoeopathic institutions will need to prepare themselves with suitable infrastructure and processes so that the graduate is able to deliver on the National goals. The NCH has laid down the following goals for homoeopathic institutions.



## **INSTITUTIONAL GOALS:**

In consonance with the national goals, each homoeopathic medical institution should evolve institutional goals to define the kind of trained homoeopathic professionals they intend to produce. The undergraduate students coming out of a homoeopathic medical institute should:

- a. Be competent in clinical diagnosis and homoeopathic management of the health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant investigations.
- b. Be competent to use homoeopathic medicines scientifically for health problems in preventive, promotive, curative palliative and rehabilitative mode.
- c. Appreciate the rationale for the use of different therapeutic modalities & engage in cross-referral when required in the interest of the patient.
- d. Be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop a humane attitude towards patients in discharging professional responsibilities.
- e. Be able to identify community health problems and learn to work to resolve these by understanding, designing, instituting corrective steps as per homoeopathic principles and evaluating outcome of such measures.
- f. Develop sensitivity to environmental sustainability and engage in community work towards achieving it with responsibility and commitment.
- g. Be trained in critical thinking, evidence-based practice and possess research aptitude and documentation skills necessary in professional work.
- h. Possess the attitude for lifelong learning and be ready to develop competencies as and when conditions of practice demand it.
- i. Be familiar with the basic factors which are essential for the implementation and integration of the National Health Programmes with homoeopathy including practical aspects of the following: (i) Family Welfare and Mother and Child Health (MCH) (ii) Sanitation and water supply (iii) Prevention and control of communicable and non-communicable diseases (iv) Immunization (v) Health Education.
- j. Acquire basic management skills in the area of human resources, materials and resource management related to homoeopathy in health care delivery, general and hospital management, principal inventory skills and counselling.
- k. Be able to work as an active and responsible partner in health care teams and acquire proficiency in communication skills with colleagues, patients and the community at large.
- l. Be competent to work in a variety of health care settings.

- m. Develop personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

When we look at the translation of these set of goals to the individual learner, we will be able to define these as follows:

### **GOALS OF THE LEARNER**

Towards attaining the goals of this program, the homoeopathic graduate must be able to function in the following roles appropriately and effectively:

- a. Clinician who understands and provides holistic preventive, promotive, curative, palliative and rehabilitative care with compassion.
- b. Leader and member of the health care team and system with capabilities to collect, analyse, synthesize and communicate health data.
- c. Communicator with patients, families, colleagues and community.
- d. Lifelong learner committed to continuous improvement of skills and knowledge.
- e. Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

The above goals, though desirable, are broad. To realize them, the student entering into the undergraduate homoeopathic programme needs to be equipped with a set of competencies which would fall in the domains of knowledge, skills and attitudes. The broad goals need to be defined in specific actionable terms which will form the Programme outcomes. These will enable all the stakeholders to be clear of the nature of functioning expected from the homoeopathic physician at the end of the training. Accordingly, the team of resource persons worked together to formulate Programme Outcomes

### **PROGRAMME OUTCOMES:**

At the end of the course of the undergraduate studies, the homoeopathic physician must

- 1) Develop the knowledge, skills, abilities and confidence as a primary care homoeopathic practitioner to attend to the health needs of the community in a holistic manner
- 2) Correctly assess and clinically diagnose common clinical conditions prevalent in the community from time to time
- 3) Identify and incorporate the socio-demographic, psychological, cultural, environmental & economic factors affecting health and disease in clinical work
- 4) Recognize the scope and limitation of homoeopathy in order to apply Homoeopathic principles for curative, prophylactic, promotive, palliative, and rehabilitative primary health care for the benefit of the individual and community

- 5) Be willing and able to practice homoeopathy as per medical ethics and professionalism.
- 6) Discern the scope and relevance of other systems of medical practice for rational use of cross referrals and role of life saving measures to address clinical emergencies
- 7) Develop the capacity for critical thinking, self-reflection and a research orientation as required for developing evidence based homoeopathic practice.
- 8) Develop an aptitude for lifelong learning to be able to meet the changing demands of clinical practice
- 9) Develop the necessary communication skills and enabling attitudes to work as a responsible team member in various healthcare settings and contribute towards the larger goals of national health policies such as school health, community health and environmental conservation.

Defining the Programme outcomes is a crucial step since this allows us to derive the competencies the homoeopathic graduate should possess at the end of the period of training. Care is taken to ensure that the National goals and Institutional goals are covered as much as possible by the various aspects of the Programme Outcomes. Further, the Outcomes for each academic year and of the period of internship will be formulated separately based on the Courses studied and the nature of clinical or community activities undertaken each year. Accordingly, the corresponding competencies for the respective years have been defined.

## II - Deriving Competencies of the Homoeopathic Medical Graduate

Seven broad dimensions of practice were identified in which all actions of the homoeopathic physician in the context of our health care system could be classified (Englander, et al, 2013). The definition of these terms in our medical and social context are as follows:

Table 1: Dimensions of Practice of the Homoeopathic Physician

	<b>Dimensions of Practice of the Homoeopathy Physician</b>	<b>Definition</b>
1.	Knowledge for Homoeopathy Practice	Demonstrates knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care using homoeopathy as a means of intervention.

2.	Patient Care	Provides patient-centered, individualized care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
3.	Interpersonal and Communication Skills	Demonstrates interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, families, and health professionals.
4.	Professionalism	Demonstrates a commitment to carrying out professional responsibilities and an adherence to ethical principles.
5.	Practice based learning and Improvement	Demonstrate the ability to investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.
6.	Health care systems	Demonstrate an awareness of and responsiveness to the larger context and system of health care in the country, as well as the ability to call effectively on other resources in the system to provide optimal health care.
7.	Scholarship	Demonstrate the qualities required to sustain lifelong personal and professional growth.

We now needed to draw up a list of generic competencies relevant for the training of the homoeopathic physician. These would subsequently be mapped on to the Programme Outcomes for each year. The list of generic competencies drawn up were subsumed under the 4 relevant areas of the functioning of the physician viz. cognitive, personal, interpersonal and in the community after referring to Kallioinen (2010), General Medical Council (2017) and Arora (2020).

Table 2: Generic competencies relevant to the functioning of the physician

Areas	Cognitive	Personal	Interpersonal	Community
	Analytical	Self-reflection	Empathetic	Ethical awareness
	Synthetic	Self-Awareness	Leadership	Community awareness
	Objective	Safety compliance	Team work	Safety awareness

	Organizing and Planning	Lifelong learning	Collaboration	
	Problem Solving	Compassion	Respect for Privacy and autonomy	
	Information gathering	Personal integrity	Communication skills - oral and written	
	Documentation	Healthy coping mechanisms	Executive ability	
	Information management	Flexibility		
	Creative thinking	Dealing with uncertainty		
	Holistic approach			
	System based thinking			

This now equips us to chart the generic competencies against the expanded functions of the physician in each of the areas mentioned in Table 1. The components of each of the areas has been expanded to include all actions which the trained physician would be expected to undertake. This also helps us to zero down on the tasks which the physician would need to be trained to perform. The series of seven tables below expands each of the areas, identifies the generic competencies and the component tasks.

Table 3: Charting of Generic Competencies and Tasks against the areas of functioning

	Areas of action	Generic Competencies	Component tasks
1	<b>Knowledge (K) for Homoeopathy practice</b>		
k-1	Describe the basic scientific principles underlying normal development, structure and function of genes, cells, organs and the body as a whole throughout the life cycle and correlate with concept of man	Integration of information	Information gathering Information management Synthesis of data Holistic approach

	as per Dr Hahnemann and other Homoeopathic masters		
k-2	Describe the aetiology and pathophysiology of major diseases and disorders, and their clinical, laboratory, radiographic and pathologic manifestations and correlate with Homoeopathic concept of disease	Integration of information Problem integration	Information gathering Information management System based thinking Analysis synthesis
k-3	Describe the epidemiology of disorders in populations and approaches designed to screen, detect, prevent, and treat disease in populations. - problem formulation- planning of intervention, treatment, evaluation- interpretation, integration and correlate with Homoeopathic concept of preservation of health and clinical management	Integration of information problem integration communication problem solving leadership skill team work communication	Information gathering Information management System based thinking Analysis Synthesis Organizing and planning Implementation evaluation
k-4	Describe the spectrum of	Problem solving	Information gathering

	therapies for common physical and mental disorders and recognize the relative efficacies and common adverse effects of these and their variations among different patients and populations and relate with different expression of chronic disease		Information management System based thinking Analysis Synthesis
--	--	--	--

		Generic competencies	Component tasks
<b>2</b>	<b>Patient care (PC)</b>		
Pc1	Perform both a focused and comprehensive history and physical examination, develop diagnostic hypotheses, order and evaluate diagnostic tests, and formulate an appropriate plan of care using Homoeopathic concept of case taking with individualisation and Management	Problem solving	Information gathering Problem Integration Documentation Information management System based thinking Organising and planning Analysis and evaluation Holistic approach
Pc2	Perform core technical procedures, as would be expected of a beginning intern, and describe their indications,	Problem solving independent study	Information gathering

	contraindications, and potential complications.		Problem integration Problem formulation Implementation of plan and evaluation
Pc3	Recognize acute, life-threatening conditions and perform measures to stabilize the patient.	Problem solving	Information gathering Problem integration Problem formulation Implementation of plan and evaluation Dealing with uncertainty

		<b>Generic competencies</b>	<b>Component tasks</b>
<b>3</b>	<b>Interpersonal and Communication Skills (ICS)</b>		
Cs1	Communicate with patients and their families, counsel them in an effective, caring, and culturally competent manner as per the guidance of Hahnemann and different masters and current advances	Communication Objectivity Flexibility of thought	Information gathering Organising and planning Compassion Empathy Personal integrity Dealing with uncertainty Respect for privacy and autonomy
Cs2	Communicate, consult, collaborate, and work effectively as a member or leader of healthcare teams.	Communication Team member Leadership skills	Organising planning System based thinking Objectivity



			Communication - written and oral Collaboration Executive ability
--	--	--	---

		Competency generic	Component tasks
4	<b>Professionalism (P)</b>		
P1	Maintain a professional demeanour, while demonstrating responsibility, integrity, empathy, reliability, and attention to personal wellness as per the direction from Organon of medicine and homoeopathic masters	Problem solving	Ethical awareness Self-awareness Empathy Integrity Reliability
P2	Demonstrate ethical principles that govern the doctor-patient relationship, medical decision-making, and healthcare delivery.	Problem solving	Ethical awareness Respect for privacy and autonomy
P3	Provide compassionate, unbiased care to patients from diverse backgrounds	Problem solving	Compassion Objectivity Flexibility in thinking

		Generic competency	Component tasks
5	<b>Practice-Based Learning and Improvement (PBLI)</b>		
Pbl1	Utilize appropriate information technology for scientific and clinical problem-solving and decision-making	Problem solving Independent study	Information gathering Information management Documentation Creative thinking
Pbl2	Analyze and critically appraise the relevant medical literature	Information management	Analysis,

			Evaluation Critical thinking Creative thinking
Pbl3	Apply principles of evidence-based medicine, medical ethics, and cost-effectiveness to diagnosis, prognosis, and therapeutics.	Problem solving Objectivity Integration of information Problem integration	Analysis Evaluation Critical thinking Plan for implementation evaluation
Pbl4	Demonstrate the ability for lifelong self-directed learning.	Problem solving Objectivity Integration of information Problem integration Learning ability	Analysis Evaluation Critical thinking Plan for implementation Evaluation Lifelong learner

		Generic competency	Component tasks
6	<b>Healthcare Systems (HCS)</b>		
HCS1	Discuss the organization, financing, and delivery of healthcare services with particular awareness of healthcare disparities, the needs of the underserved, and the medical consequences of common societal problems.	Problem solving objectivity	Empathy Compassion Community awareness Analysis evaluation of information

			information management
HCS2	Define the core principles of healthcare quality, patient safety, and interprofessionalism	Problem solving objectivity	Problem definition Critical thinking Information management
HCS3	Participate in national programmes	Problem solving	Team work Communication Empathy Compassion

		Generic competency	Component tasks
7	<b>Scholarship (S)</b>		
S1	Define the scientific and ethical principles of biomedical research, including basic, translational, clinical, and population studies.	Integration of information Problem integration objectivity	Information management Critical thinking
S2	Identify a scholarly area of interest, formulate an investigative question, develop and implement methods to assess it, and communicate the results.	Problem solving objectivity Independent study	Analytical Evaluation Documentation Information management Critical thinking Personal integrity Ethical awareness Communication skill

With this background, we should be able to approach the Manual which is being issued in four parts for each year, the last manual also covering the period of internship. It will be noted that the Generic competencies and the Component tasks as in the Table 3 will be aligned with the specific competencies for each item of learning.

Considerable fresh thought has gone into the framing of this document of CBDC for the Homoeopathic graduate. The existing templates were unable to satisfy the very foundations on which homoeopathic practice rests and which have been extensively elaborated in the Preamble to the new Syllabus introduced in 2022. The two features which may be emphasized here are:

1. Close adherence to homoeopathic philosophy and principles at every stage of education and training
2. This in turn demands a rare amount of integration at horizontal, vertical and spiral forms

The next section will deal with how the Competency table was formulated and how it should be used.

### References

1. Englander Robert, Cameron Terri, Ballard Adrian J., Dodge Jessica, Bull Janet, and Aschenbrener, Carol A. (2013) Toward a Common Taxonomy of Competency Domains for the Health Professions and Competencies for Physicians *Acad Med.* 88:1088–1094. doi: 10.1097/ACM.0b013e31829a3b2b
2. Kallioinen, Outi (2010) Defining and Comparing Generic Competences in Higher Education *European Educational Research Journal*; 1, 56 <http://dx.doi.org/10.2304/eerj.2010.9.1.56>
3. General Medical Council (2017) Generic professional capabilities framework accessed at [https://www.gmc-uk.org/-/media/documents/generic-professional-capabilities-framework--2109\\_pdf-70417127.pdf](https://www.gmc-uk.org/-/media/documents/generic-professional-capabilities-framework--2109_pdf-70417127.pdf) on 5<sup>th</sup> December 2022
4. Arora Aman (2020) Building Generic Competencies Model Conference: International Conference on Recent Trends and Innovations in Business Management, Social Sciences and Technology - NCIBM 2020, New Delhi accessed at <https://www.researchgate.net/publication/345001112> on 5<sup>th</sup> December 2022

## II - UNDERSTANDING THE COMPETENCIES TABLE

The Competency Table has been designed keeping in mind the Generic and specific competencies required by the learner to attain the overall Program Outcomes (PO) as well as Course Outcomes (CO) of all courses.

### A. Methodology in preparation of the Competency Table

The following methodology was adopted in preparing the Competencies table for each course (or subject) of the BHMS program once the National and Institutional Goals, Programme Outcomes, Generic Competencies and component tasks were identified:

- ❖ Course Outcomes (CO) were identified for each course (or subject) that were in alignment with the National and Institutional Goals, Programme Outcomes (PO)
- ❖ Finalizing the syllabus or the list of topics which will help to achieve not only the Course Outcomes (CO) but also the overall Program Outcomes (PO)
- ❖ Identifying the Learning Objectives and Specific Learning Outcome (SLO) for each topic
- ❖ Aligning the Specific Learning Outcome (SLO) to the Generic and Specific Competencies that are to be achieved
- ❖ Identifying the level of Miller's Pyramid for each Specific Learning Objectives/ Outcome (SLO)
- ❖ Classifying each Specific Learning Outcome (SLO) as per Bloom's Taxonomy and Guibert's Level
- ❖ Distinguishing the Specific Learning Outcome (SLO) into 'Must know' or 'Desirable to know' or 'Nice to know' categories
- ❖ Choosing the appropriate Teaching Learning method/s and the assessment method/s required for achieving each objective or outcome
- ❖ Identifying the Horizontal, Vertical and Spiral Integration with other courses (or subjects) required for holistic understanding of the topic

We will now illustrate how the Competency table is to be read with respect to the Repertory Course (subject)

## Illustrative Diagrammatic Representation of Competencies Table with example of the Repertory Course

S.No	Generic Competency	Subject Area	Millers Level: Does/Shows how/ Knows	Specific Competency	SLO/ Outcome	Blooms Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic 1: Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Small Group discussion	MCO, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1 (Remember/ recall)	Desirable to know	Lecture, Small Group discussion	MCO, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2 (Understand)	Nice to know	Lecture, Small Group discussion	MCO, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCO, SAQ, Viva Voce	-----	
	1	2	3	4	5	6	7	8	9	10		11

Table 4: Description of the Competencies table

S.No	Description
1	Unique number of the competency /outcome (Hom-UG-R-I-1.1) Hom-UG-R-I: Course Code 1.1: Topic number followed by serial number of the Specific Learning Objectives/ Outcome (SLO)
2	Generic Competency to be achieved from the topic
3	Mapping of the Level of Specific Learning Outcome ( SLO) to Miller's Pyramid- Knows/ Knows How/ Shows How/ Does
4	Specific Competency to be acquired from the topic
5	Description of Specific Learning Outcome (SLO) for the topic

6	The Blooms Domain addressed by the Specific Learning Outcome ( SLO)- Cognitive or Affective or Psychomotor Domain
7	Mapping of the Specific Learning Outcome ( SLO) to Guibert's Level of Learning in the Cognitive or Affective or Psychomotor Domain
8	Classifying the Specific Learning Outcome ( SLO) into Must know or desirable to know or nice to know areas
9	Teaching Learning methods
10	Assessment methods
11	Subjects that can be vertically or horizontally integrated to improve understanding. If the subject is taught for more than 1 year, it must be integrated spirally in all the years.

## B. USING THE COMPETENCIES TABLE

A Competency Based Dynamic Curriculum necessitates that each topic in a course (or subject) be elaborated in terms of the outcomes that are to be achieved by the learner at the end of the particular topic. This in turn will help the learner to achieve the competencies at the course and overall, at the program level.

### 1. Linking the Specific learning Objective/ Outcome (SLO) to the Generic Competency, Specific Competency and Miller's Level

S.No	Generic Competency	Subject Area	Miller's Level Does/Shows how/ Knows/ Knows	Specific Competency	SLO/ Outcome	Blooms Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic 1- Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1 (Remember recall)	Must Know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral Integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1 (Remember recall)	Desirable to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2 (Understand)	Nice to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1 (Remember recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCQ, SAQ, Viva Voce	-----	

Each Specific learning Objective/ Outcome (SLO) will help the learner to acquire Generic competencies (abilities that a basic homoeopathic doctor would be trusted to have acquired as a consequence of his / her learning) and Specific competencies (abilities that the student is expected to acquire in a focused area of expertise)

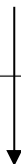
In the above table Introduction to a subject will help the learner to acquire a generic competency of gathering and Integrating knowledge & a specific competency of getting acquainted with the tools required to search for a Homoeopathic remedy.

The Specific learning Objective/ Outcome (SLO) also indicates at what level the competency is defined in the Miller's Pyramid which in the above example is at the level of 'Knows' – the ability to recall facts and ideas.



## 2. Specific learning Objective/ Outcome (SLO) for each topic

S.No	Generic Competency	Subject Area	Millers Level: Does show/ Knows how/ Knows	Specific Competency	SLO/ Outcome	Blooms Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic I- Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1 (Remember/ recall)	Desirable to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2 (Understand)	Nice to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCQ, SAQ, Viva Voce	-----	



Specific Learning Objectives / Outcomes (SLOs) start with the "Action Verb" as per the Domain and describe what students should know or be able to do at the end of a learning session. The SLOs are written as per the Blooms Domain (Cognitive or Affective or Psychomotor) under which they are categorized.

In the above example four Specific Learning Objectives / Outcomes (SLOs) have been described that belong to the Cognitive domain.

### 3. Teaching Learning methods for each topic

S.No	Generic Competency	Subject Area	Millers Level Does/Shows how/ Knows how/ Knows	Specific Competency	SLO/ Outcome	Blooms Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic 1- Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1(Remember/ recall)	Must Know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral Integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1(Remember/ recall)	Desirable to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2(Understand)	Nice to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1(Remember/ recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCQ, SAQ, Viva Voce	-----	



The Teaching- Learning methods have been identified that are most suitable to the Specific Learning Objectives / Outcomes (SLOs) formed for each topic and as per the Domain of each of the Specific Learning Objectives / Outcomes (SLOs).

In the above example, Lectures, Integrated teaching and Small Group Discussion are the Teaching- Learning methods to be adopted for achieving the SLO.

The Teaching Learning Methods will vary as per the Specific Learning Objectives / Outcomes (SLO) and the Domains they cover.

#### 4. Assessment methods for each topic

S.No	Generic Competency	Subject Area	Millers Level Does/Shows/ Knows how/ Knows	Specific Competency	SLO/ Outcome	Blooms Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic 1- Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1 (Remember/ recall)	Desirable to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2 (Understand)	Nice to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCQ, SAQ, Viva Voce	-----	



The Assessment methods have been identified that are most suitable to the Specific Learning Objectives / Outcomes (SLOs) formed for each topic and as per the Domain of each Specific Learning Objectives / Outcomes (SLOs) to assess the learner.

In the above example, Multiple Choice Questions (MCQ), Short Answer Questions (SAQ) and Viva Voce are the assessment methods to be adopted for assessing the SLO. The Assessment Methods will vary as per the SLO and the Domain it covers

## 5. Integrated Teaching

S.No	Generic Competency	Subject Area	Miller's Level: Does/Show/ Knows/ how/ Knows	Specific Competency	SLO/ Outcome	Blooms: Domain	Guilbert's Level	Must Know/ Desirable to know/ Nice to know	T.L Methods	Formative Assessment	Summative Assessment	Integration Departments- Horizontal/ Vertical/ Spiral
<b>Topic 1- Introduction to Repertory, Definition and Meaning of Repertory</b>												
HomUG-R-I-1.1	Gathering and Integration of information	Introduction to Repertory	Knows	Get acquainted with tools required to search for remedy.	Define the term Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	Horizontal Integration with Materia Medica and Organon of medicine, Spiral integration in II, III and IV BHMS
HomUG-R-I-1.2			Knows		Explain the meaning of Repertory	Cognitive	Level 1 (Remember/ recall)	Desirable to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.3			Knows		Discuss the origin of the word Repertory	Cognitive	Level 2 (Understand)	Nice to know	Lecture, Small Group discussion	MCQ, SAQ, Viva Voce	-----	
HomUG-R-I-1.4			Knows		List 3 uses and 3 limitations of Repertory	Cognitive	Level 1 (Remember/ recall)	Must Know	Lecture, Integrated teaching (with Materia Medica) Small Group discussion	MCQ, SAQ, Viva Voce	-----	

Horizontal or Vertical Integrated Teaching with other subjects is required for a holistic understanding of the topic from different points of view.

The above topic should be integrated with other subjects of the same year for better understanding of the topic.

Spiral integration is required as the subject will be taught in II, III and IV BHMS and concepts taught in I BHMS will be utilized for further understanding of the subject.

### III - Glossary of terms used in the template.

#### Goals

These are broad outcomes expected of a student at the end of the course of studies. These are to be contrasted with Objectives/Outcomes which are more specifically and narrowly defined.

#### Programme

A range of learning experiences offered to students in a formal manner over a period of one-to-four years leading to certificates/ diplomas/ degrees. Examples: BA (Economics) BSc (Physics). All possible formal degree Programmes are identified by UGC. BHMS is one such Programme

#### Programme Outcome

Programme Outcomes (POs) are what knowledge, skills and attitudes a graduate should have at the time of graduation. The Programme Outcomes of professional disciplines are identified at national level by the concerned accrediting agency. In this case, it would be the National Commission of Homoeopathy which would be involved.

#### Course

Course for the purpose of this Manual represents a subject e.g. Anatomy. In homoeopathic education some of the courses extend over several years e.g. Materia Medica. The relevance of this is in the formulation of Course Outcome

#### Course Outcome

Course Outcomes are statements that describe what students should be able to do at the end of a course. Where a Course extends over a number of years, it is necessary to define distinct Course Outcomes over the entire teaching programme of the subject. These will vary in depth and extent of the coverage of the subject.

## Competency

An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition.

## Generic competency:

Professional performances are denoted by certain demonstrable attributes that the learners imbibe and internalize as reflex activities. These are the abilities of the professional that characterize the quality and level of performance. The generic competencies therefore are the abilities that a basic homoeopathic doctor would be trusted to have acquired as a consequence of his / her learning. The examples include Information gathering, problem identification, etc. The generic competencies therefore refer to the overall frames of abilities.

## Subject area:

Subject area is a chunk of content in a given subject. It could be a chapter, topic, sub-topic, etc.

## Millers Levels:

Miller's Pyramid is a diagrammatic representation of the convergence of learning. It maps the pathway of learning to show a person gains the ability and competence in a series of increasingly progressive phases of learning.



The broad base of this pyramid - 'Knows' – has the ability to recall facts and ideas that form the bedrock of professional requirements. 'Knows How' is the next phase of learning, where the students gains the insight into the relationships between the various units of 'knows' and can relate them meaningfully to reach the 'knows how' capacity. These phases would largely be in the Cognitive Domain of Bloom's Taxonomy of Learning Objectives.

Learning is not just about knowing and knowing how, but also to enable that the 'know how' is put into practice. This is the third phase of Miller's Pyramid – the 'Shows How'. During this phase of learning, the student is able to demonstrate the reasoning ability that he / she has acquired in controlled or real situations. This ability also includes the psychomotor dimension of Bloom's Taxonomy. The summit of pyramid, i.e., 'Does' also includes the emotional aspect

of learning in the form of values, attitudes, communication, etc, that denote the 'Affective Domain' of Bloom's Taxonomy.

The Miller's Pyramid is a valuable tool to represent the increasing levels of competencies that the students need to acquire, and also a framework to assess the level of competency that is achieved. Interestingly, the framework focuses on what the learner would be doing, rather than on what the teacher would be doing.

#### Specific competency:

Specific competencies are the abilities that the student is expected to acquire in a focused area of expertise, which could be a discipline-based knowledge, a skill, an attitude, or a combination of these.

#### Specific Learning Objectives / Outcomes:

Specific Learning Objectives / Outcomes (SLOs) describe what students should know or be able to do at the end of a learning session, that they couldn't do before. These are written and communicated in a 'low context communication style', that is to say, whoever reads the SLO would have the same understanding that the person who wrote it had. That is, there would be no communication gap.

That is the reason why the SLOs are written specifically and exclusively as units of learning in one of the domains of Bloom, and further at one of the levels of Guilbert. This will ensure that the learning that is expected is clearly communication among all those who refer to it, including those who set the assessment and evaluate the student performance. Further, the SLOs are ALWAYS written with an ACTIVE verb, so as to make the statement observable and measurable.

#### Bloom's domain:

Bloom's Taxonomy of Educational Objectives is a tool for classifying learning under the categories of 'knowledge', 'skill', and 'attitude / value / communication', represented by the technical terms 'Cognitive', 'Psychomotor', and 'Affective' domains respectively. Each of these domains distinguish the dimension of learning in a particular area. The importance of such classification is that it offers a clear model for both teaching and students' assessment.

#### Guilbert's level:

Guilbert's Hierarchy is a tool that describes the various levels of learning that can be mapped and managed in the Bloom's domains of learning – cognitive, psychomotor, and affective. This tool also has the additional benefit to identify the appropriate teaching – learning methods / media, and also the assessment strategies.

In the 'knowledge' domain Guilbert's approach to learning proceeds from recall of facts to understanding / interpreting the different sets of data, and finally to the ability to make decisions and solve problems on the basis of the understanding / interpretation. This simple three-step process builds a sequential order of learning; it clearly brings out that decisions shall be made NOT on the basis of facts alone, but through a process of understanding and interpretation.

The 'skill' domain builds the learning from the stage of observing and imitation to gaining control over the skills and culminating in automatism of the skill. In simple terms, any skill will be learnt initially by observing its performance, and imitating the same in the sequential order. In the next phase, the learner tries to gain control over the skill initially under the supervision, and ultimately will be able to perform it independently.

Learning in the affective domain proceeds from the stage where the learner is open and receptive to the stimulus or trigger situation, responding to it in a desirable manner, and finally internalising the responses.

#### Priority of learning:

The priority of learning is represented as 'Must know', 'Desirable-to-know', and 'Nice-to-know'. Prioritisation is a critical component of curriculum design because it classifies the learning outcomes on the basis of their importance and usefulness for the ultimate professional standards. The priority of learning is objectively assigned by a formula that gives weightage on the basis of 'frequency and impact' of the learning for professional needs.

#### TL Method / Media:

The teaching-learning (TL) methods and media are the vehicles that enable the acquisition of stated outcomes. Teaching method is simply 'what the teacher does or what the teacher enables the students with', such as giving a lecture, conducting a demonstration, or facilitating a group discussion. Teaching-learning media is 'what the teacher or the students use' to enable the learning; with examples such as a board, or projector, or model, or specimen, among others.

The teaching-learning methods and media are specific to the domains and levels in the domains. It must also be remembered that learning is a continuum, and a range of methods and media would be appropriate in the different phases in the continuum of learning.

#### Assessment:

Assessment of learning is an important component of curriculum. This measures the performance of the students in comparison to the expected outcomes of learning. Therefore the learning outcomes must be stated and communicated clearly and objectively to all the stakeholders of education. Assessment strategy is based on the domain and the level of domain in which the outcome is to be measured. Assessment could be judgemental for the extent and quality of outcomes, when it is called 'assessment of learning', or it could also be supportive for learning, when it is called as 'assessment for learning'. There are two major approaches to assessment – formative, and summative. The tools of assessment are provided in the annexure.

#### Formative Assessment:

Formative assessment is NOT judgmental, in that it does not brand the learner as 'pass' or 'fail'. The formative assessments measure the extent and quality of learning with reference to the expected learning outcomes, so that the students can be given feedback to improve on their performance. The formative assessments promote mastery learning, that is to say, each student achieves the stated level of mastery of performance because of the feedback and support. Formative assessment is also called as continuous assessment.



### Summative Assessment:

Summative assessment has the mandate to judge the achievement of the learner at the end of a period of learning, and label him / her as 'pass' or 'fail, assign a rank, approve for eligibility to be promoted or eligibility to be admitted to a course. These assessments also serve as quality check to ensure that those who are being certified conform to a minimum standard of professional competence.

### Integration:

Integration of learning is an essential requirement for aligning various data points of knowledge and skills for getting a holistic understanding and enabling a unified performance. Integration can be achieved at various dimensions and at various levels.

The dimensions of integration could be temporal in the form of Horizontal, Vertical, or Spiral. Horizontal integration is the alignment of learning on a longitudinal timeline, where the comparable contents of various subjects in the same term or year are integrated, for example the structure from anatomy, function from physiology, symptoms from Materia medica, and rubrics from repertory in the pre-clinical phase of BHMS.

Vertical integration is seen in the subjects that build on the pre-existing knowledge and skills of another subject. For example, the integration between the basic sciences such as anatomy, physiology, and biochemistry for the para-clinical learning such as in pathology, and the integration of basic and para-clinical skills into clinical learning.

Spiral integration is where a subject is recurring at various levels in the same course. For example, Materia medica is learnt from the first to final BHMS, and the focus of the subject is not the same in each year. There would be iteration of the same knowledge from different perspectives and capabilities across the different phases of BHMS.

The levels of integration represent the increasing approximation of knowledge from different subjects, so as to reach an approximation of fusion. The attempt to integration may begin with arranging the comparable contents of different subjects at the same cross sections of timeline. Further, there could be positioning the content of one subject into another subject to bring some kind of co-existence. Still further, the contents can be seamlessly merged to create an aligned learning content. Such integrative efforts can bring about holistic learning for a meaningful homeopathic capacity-building.