

Roga Nidan Evam Vikriti Vigyana-CME

6-day CME for Teachers Module

Unit 1 **Topic: Agni/Ama -Fundamental Principles of Roga Nidana**

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Understanding the basic concept of *Dosha Vaishamy* and *Dhatu Vaishamy* in detail as per *Samhita* and *Teeka vivechana*.
- Understanding basics of concept of *Agni/Ama* with detail *Samhita* and *Teeka vivechana*.
- Understanding basics of concept of *Agni/Ama* vis-a-vis Energy releasing and conserving metabolic activities in body in parlance with contemporary knowledge.
- Clinical understanding of *Samagni Mandagni Teekshnagni*, and *Vishamagni*.
- *Ama* as basis of diseases, explanation in view of modern understanding, Bio-transformation, end metabolic products etc.
- Knowledge of Carbohydrate/Fat/Protein metabolism in context to disease pathogenesis.
- Application of *Agni* and concept in diagnosis of diseases.
- Scientific explanation of fundamental principles of *Agni* and *Ama*.

ii. Activity session (Group discussion)

- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods to achieve respective learning objectives of topic, which will be designing by the resource person.
- Material for activity: The participants will write the importance of knowledge of *Agni* and *Ama* in the disease development with appropriate examples.

Unit 2 **Topic: Srotas: Fundamental Principles of Roga Nidana**

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Conceptual knowledge of *Srotas*-macro/micro body channels. Transportation and disposal channels in body.
- Clinical Application of Knowledge of *Srotas* and *Kha-Vaigunya*.
- Applied Aspect of *Srotovaigunya*, (*Srotodusti*) in manifestation of diseases.
- Clinical Application of Transmission of physical Constituents and electrical nutrients, secretions, signals in body.
- Aging and obliterating channels as root cause of systemic disorders.
- *Srotas Pariksha*- Clinical understanding of various systems based on signs and symptoms.

ii. Activity session (Group discussion)

- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.

- Each group will propose methods to achieve respective learning objectives of topic, which will be designing by the resource person.
- Material for activity: The participants will make flow chart of various diseases by explaining involved *Srotodushti* pertaining to their identified topics & write probable line of treatment to overcome such conditions.

Unit 3 Topic: *Nidan, Purvaroopa, Roopa, Upashaya, Anupashaya, Upadrava, Udarka*

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Concept of *Nidan* in Ayurved, Types, Role of *Nidan* in Disease genesis.
- Clinical Application of *Nidan* in Disease genesis with examples.
- Concept of *Purvaroop, Roopa* in Ayurved, Types, Role of *Nidan* in Disease genesis.
- Clinical Application of *Purvaroop, Roopa* in diagnosis of diseases with examples.
- Clinical Application of *Upashaya, Anupashaya* in diagnosis of diseases with examples.
- Understanding of *Upadrava* and *Udarka*.
- Applied aspect of knowledge of *Upadrava* and *Udarka* with examples.

ii. Activity session (Practical)

- Presentation of diseases based on preclinical & clinical findings by the participants.
- Searching for new concepts about disease diagnosis.

Material for activity:

Participants must interpret the *Nidan Panchaka* concept in disease diagnosis with appropriate examples

Unit 4 Topic: *Samprapti*

Categories: Microteaching session of *Roga Nidana*

Course contents:

j. Interactive session

- Concept of *Samprapti* in Ayurved, Types, Role of *Samprapti* in Disease genesis, *Samprapti Ghatak*.
- Nature of *Samprapti* in *Agantuj Vikara*.
- Interpretation of *Samprapti* in light of contemporary understanding of disease development.
- Application of knowledge of *Samprapti* and *Shatkriyakala* in terms of various diseases with examples.

ii. Activity session (Practical)

- Presentation of a diseases and discovering different *Samprapti* by participants.
- Searching for new concepts about *Samprapti* manifestation by attending minds of participants.
- Material for activity: A sheet with listed possible keywords specific to pathogenesis of disease. The participants should write the components of *Samprapti (Samprapti Ghataka)* of the given disease with proper justification. Each participant will search for literature using personal laptops or mobile phones or any other resource material needed to fulfill the objectives.

Unit 5 Topic: Basic Pathology

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Applied aspect of *Shotha* and its contemporary understanding.
- **Basic understanding of following topics:** Introduction to Pathology, Techniques for the study of pathology; Cell Injury and Cellular Adaptations; Immunopathology including Amyloidosis; Haemodynamic disorders; Inflammation & Healing; Infectious and Parasitic diseases; Neoplasia; Environmental and Nutritional diseases and genetic diseases.
- Applied aspects of these above mentioned topics in relation to pathology in diseases manifestation.

ii. Activity session (Group discussion)

- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods to achieve respective learning objectives of topic, which will be designing by the resource person.
- Material for activity: Basic understanding of general pathology in respect to disease development and one topic should be given to participants and they must write about its role in disease genesis.

Unit 6 Topic: Avarana, Vata Vyadhi and its clinical applications

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Clinical & applied aspect of *Avarana* and its understanding;
- *Avarana* in different disease pathology.
- Identifying *Avarana* & its applications in *Samprapti Vighatan*.
- Difference between *Gatavata*, *Srotorodha* and *Avarana*.
- Clinical & applied aspect of *Ashayapakarsha* and its understanding.

ii. Activity session (Group discussion)

Clinical case presentations involving the *Avarana* pathology.

Unit 7 Topic: Rogi Pariksha: Dwividha, Trividha, Shadvidha, Ashtavidha, Dashvidha, Dwadashavidha

Categories: Microteaching session and Practical of *Roga Nidana*

Course contents:

i. Interactive session

- j. Detailed knowledge of *Vividha Rogi Roga Pariksha: Dwividha, Trividha, Chaturvidha, Panchavidha, Shadvidha, Ashtavidh Pariksha (Astasthan Neerikshana)* and their utility in disease diagnosis (*Vyadhi Vinishchaya*). Detailed knowledge of *Vividha Rogibala & Roga Bala Pariksha: Charakokta Dashavidha, Sushrutokta Dwadashavidha Pariksha* & their utility in treatment principles

(*Chikitsa Sutra*).

k. Application of *Vividha Pariksha* at OPD and IPD level for diagnosis and to plan treatment principles.

ii. Activity session (Demonstration and discussions)

- Interpretation of diagnostic tools in parlance with contemporary knowledge & its utility in bedside teaching (Clinical Methods).

Unit 8 Topic: Clinical Methods at a Glance-Medical History, Clinical Examination (Physical & Systemic) and Ancillary Investigations

Categories: Microteaching session and Practical of *Roga Nidana*

Course contents:

i. Interactive session

- Detailed General Physical Examination and Systemic Examination of Patient.
- Approach to the Patient with Diseases of the Respiratory System.
- Approach to the Patient with Diseases of the Cardiovascular.
- Approach to the Patient with Disease of the gastrointestinal (GI) system.
- Approach to the Patient with Diseases of the Neurologic.
- Approach to Patient with Diseases of the Articular and Musculoskeletal.
- Interpretation of contemporary knowledge with *Rogi-Roga Pariksha*.

ii. Activity session (Demonstration and discussions)

- Knowledge on updated examination techniques.
- Material for activity: Participants should go to hospital ward and demonstrate the examination skills & wherever necessary resource persons will guide them to correct the techniques and examination skills.

Unit 9 Topic: Classification of Disease

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Importance & Knowledge of Ayurvedic classification of Diseases.
- Updated knowledge of International Classification of Diseases (ICD) and Diagnostic and Statistical Manual of Mental Disorders (DSM) from time to time.

ii. Activity session (Practical)

- Demonstration of ICD 11 i.e. (internet based) how it can be useful.
Material for activity: Interpretation of International Classification of Diseases & the Diagnostic and Statistical Manual of Mental Disorders in parlance with Vyadhi classification mentioned in Ayurveda.

Unit 10 Topic: Vyadhi Kshamatva and Beeja Dosha

Categories: Microteaching session of *Roga Nidana*

Course contents:

i. Interactive session

- Understanding the components of *Vyadhikshamatva* i.e. *Ojas* and its morbidities (*Ojo Vikara/Ojo Dosha*).

- Understanding the components of *Vyadhikshamatwa* i.e. *Doshas* and its morbidities (*Dosha Vaishamyata*).
- Understanding the components of *Vyadhikshamatwa* i.e. *Dhatus* and its morbidities (*Dhatu Vaishamyata*).
- Understanding the components of *Vyadhikshamatwa* i.e. diet, activities, sleep etc.
- Understanding of *Vyadhikshamatwa* in relation to disease development.
- Personalized approach to disease genesis based on the status of *Vyadhikshamatwa*.
- Interpretation of *Vyadhikshamatwa* from contemporary immunopathology.
- *Beeja Dosha Janya Vikara, Sahaja/Kulaja/ Adibala Pravritta*-Genetic basis of disease.
- Knowledge of common Genetic Disorders.
- Recent researches on various immunopathological aspects.
- Current research in immunization.

ii. Activity session (Group discussion)

- Searching research literature of above discussed topics using PubMed, AYUSH Research Portal.
- Material for activity: Discussion and interpretation of opportunistic and other immunopathological disorders and their influence in diseases development should be done by the participants.

Unit 11 Topic: *Pranavaḥa Srotas Vikara*

Categories: Problem based learning of *Roga Nidana*: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

i. Interactive session

- *Nidan panchatmaka Adhyayana* of following Respiratory tract diseases.
- *Shwas* & its Classification & its contemporary understanding.
- *Kasa* & its Classification & its contemporary understanding.
- *Rajyakshma, Shosha, Kshatksheena* & its Classification & its contemporary understanding.
- Diagnostic criteria, investigations and differential diagnosis of above listed diseases.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Knowledge of Recent updates of above listed diseases.

ii. Activity session (Group discussion)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka*. with its interpretation.
- Searching recent published articles in terms of any updates of diseases of respiratory disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases. If possible case presentation.

Unit 12 Topic: *Hridaya Roga* (Cardiovascular diseases)

Categories: Problem based learning of *Roga Nidana*: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

i. Interactive session

j. *Hridroga & Hrid Shool* and its contemporary understanding.

Knowledge and understanding of IHD, Hypertension, Myocardial Ischaemia.

- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Diagnostic criteria, investigations and differential diagnosis of above listed diseases.
- Knowledge of Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka*. With its interpretation.
- Searching recent published articles in terms of any updates of diseases of respiratory disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 13 Topic: Annavaha Srotogat Vikara

Categories: Problem based learning of *Roga Nidana: Systemic Diseases (Srotogat Vyadhis)*

Course contents:

i. Interactive session

- Role of *Avidhi Ahara* as etiological factor in Gastro intestinal disorders.
- *Nidan Panchatmaka Adhyayana* of following diseases.
Atisara, Amlapitta, Grahani Gada, Ajirna, Udawarta, Atyagni (Bhasmakagni) and its classification and its contemporary understanding.
- Diagnostic criteria, investigations and differential diagnosis of above listed diseases.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka*. with its interpretation.
- Searching recent published articles in terms of any updates of diseases of gastrointestinal disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 14 Topic: Pandu and Kamala Rasavaha/ Raktavaha Srotogat Vikara

Categories: Problem based learning of *Roga Nidana: Systemic Diseases (Srotogat Vyadhis)*

Course contents:

i. Interactive session

- *Nidan Panchatmaka Adhyayana* of following diseases.
- *Pandu* and its classification and its contemporary understanding.
- *Kamala* and its classification and its contemporary understanding.
- *Amavata* and its classification and its contemporary understanding.
- Diagnostic criteria, investigations, Physical Examinations and differential diagnosis of

above listed diseases.

- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Knowledge of recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka*, With its interpretation.
- Searching recent published articles in terms of any updates of diseases of cardiovascular disorders and hepato-biliary disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 15 Topic: Madhumeha/ Prameha – Diabetes – Medavaha Srotogata vikara

Categories: Problem based learning of Roga Nidana: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

i. Interactive session

- *Nidan Panchatmaka Adhyayana* of following diseases.
Prameha and its classification and its contemporary understanding.
Sthaulya and Karshya and its classification and its contemporary understanding.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Diagnostic criteria, investigations, Physical Examinations and differential diagnosis of above listed diseases.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Diagnosis of Anemia on the basis of Clinical features and laboratory investigations.
- Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka*. With its interpretation.
- Searching recent published articles in terms of any updates of diseases of metabolic and urological disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 16 Topic: Vata Vyadhis -Asthi-Majja Srotogat Vikar- Musculoskeletal Disorders

Categories: Problem based learning of Roga Nidana: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

i. Interactive session

- *Nidan Panchatmaka Adhyayana* of following diseases
Amavata, Sandhivata, Gridrasi etc Vatavyadhi and its classification and its contemporary understanding.
- Diagnostic criteria, investigations, Nervous System Examinations and differential diagnosis of above listed diseases.

- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
 - Recent updates of above listed diseases.
- ii. Activity session** (Group discussion /case presentation)
- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka* along with its interpretation.
 - Searching recent published articles in terms of any updates of diseases of neurological and musculoskeletal disorders.
 - Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 17 Topic: Pakshaghat-Ardit & Mutraghat-Mutrakrichra/Trimarmiya Vyadhis - Cerebro Vascular Disorders and Urinary Tract diseases

Categories: Problem based learning of *Roga Nidana*: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

i. Interactive session

- *Nidan panchatmaka Adhyayana* of following diseases.
Pakshaghat, Ardita, and its classification and its contemporary understanding.
Mutraghat- Mutrakrichra and its classification and its contemporary understanding.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Diagnostic criteria, investigations, Physical Examinations and differential diagnosis of above listed diseases.
- Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka* along with its interpretation.
- Searching recent published articles in terms of any updates of diseases of Cerebro Vascular Disorders and CKD- Urinary Tract diseases.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases

Unit 18 Topic: Manovaha Srotovikara and its clinical applications

Categories: Problem based learning of *Roga Nidana*: Systemic Diseases (*Srotogat Vyadhis*)

Course contents:

j. Interactive session

- Diseases of *Manovaha, Sangyavaha, Buddhivaha srotas* and their *Panchanidanatmaka* study of following diseases.
- *Unmada, Apasmara, Atatwabhinivesha, Vishada* and its classification and its contemporary understanding.
- Diagnostic criteria, investigations, psychological Examinations and differential diagnosis of above listed diseases.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.

- Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka* along with its interpretation.
- Searching recent published articles in terms of any updates of diseases of Mental and behavioural disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 19 Topic: Skin diseases

Categories: Problem based learning of *Roga Nidana: Systemic Diseases (Srotogat Vyadhis)*

Course contents:

i. Interactive session

- Perspective of skin diseases in Ayurveda.
- Understanding the *Panchanidanatmak* components of *Kustha*, *Visarpa*, *Shwitra* and other *Twak Vikara* and its classification and its contemporary understanding.
- Diagnostic criteria, investigations, integumentary system examination and differential diagnosis of above listed diseases.
- Important diagnostic parameters of contemporary science like PASI score, DLQI, Auspitz sign, etc applicable in different diseases.
- Clinical application of knowledge of *Samhitokta Vyadhi Nidan Panchak* using modern tools of examination and investigations.
- Recent updates of above listed diseases.

ii. Activity session (Group discussion /case presentation)

- Searching classical literature along with detail *Nidanatmaka Adhyayan* from *Samhita* and *Teeka* along with its interpretation.
- Searching recent published articles in terms of any updates of diseases of skin disorders.
- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 20 Topic: Anukta Vyadhi

Categories: Problem based learning of *Roga Nidana*

Course contents:

i. Interactive session

- Knowledge on *Anukta Vyadhi* (diseases not explained in *Samhita*) like Chikungunya, Corona virus diseases, PCOD, Dengue and newly emerging diseases etc.
- Methods, ways/means to document *Anukta Vyadhi*.
- Knowledge of *Shatkriyakala* and components of *Samprapti (Samprapti Ghataka)* of newly emerging diseases.

ii. Activity session (Group and Practical discussion)

- Knowledge on updated newly emerging diseases.
- Exercise on developing the components of any newly found disease assigned to the participants with their logic.

- Material for activity: Participants present their clinical presentation pertaining to any of the above diseases.

Unit 21 Topic: Ayurvedic Interpretations of modern laboratory Investigations.

Categories: Microteaching session and practical of *Roga Nidana*

Course contents:

i. Interactive session

- Knowledge & Interpretations of Complete blood count/full blood count.
- Knowledge & Interpretations of biochemical blood Investigations.
- Knowledge & Interpretations of stool examination.
- Knowledge & Interpretations of urine examination.
- Knowledge & Interpretations of sputum examination.
- Knowledge & Interpretations of semen examination.
- Basic knowledge about Liver Function Tests; Bone Marrow Aspiration and Trephine Biopsy; Hypothalamus and Pituitary Gland Hormones; Renal Function Tests; Semen analysis; Semen Examination; Thyroid Function Test (Thyroid Hormones) T4, T3, TSH; Lipid Profile.

ii. Activity session (Group discussion)

- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods of achieve respective learning objectives of topic, which will be designing by the resource person.
- Material for activity: Participants present their clinical interpretation pertaining to any of the above investigations.

Unit 22 Topic: Micro-biology i.e. Culture and sensitivity

Categories: Microteaching session and practical of *Roga Nidana*

Course contents:

i. Interactive session

- Introduction to Microbiology.
- Detailed Knowledge of Culture Media.
- Detailed Knowledge of identification of Bacteria, viruses, fungal and parasites.
- Detailed knowledge of various tests for exact identification of infectious agents.
- Detailed knowledge of Sensitivity test.
- Detailed knowledge of sample Collection and procedure for culture of Urine, Blood, pus and other body fluid.

ii. Activity session (Group and Practical discussion)

- Demonstration on Culture and sensitivity.
- Showing autoclaving, Preparation of Culture media, streaking, sensitivity studies
- Material for activity: Interpretation of Diagnostic Microbiology; Sero-immunological Investigations; Examination of body fluids & Culture Medium etc.

Unit 23 **Topic:** Radio-diagnosis

Categories: Microteaching session and practical of *Roga Nidana*

Course contents:

i. Interactive session

- Knowledge of X-Ray taking Normal and abnormal, X-Ray Chest, Abdomen, Spine, contrast studies. Chest, Abdomen, Spine, contrast studies.
- Knowledge of X-ray films and its interpretations.
- Knowledge of Ultra sound and diagnosis of diseases on the basis of USG.
- Knowledge of CT scan and MRI techniques & other non-invasive diagnostic modalities.
- Various types of Ultra sound.
- Knowledge of CT scan and MRI techniques, Basic principles.
- Understanding of normal physiological aspects, recognising pathological aspects and interpretations.
Recent Advances of the techniques and their applications.

ii. Activity session (Group and Practical discussion)

- Some exercises for hands on training.
- Material for activity: Participants must be provided X ray films, MRI films and CT Scan films and ask them to interpret the same.

Unit 24 **Topic:** ECG

Categories: Microteaching session and practical of *Roga Nidana*

Course contents:

i. Interactive session

- Basics of ECG.
- Identifying Normal pattern and values.
- Identifying abnormal ECGs and interpretation for various diseases.

ii. Activity session (Practical discussion)

- Material for activity: ECG strips or graphs will be provided for identification.
- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods of achieve respective learning objectives of topic, which will be designing by the resource person.
- Material for activity: Material for activity: Participants must be provided ECG sheet and ask them to interpret the same.

Unit 25 **Topic:** Body fluid examination & other investigation

Categories: Microteaching session and practical of *Roga Nidana*

Course contents:

i. Interactive session

Examination of body fluids

- Sample collection and Procedure of body fluid examination with Interpretation.
- Gross examination: The fluid received in lab is observed grossly to observe the color, transparency/opaque nature, hemorrhagic or clotted.

- Microscopic examination of the fluid for cell count.
 - Interpretation of Pleural fluid, Peritoneal fluid, Cerebrospinal fluid (CSF) etc
 - Sero-immunological Investigations and their interpretation.
 - New techniques of body fluids examination, FNAC, and Basic knowledge of Cell Cytology.
- ii. Activity session (Demonstration and Practical discussion)**
Some exercises for hands on training.
- Material for activity: Participants present their clinical interpretation pertaining to any of the above investigations.

Unit 26 Topic: Teaching learning and assessment Methods.

Categories: Teaching Technology

Course contents:

i. Interactive session

- Principles of teaching methods.
- Various teaching learning methods.

Problem based learning, Case Bases Learning, Interactive teaching Methods, Use of ICT (Information and Communication Technologies) in Teaching, Clinical/ Practical teaching bedside teaching etc. Introduction to Methods of assessment like practical / clinical tests, Objective Structured Clinical Examination (OSCE) / Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), Mini Clinical Evaluation Exercise (mini-CEX), records maintenance and attitudinal assessment. etc,

Unit 27 Topic: Scope of research in *Roga Nidana*

Categories: Research Methodology

Course contents:

i. Interactive session

- Various area of research in *Roga Nidana*.
- Study design on survey, correlation and association study and clinical trial etc. may be discussed.
- Professional utility after pursuing *Roga Nidana* post-graduation.
- Role of *Roga Nidan* expert in procurement, authentication of Ayurvedic laboratory investigations.
- Interpretations of Modern laboratory investigations with Ayurved point of view.
- Various standard guidelines for survey and clinical study.

Unit 28 Topic: Development and validation of questionnaires and scales for Research

Categories: Research Methodology and Teaching Technology

Course contents:

k. Interactive session

- Crucial steps for extraction of components from Ayurveda classics.
- Steps in Questionnaire development, pretesting, validation techniques, final assessment of validated questionnaire.
- Translation of questionnaire.

- Standardization and Validation Procedure.

ii. Activity session (Group discussion)

Mind mapping of steps

Unit 29 **Topic: Microteaching session of Study Design**

Categories: Research Methodology

Course contents:

i. Interactive session

- The process of ideation, defining research question/hypothesis/objectives.
- Overview of study methods: literature research, clinical research (case reports, case series, cohort studies, clinical trials), laboratory research (*in-vitro*, *in-vivo*, *in-silico* etc), epidemiological designs (descriptive, analytical).
- How to design a study (concepts of confounders, bias / □□□□□□□□).

ii. Activity session

- Defining objectives, proposing methods for relevant objectives. The participants will propose their objectives, which will be refined by the resource person. Then the participants will propose methods to achieve respective objectives. The resource person will help in designing study for their objectives.
- Material for activity: Participants should design one research protocol and discuss with resource person to validate the topic

Unit 30 **Topic: Overview of Scientific Publications**

Categories: Research Methodology and Teaching Technology

Course contents:

i. Interactive session Introduction for UG and PG of Roga Nidan

Advanced

- Overview of scientific publications, popular and scientific literature.
- Types of papers, peer review and editorial process, research journals (predatory publications and assessing the authenticity of journals), indexing and online databases
- Knowledge regarding the publication of articles in the PubMed, scopus, web of science, impact factor journals.
- Knowledge about “IMRaD” format to a paper/article that is structured by four main sections: Introduction, Methods, Results, and Discussion
- Guidelines for publications and reporting standards, introduction to publication ethics, referencing styles.

ii. Activity session

Advanced

- Searching research literature specific to objectives using PubMed/Scopus, Cochrane, ResearchGate, CTRI, online ICE, mobile apps related to scientific literature. Each participant will also create PubMed alert related to areas of research / clinical interests.
- Material for activity: Every participant will search for literature using personal laptops or mobile phones. A sheet of important links of web-sources will be provided to the participants.

Proposing the method for enrollment, participation and evaluation of the CME programme.

A. Enrolment/ Selection:

Statement of Purpose (SOP) for attending CME:

It will be a short brief summary of the participant's background including Education, Institute working, special interest in the subject. Initiatives adopted by the teacher in teaching subjects. Why participants want to attend CME. Considering the CME topic list; which areas he wants to learn or refresh. How he will utilize the knowledge gained during this program.

After selection: Providing schedule, Study material and introducing with participants expectations from the participants, Activities they need to complete and probable submissions.

C. During the session:

Pre-test: (we recurrently conducting for the CME): (It will be based on Topics of CME, with questions of Qualitative and Quantitative measures, Questions of all types including Recall to application)

Formation of Group: Before starting of the CME, the organizer will divide the participants into suitable groups (minimum 5 participants in each group). Each day the group will decide the group leader/coordinator. Interactive session topics will distributed to each group by resource persons. The average duration of most group discussions is 15 minutes (not including the prep time). Group leader/coordinator will share and present the view of the group during activity session of that topic. New sessions of CME are well divided and are imparting essential knowledge and skills considering the participants. Organizers can plan interactions and ensure at least one individual submission and one group presentation/day.

Organizers should carefully plan activities. The activities should have fixed objectives, resource material, planned discussions, and methods of assessment like presentation or submission as result. An effective group discussion generally has a number of elements:

All members of the group have a chance to speak, expressing their own ideas and feelings freely, and to pursue and finish out their thoughts

Even in disagreement, there's an understanding that the group is working together to resolve a dispute, solve a problem, create a plan, make a decision, find principles all can agree on, or come to a conclusion from which it can move on to further discussion

D. Evaluation can be planned in four stages.

1. **Reaction of participants:** - (Feedback on contents - Currently we are taking daily feedback and one feedback at the end.) A survey preferably online can be planned and submitted by participants. Questions will include reactions related to the CME of the participant. Qualitative and Quantitative questions can be planned based on sessions

2. **Learning:** - Post-test: Similar to Pre-test, quiz, or presentation from the participant. This will be an opportunity to know about the conducted program as well as the knowledge and skills gained by participants.

3. **Behavior:-**

A report of the change in Knowledge, skills, Practice to teaching will be reported by the participants within three months after completion of CME.

4. **Benefits –**

Participants will share a detailed report related to the benefits due to CME related to Knowledge, Skills and behavior/practice. What is implemented in the teaching? What was reaction of Students,

Peers and Students? Remark of the participant implementing change. Any support difficulties noted. What else can be added in CME.

Instruction to Organizers

While selecting topics for CME follow rules given below

- 1) Select any 8 topics from 1-10 topics i.e. Fundamentals of *Roga Nidan*.
- 2) Select any 8 topics from 11-20 topics i.e. *Srotogat Vikar* (Systemic Diseases).
- 3) Select any 8 topics from 21-30 topics i.e. Practical Pathology and Research Methodology.

Total Duration of Hours

36 Hours + 01 Hour

- | | |
|---|----------|
| i. Microteaching session | 12 Hours |
| ii. Problem based learning and Case Demonstration | 12 Hours |
| iii. Microteaching and Practical | 6 Hours |
| iv. Research Methodology & Teaching Technology | 6 Hours |
| v. Pre and post training assessment | 1 Hour |

Note: Each session is 1 ½ Hour (45 min. Interactive session+ 45 Min. Activity session)