CENTRAL COUNCIL OF INDIAN MEDICINE

SIDDHA MARUTHUVA PERARINGNAR (M.D. (SIDDHA) COURSE

SYLLABUS FOR SIDDHAR YOGA MARUTHUVAM (SIDDHAR'S YOGIC SCIENCE) SPECIALITY

[UNDER THE INDIAN MEDICINE CENTRAL COUNCIL (POST GRADUATE SIDDHA EDUCATION) REGULATIONS, 2016.]

GOAL:

• The main goal of the post-graduate education in SIDDHAR YOGA MARUTHUVAM is to enable medical student understand, envisage and explain life processes as YOGA AND MEDICINE and apply his knowledge and skills in clinical problems solving and scientific research.

OBJECTIVES:

At the end of the Three years training in Siddhar yoga maruthuvam, the postgraduate student is expected to gain knowledge and demonstrate his understanding of the

• Concepts and principles of Siddhar yoga maruthuvam. This includes Thirumoolar’s Thirumandiram Attanga yogam and other yogam of various Siddhars, role of yogam in current scenario, yogam in different school of thoughts and role of Yogam intreating various life style disorders and also to promote physical and mental fitness.

• Fundamentals of biostatistics and research methodology
### FIRST YEAR (Preliminary Examination)

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<th>S.NO</th>
<th>SUBJECT</th>
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<th>PRACTICAL/CLINICAL</th>
<th>VIVA</th>
<th>TOTAL MARKS</th>
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<tbody>
<tr>
<td>1.</td>
<td>PAPER – I Research Methodology and Bio-Medical Statistics</td>
<td>100</td>
<td>Minor Project - 100(Submission of report - 60 marks, Publication/presentation-20 marks, Oral-20 Marks)</td>
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<td>200</td>
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<td>2.</td>
<td>PAPER – II Basic Principle of Siddhar Yogam and Applied Aspects</td>
<td>100</td>
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<td>50</td>
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### SECOND YEAR

**Essential:** Obtain CME credit points through Seminars/Workshops/Conferences (National/International)

**Desirable:** Publication/Visits or internship at Industry / Lab / Research institute /other AYUSH Institutionsx/Journal club/Teaching under graduate Students

### THIRD YEAR (Final Examination)

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<tr>
<td>1.</td>
<td>PAPER-I Kaaya Karpam and Ula Udal Anma Thathuvam</td>
<td>100</td>
<td>100 (Practical 70+Oral30)</td>
<td>50</td>
<td>250</td>
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<td>2.</td>
<td>PAPER-II Principles and Practice of Siddhars’ Yogam</td>
<td>100</td>
<td>100(Practical 70+Oral30)</td>
<td>50</td>
<td>250</td>
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<td>3.</td>
<td>PAPER-III Principles and Practice of Modern Medicine</td>
<td>100</td>
<td>100(Clinical 70+Oral-30)</td>
<td>50</td>
<td>250</td>
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<td>4.</td>
<td>PAPER-IV Therapeutic Siddhar Yogam</td>
<td>100</td>
<td>100 (Clinical 70+Oral-30)</td>
<td>50</td>
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**Dissertation:** Maximum marks will be 100 and Minimum marks for passing will be fifty percent.
FIRST YEAR

PAPER- I RESEARCH METHODOLOGY AND BIO-MEDICAL STATISTICS

CLINICAL RESEARCH METHODS UNIT-I

- Measures of disease frequency
- Measures of association/impact in clinical research
- Measurement errors in clinical research
- Validity in clinical research
- Bias in clinical research
- Descriptive bio-statistics
- Inferential bio-statistics
- Formulating research question
- Descriptive studies
- Analytical studies
- Pre-clinical studies
- Experimental studies
- Sampling and sample size estimation
- Survival analysis

CLINICAL RESEARCH METHODS UNIT-II

- Bio-medical literature search / Organization of Literature search (Zotero etc)
- Developing data collection instruments/Case Record Form (CRF)
- Developing analysis plan
- Use of statistical software for data analysis
- Writing protocol: Principles and Guidelines
- Ethics in clinical research (Siddha, International/National)
- Scientific writing/ Writing the Dissertation (Including University Guidelines)
- Scientific presentation (oral/visual/poster)
- Case report writing / presentation
- Journal critique
- Writing research grants
- Comparative study of traditional medical systems (specifically Chinese, Ayurveda, Homeopathy, Unani)
- Mentorship
- Pedagogic methods

CLINICAL RESEARCH METHODS UNIT-III

- Introduction to National health programmes/health system including AYUSH
- Indian health/medical research systems/bodies including AYUSH  ICMR, CCRAS, CCRS, Clinical Trials Registry of India etc
- Orientation to National clinical research guidelines/regulatory bodies CDSCO/DCGI/NABH/QCI Indian GCP for ASU
- Drug standardization as per Pharmacopoeial Laboratory for Indian Medicine (PLIM)
- International guidelines ICH-GCP; WHO guidelines for traditional medicine; WHO/OECD guidelines for animal studies
CLINICAL RESEARCH METHODS UNIT-IV (MINOR PROJECT)

- Cross-sectional study (Hospital-based)
- Patients; Care-takers; Physicians
- Cross-sectional study (Community-based)
- Local traditional health traditions, including traditional bone-setting
- Community (including tribal populations)
- Studies using qualitative research methods
- Clinical epidemiological studies (Hospital-based)
- Secondary data analysis of clinical data with report
- Case report/Case-series writing
- Systematic review
- Literary research
- Comparative study of traditional medical systems
- Report on visit to industry / entrepreneurship ideas
  Publication of any of the above work will get 20 marks

References:

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<td>4</td>
<td>Biostatistics – Principles and Practice, (English), Elsevier, 2017</td>
<td>B Antonisamy, Solomon Christopher, Prasanna Samuel</td>
</tr>
</tbody>
</table>

PAPER - II BASIC PRINCIPLES OF SIDDHAR YOGAM AND APLIIED ASPECTS

1. Introduction to Yogam

Definition – various schools of thought – principles and philosophy – Uniqueness of Yogam

2. History of Yogam

3. Introduction to Siddhar Yogam

Aim of life - Veeduperu (Salvation) - Noikal (Diseases) - Causes for diseases - Siddha maruthuvam (Prevention and Treatment) - Siddharkalinmuthalkotpadu (Yogam and Gnanam) - Siddharkalin matruo kotpadu (Saiva Siddhantham - Siddharin kanmani (Rajeswaratharisanam) - Siddharin manimakudam (Muppu) - Rasavatham - Kayassidhi - Kayakarpam - Karpa marunthukal.

4. Udal thathuvam & udal koorugal

96 Thathuvas: Iympootham (Five Primordial elements) – Iym Pori (Five sense organs)- Iymplulan (Functions of the sense organs 5)-Kanmenthiriyam (Motor organs-5)- Kanmavidayam (Functions of the motor organs-5)- Karam (Intellectual faculties 4).- Arivu (Self realisation-1) - Dhasa Naadi (Vital channels-10) - Dhasa Vaayu (Vital force-10)-Aasayam (visceral Cavites-5)-Kosam (Systems or sheath-5) - Aatharam-6 (Psychophysical centres -6)-Mandalam (vital regions-3) - Malam(Mental Bindings-3)-Dhosham (Life humours-3)–Aedanai (Physical bindings-3)-Gunam (Qualities 3) -Vinai (Acts-2) - Raagam (Passions-8)-Avasthai (State of consciousness-5)-Udal Kattugal (Physical constituents) -Udal Vanmai (Body strength)-Malam(body excretion)-Udal thee(Digestant)- Vegam-14 (Natural urges-14)-Sarampazhakkam-karuurpathiyil vasyiyogam-vazhnaal vivaram.

5. Principles and philosophy of Siddhar yogam

Guru chisyan-Panja latchanam for yoga student- Purucharthangal(Aim of life)- Four Asiramam(Stages of life)- Four Margam(Way for Mukthi)- Six Tharisanam-Yoga Naadikal- Body according to Yogam- Mind according to yogam- Pranava manthiram- Three Kalaikal- Suvasathin oligal (Sound of respiration)- Siddhar’Attanga Siddhikal- Yoga and positive health- Dietary regimen for yogam- Purification steps in Yogam (Kiriya yogam)-Benefits of yogam-- Thirumoolar Thirumanthiram- Padanjali yoga soothiram- Yogam of other siddhars-Attanga yogam.

6. Different schools of yogam


7. Yoga practice in daily life

8. Yogam for disease prevention, healing, health promotion and quality of life

9. Yogam and spirituality

10. Applied anatomy and physiology pertaining to yoga practice

1. Introduction

- Practical division of yoga based on the Astanga yogam
- The scientific validity of yoga
- A balance between strength, flexibility and relaxation
- Nerve tensioning and stimulation of nerve reflexes
- Co-activation of opposing muscle groups around joint complex in yoga
• Principle of stretching in yoga
• Principle of strengthening in yoga
• Principle of relaxation in yoga

2. Shoulder joint complexes

• Bones, joints and muscles of shoulder region
• Shoulder joint disorders
• Applied anatomy and physiology of the shoulder joint complex in yoga posture

3. Elbow, forearm, wrist and hand

• Bones, joints and muscles of shoulder region
• Special features and disorder of the elbow, wrist and hand
• Applied anatomy and physiology of forearm, wrist and hand in yoga posture

4. Hip joint complex

• Bones, joints and muscles of hip and pelvis
• Applied anatomy and physiology of the hip and pelvis in yoga posture

5. Knee joint complex

• Bones, joints and muscles of knee
• Disorders and injury of the knee
• Applied anatomy and physiology of the thigh and knee in yoga posture

6. Ankle and foot

• Bones, joints and muscles of ankle and foot
• Special features, injury and disorders of ankle and feet
• Applied anatomy and physiology of the ankle and foot in yoga posture

7. Spinal joint complex

• Bones, joints and muscles of spinal joint
• Abnormalities and disorder of spine
• Applied anatomy and physiology of the head and trunk in yoga posture

8. Cardio pulmonary system

• Introduction of cardio pulmonary system
• Disorder of cardiopulmonary system
• Applied anatomy and physiology of Cardio pulmonary system in yoga
  – Effects of yoga in circulation
  – Cardiopulmonary consideration in yoga exercise
  – The effects of breathing rate on various body system
  – Breath control and regulation - Pranayamam
9. The nervous system

- Introduction of nervous system
- Applied anatomy and physiology of nervous system in yoga
  a. Principle of nerve stretching in yoga
  b. Relaxation in yoga
  c. Spinal reflexes and their use in yoga
  d. Relationship between the nasal cycle, the autonomic nervous system and cerebral hemispheric dominance
  e. Effect of Pranayamam on the nervous system
  f. Effects of the meditative practice on the nervous system
    - Physiological effects of meditation
    - Types of meditative practice
    - Effects of meditative practice

10. The digestive system and immune system

- Introduction
- Natural and acquired immunity
- Immune suppressive diseases
- Autoimmune diseases
- Hypersensitivity
- Applied anatomy and physiology of digestive system and immune system in yoga

11. Endocrine, urinary and reproductive system

- Introduction of endocrine, urinary and reproductive system
- Applied anatomy and physiology of the endocrine, urinary and reproductive system
  a) Applied physiology of the endocrine system in yoga
  b) Applied anatomy and physiology of urinary system in yoga
  c) Applied anatomy and physiology of reproductive system in yoga
    - Yoga for male reproductive system
    - Yoga for female reproductive system
      - Yoga and menstruation
      - Yoga and pregnancy

12. Exercise physiology and yogic physiology

- Exercise physiology
- Muscles physiology
- Enhancing muscle function
- Effect of immobilization or minimal activity
- Fitness testing
- Functional analysis of the gait cycle
- Applied yogic anatomy and physiology
## References:

<table>
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<td>UdalThathuvam, Department of Indian Medicine and Homeopathy, (2014)</td>
<td>Dr. P.M. Venugopal H.B.I.M.</td>
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<td>8.</td>
<td>Glimpses of 96 thathuvas, The south India saivasiddhantha Noorpathippukazhagam), (2011)</td>
<td>Dr. R.S. Ramaswamy MD(s)</td>
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<td>9.</td>
<td>Pattinathar Patalkal</td>
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<td>10.</td>
<td>Sivayogasaaram</td>
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<td>Kirathasamkithai</td>
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<td>Idaikattusiddhar Paadalgal</td>
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<td>Kagapusandar Kavyam, Thamarai Noolagam-chennai, (1999)</td>
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<td>16.</td>
<td>Thirumoolar Thirumanthiram, Gangai Puthaga Nilayam, (2002)</td>
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<td>17.</td>
<td>Agashthiyarnijyanam</td>
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<td>18.</td>
<td>Essentials of Medical Physiology, Jaypee brother’s medical publishers (p) ltd</td>
<td>K. Sembulingam, Prema Sembulingam</td>
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<td>19.</td>
<td>Applied anatomy and physiology of yoga</td>
<td>Simon Borg-olivier, Bianca Machliss</td>
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<td>20.</td>
<td>Gray’s Anatomy, Elsevier health science</td>
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<td>22.</td>
<td>Chaurasia’s Human Anatomy, CBS publishers</td>
<td>BD Chaurasia</td>
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PART A: KAAYA KARPAM:


Mooligai Karpam:

Thathu Karpam:


Jeeva Karpam:


Pothu Karpam:

1. Definition
2. Principles of Pothukarpam
3. Pothu Karpa avizhathangal

Sirappu karpam:

1. Definition
2. Principles of Sirappu karpam
3. Sirappu karpam avizhathangal

Physical, chemical properties and pharmacological action of Kayakarpa Herbs, Minerals and Metals -Recent research papers in Kayakarpam and Kayakarpam medicine.
Muppu

- Definition
- Types
  - Vatha muppu
  - Vaithiya muppu
  - Yoga muppu
- Properties of Muppu
- Therapeutic effects of Muppu
- Various schools of thought on Muppu

Aging

- Definition
- Causes of aging-various theory
- Effects of aging
- Prevention and delay of aging
- Research on anti aging

PART B: ULA UDAL ANMA THATHUVAM (CONCEPTS OF MIND BODY AND SOUL)

1. Concept of mind, Body and soul
   A. Mind-modern understanding
      a. States of consciousness and physiological changes in altered states of consciousness
      b. Psychological concepts of perception, conception and creativity.
      c. Manam – Mind
      d. Budhi- Intellect
      e. Siddham – Intuition
      f. Ahankaram- An exaggerated love of self leading one to infer all things to oneself, egotism.
      g. Sidhars’ concept of Aanma
      h. Aanavam, kanmam, Mayai
      i. Aanma thathuvam
      j. Arivu-Self realisation
      k. The immaterial spirit which exists in man unrecognised by him.

2. Basics of mind body medicine
   a. Five categories in complementary and alternative medicine(CAM)
   b. Definition of Mind Body Medicine
   c. Historical view of Mind Body Medicine
   d. Pioneers in Mind Body Medicine in modern era– Norman cousins, Deepak chopra, Herbert Benson,Deanornish, Bernie Siegal,LorryDossey
   e. Need of mind body medicine
   f. Mind body relationship and modern medicine: Epidemiological studies, clinical studies,& experimental studies
   g. Placebo and Nocebo
3. Stress and emotions
   a. Definition
   b. Physiological and psychological stress
   c. Understanding stress in accordance with scriptures
   d. Stress assessment tools and biomarkers of stress
   e. Stress & disease
   f. Yogic concept of emotions
   g. Physiology of emotions
   h. Mobilizing, transforming and celebrating the emotions
   i. Trauma & transformation
   j. Emotional, social intelligence and spiritual intelligence
      i. Definitions
      ii. Need of emotional & social intelligence
      iii. Working on emotional & social intelligence
      iv. Emotional freedom technique,

4. Psychoneuroimmunology (PNI) & Psycho-neuro-endoimmunology (PNEI)
   a. Definition of Psychoneuroimmunology and Psycho-neuro-endoimmunology
   b. Role of cortex, limbic, thalamus, hypothalamus, and brainstem structures
   c. Vagal pathways of mind body communication
   d. Communication between brain and immune system
   e. Communication between neuroendocrine and immune system
   f. Communication between glucocorticoids and immune system
   g. Introduction to Autonomic nervous system
      o Parasympathetic nervous system
      o Sympathetic nervous system
   h. Environmental influence on mind
   i. Neurogenesis, neuroplasticity, telomere length, etc.
   j. Endocrine system
      a. Endocrine glands & stress
      b. Hypothalamic-pituitary-adrenal axis or limbic-pituitary-adrenal axis
   k. Immune system
      a. Basics of immune system
      b. Classification of immune system
      c. Cellular and humoural immunity
      d. Immunoglobulins
      e. Cytokines
      f. Complement system
      g. Altered immunity and its causes
         i. Hypersensitivity reactions
         ii. Allergies
         iii. Allergen immunotherapy
         iv. Autoimmunity
         v. Immunodeficiency
5. **Classification of Mind body techniques**
   a. Mind-to-body therapies and Body-to-mind therapies
   b. Concentration based mind body medicine therapies, Relaxation based mind body medicine therapies, and Movement based mind body medicine therapies
   c. Top-down and Bottom-up mechanisms

6. **Mind’s role in illness–Understanding connection**
   a. Mind & Cardiovascular ailments
   b. Emotions & Cancer
   c. Chronic pain
   d. Mind & metabolic disorders
   e. Stress & gastrointestinal disorders
   f. Stressed skin
   g. Musculoskeletal disorders
   h. Respiratory disorders
   i. Menstrual disorders, infertility, pregnancy and emotions
   j. Somatisation
   k. Psychological disorders
   l. Disorders of excretory system
   m. Disorders of nervous system

7. **Mind body medicine techniques**
   a. Medical Meditation– Eating meditation, transcendental meditation, Om meditation, cyclic meditation, forgiveness meditation,
   b. Mindfulness
   c. Hypnosis
   d. Autogenic training
   e. Imagery
   f. Dance, music and art therapy
   g. Journal writing
   h. Breathing, mind and body
   i. Biofeedback & Neurofeedback
   j. Cognitive-behavioural therapy
   k. Relaxation response & Progressive musclerelaxation
   l. Intentional effects on living systems
   m. Social support & Support groups’
   n. Healthy attitudes
   o. Faith & Prayer
   p. Conventional psychotherapy
   q. Stress management
   r. A participating patient-Self-awareness and self-care
   s. Yoga as Mindbody medicine
   t. Yogic counselling
      ▪ Counselling and yogic counselling
      ▪ Need of yogic counselling
      ▪ Components of yogic counselling
   u. Spirituality and Mind body medicine
- Spirituality definition & its role in life with its relation to religion, culture, health and healing
- Difference between spirituality and religion
- Spiritual issues in healthcare environment
- Evidence basis for role of religion and spirituality in healthcare
- Assessment tools and evaluation for a spiritual need of a patient

References:

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<td>Gunapadam Mooligai Vaguppu, (Tamil), Department of Indian medicine and Homoeopathy, (2003)</td>
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<td>Thirumoolar Vaithyam – 600</td>
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<td>26.</td>
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<td>John.E.Sarno Paperback</td>
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THIRD YEAR

PAPER - II PRINCIPLES AND PRACTICE OF SIDDHARS' YOGAM

I. Thirumoolar Thirumanthiram

Introduction to Thirumanthiram - Definition of Yogam in Thirumanthiram - Essentials in Thirumandiram Thandiram - Thirumoolar's concept of Sivam - Thirumoolar's views on Vedams and Aagamams

II. Thirumoolar's Attanghayogam

1. Iyamam
   Definition - General rules while observing Iyamam - Principles and Practice of Iyamam

2. Niyamam
   Definition - General rules while observing Niyamam - Principles and Practice of Niyamam

3. Asanam
   Definition - General rules while doing Asanam - Principles and practice of Asanam - Therapeutic application of Asanam - Physiological and bio-chemical changes while doing Asanam - Contra-indication in yoga - Dietary regimen - Types of Asanam.

   Some important Asanams, their techniques/methods and benefits:
   Padmasanam - pathirasananm - pasumugaasanam (komugasananam - cow face pose) - Mayilasanam (mayurasanam) - kriya asana vanakkan - singasanam - kottrigaasanam - muthasanam - veerasanam - sithasanam - nindrapadasanam - utkattasanam (chair pose) - padhahasthasanam (bending forward from standing) - marasanam - natrajasanam (king of the dancer pose) - veerapathirasanam 1 (warrior 1) - veerapathirasanam 2 - veerapathirasanam 3 - parchuvakonasanam (extended side angle pose) - thirikonasanam (triangle pose) - janusirasanam - patchimothasanam - sugasanam (easy pose) - pathakonasananam - arthamachenthirasanam - vakrasanam - mudhlaiasanam - pavanamukthasanam - Garudasananam - pandriasananam - vajrasanam - subdhavajrasanam - mahamuthrasanam - yoga muthirai asanam - paathimeenasanam - meenasanam - vibareethakarani - paathimeenasanam - kukkudasanam - thandasanam (staff pose) - anchaneyarasanam (anumanasanam - monkey pose) - amaiasanam (koorasanam) - navasasanam (boat pose) - parvadhasanam - balasanam - ushtasanam (ottagasanam) - Savasanam - abanasanam - jadaraparivarthi - anandhasanam - punaisanam (marjeriasanam) - arthachandhirasanam - thalai asanam (sirasasanam) - thelasanam (viruthchikasanam - scorpion pose) - arthachakkarasanam - egapadhasanam - yoga nithirai (kaarpandaasanam).

4. Pranayamam
   Definition - Types - General rules while observing Pranayamam - Principles of Pranayamam - Practice of Pranayamam - types of Pranayamam - Therapeutic application of Pranayamam - Physiological and bio-chemical changes while doing Pranayamam - Contraindication of Pranayamam - Dietary regimen

5. Prathiyakharam
Definition - General rules while observing Prathiyakaram - Principles & practice of prathiyakaram - Types of prathiyakaram - Therapeutic application of Prathiyakaram - Physiological and biochemical changes while doing Prathiyakharam

6. Dharanai
Definition - General rules while observing Dharanai - Principles & practice of Dharanai - Types of dharanai - Therapeutic application of Dharanai - Physiological and biochemical changes while doing Dharanai

7. Dhiyanam
Definition - General rules while observing Dhiyanam - Principles & practice of Dhiyanam - Types of dhiyanam - Therapeutic application of Dhiyanam - Physiological and biochemical changes while doing Dhiyanam

8. Samaathi
Definition - Principles and practice of Samaathi - Types of samaathi - Achieving the targets fixed

III. Thirumoolar’s other yogam
- Kesari yogam;
- Lambika yogam;
- Pariyanka yogam;
- Amurirhananai;
- Chanthira yogam.

IV. Siddhar yogam (Concepts of other Siddhars)
- Pathanjali yogam etc.,
- Bogar Yogam
- Ramadevar Yogam
- Siavakkiyar Yogam
- Matchamuni Yogam
- Agasthiyar Yogam
- Gonganavar
- Korakkar yogam
- Naagamuni yogam
- Karuoorar yogam
- Nantheesar yogam
- Thavanthiri yogam
- Romarishi yogam

V. Kundaliniyogam (Raja yogam)
Definition - General Rules while observing Kundaliniyogam - Principles of Kundaliniyogam - Practice of Kundalini Yogam - Therapeutic application of Kundalini Yogam - Physiological and biochemical changes while doing Kundalini yogam - Benefits of Kundalini Yogam

VI. Yoga Muthiraigal
Definition- Types- Principle and practice -Muthirai and pranayamam- Muthirai and varmam- Muthirai and brain- Muthirai and meditation- Therapeutic application

VII. Sequential benefits of regular practice of yogam – Adverse effects of yoga practice

VIII. Yoga Pedagogy

Pedagogy is the method and practice of teaching, especially as an academic subject or theoretical concept. Yoga pedagogy is all about learning and becoming a better instructor by understanding the basic tenets of education as a science.

In a new series of workshops, experienced educator yogi, will cover the most basics of pedagogy topics, including how people learn, how to best structure a yoga class, and how to make your class accessible to yogis of all levels.

Each hour-long session will feature a short lecture, an exercise to apply the new learning, and opportunities to ask questions to the instructor. The sessions will be recorded. All participants will have access to the recordings.

Yoga Pedagogy Schedule

Session 1: How People Learn.
Session 2: More Learning Theory
Session 3: The Basics of Yoga Teaching
Session 4: Structuring Your Yoga Class
Session 5: Assessing Student Learning
Session 6: Yoga for All
Session 7: Mid-course Adjustments
Session 8: Effective Workshops & Retreats

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<td>Monistic Theism of the Tirumandiram (Thirumandiram) and Kashmir Saivism - Monograph”, Babaji’s Kriya Yoga and Publications</td>
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PAPER III PRINCIPLES AND PRACTICE OF MODERN MEDICINE

1. Cardinal manifestations and presentation of diseases:

A. pain: Abdominal pain, Head ache, Back and neck pain

B. Nervous system dysfunction
Syncope, Dizziness, vertigo, Fatigue, Neurologic causes of weakness and paralysis, Numbness, tingling and sensation loss, Gait and balance disorder, Confusion and delirium, Dementia, Aphasia, memory loss and other focal cerebral disorder, Primary progressive aphasia, memory loss and other focal cerebral disorder, Sleep disorder.

C. Disorders of eyes, ear, nose and throat
Disorders of the eye, Disorder of smell and taste, Disorders of hearing, Sore throat, earache and upper respiratory symptoms, Oral manifestations of disease.

D. Alterations in circulatory and Respiratory functions
Dyspnea, Cough and hemoptysis, Hypoxia and cyanosis, Edema, palpitations.

E. Alterations in Gastrointestinal function
Dysphagia, Nausea, vomiting and indigestion, Constipation, Involuntary weight loss

F. Alterations in Renal and Urinary Tract Functions
Dysuria, bladder pain and bladder pain syndrome, Azotemia and urinary abnormalities, Fluid and electrolyte disturbances, Hypercalcemia and hypocalcemia, Acidosis and alkalosis.

G. Alterations in sexual function and Reproduction
Sexual dysfunction, Hirsutism, Menstrual disorder and pelvic pain.

H. Alterations in the skin
Approach to the patient with a skin disorder, Eczema, psoriasis, acne and other commom skin disorder, Skin manifestation of internal disease, Immunologically mediated skin disease, Photosensitivity and other reactions to light.

Section I: Hematological alterations
Anemia and polycythemia, Enlargement of lymph nodes and spleen

2. Aging:
World demography of aging, the biology of aging

3. Nutrition and weight loss:
Nutrient requirement and dietary assessment, Vitamin and trace mineral deficiency and excess, Malnutrition and nutritional assessment, Enteral and parenteral nutrition therapy

4. Oncology and haematology:
A. Neoplastic disorder
Approach to the patient with cancer, Prevention and early detection of cancer, Cancer genetics, Cancer cell biology, Principles of cancer treatment, Cancer of the skin, Head and neck, Cancer, Neoplasms of the lung, Breast cancer, Upper gastrointestinal tract cancer, Lower gastrointestinal cancer, Tumors of the liver and biliary tree, Pancreatic cancer, Endocrine tumors of the gastrointestinal tract and pancreas, Bladder and renal cell carcinoma, Benign and renal cell, carcinosomas, Testicular cancer, Gynaecologic malignancies, Primary and metastatic tumors of the nervous system, Soft tissue and bone sarcomas and bone metastases, Carcinoma of unknown primary, Paraneoplastic syndromes: endocrinologic and hematologic, Paraneoplastic neurologic syndromes and autoimmune encephalitis, Thymoma, Neoplasia during pregnancy, Late consequences of cancer
B. Haematopoietic disorder
Iron deficiency and other hypo proliferative anaemias, Disorders of haemoglobin, Megaloblastic anaemia, Haemolytic anaemia and anaemia due to acute blood loss, Bone marrow failure syndromes, including aplastic anaemia and myelodysplasia, Polycythemia Vera and other myeloproliferative neoplasms, Acute myeloid leukaemia, Chronic myeloid leukaemia, Malignancies of lymphoid cells, Less common hematologic malignancies, Plasma cell disorders, Amyloidosis

5. Disorders of the cardiovascular system:
   A. Introduction to cardiovascular system
      Approach to the patient with possible cardiovascular disease, Basic biology of the cardiovascular system, Epidemiology of cardiovascular disease
   B. Diagnosis of cardiovascular system
      Electrocardiography, Echocardiography,
   C. Disorders of rhythm
      Principles of electrophysiology, the bradyarrhythmia’s: disorders of the sinoatrial node, The bradyarrhythmia’s: disorders of the atrioventricular node, Supraventricular arrhythmias, Ventricular arrhythmias
   D. Disorders of the heart
      Heart failure: pathophysiology and diagnosis, Congenital heart disease in the adult, Aortic valve disease, Mitral valve disease, Tricuspid and pulmonic valve disease, Multiple and mixed valvular heart disease, Aortomyopathy, Pericardial disease, Tumors and trauma of the heart, Cardiac manifestations of systemic disease.
   E. Coronary and Peripheral vascular disease
      The pathogenesis, prevention and treatment of atherosclerosis, Ischemic heart disease, Hypertensive vascular disease, Renal vascular disease, Deep venous thrombosis and pulmonary thromboembolism, Disease of the aorta, Arterial disease of the extremities, Chronic venous disease and lymphedema, Pulmonary hypertension

6. Disorders of the respiratory system:
   A. Diagnosis of respiratory disorders
      Approach of the patient with disease of the respiratory system, Disturbances of respiratory functions, Diagnostic procedures in respiratory disease
   B. Disease of the respiratory system
      Asthma, Occupational and environmental disease, Bronchiectasis, Cystic fibrosis, Chronic obstructive pulmonary disease, Interstitial lung disease, Disorders of the pleura, Disorders of the mediastinum, Disorders of ventilations, Sleep apnea

7. Disorders of the kidney and urinary tract:
   Cellular and molecular biology of the kidney, Adaptation of the kidney to injury, Acute kidney injury, Chronic kidney disease, Glomerular disease, Polycystic kidney disease and other inherited, disorders of tubule growth and development, Tubulointerstitial disease of the kidney, Vascular injury to the kidney, Nephrolithiasis, Urinary tract obstruction

8. Disorders of the gastrointestinal system
   A. Disorders of the alimentary tract
      Approach to the patient with gastrointestinal disease, Gastrointestinal endoscopy, Disease of the esophagus, Peptic ulcer disease and related disorders, Disorders of absorption,
Irritable bowel syndrome, Diverticular disease and common anorectal disorders, Mesenteric vascular insufficiency, Acute intestinal obstruction

**B.Liver and biliary tract disease**
Approach to the patient with liver disease, Evaluation of liver function, The hyperbilirubinemias, Toxic and drug-Induced hepatitis, Alcoholic liver disease, Non-alcoholic fatty liver diseases and non-alcoholic steatohepatitis, Cirrhosis and its complications, genetic, metabolic and infiltrative disease affecting the liver, Disease of the gallbladder and bile duct

**C.Disorders of the pancreas**
Approach to the patient with pancreatic disease

9. **Immune mediated, Inflammatory and rheumatologic disorders**

**A.The immune system in health and disease**
Introduction to the immune system, The major histocompatibility complexes, Systemic lupus erythematosus, Antiphospholipid syndrome, Rheumatoid arthritis, Systemic sclerosis (scleroderma) and related disorders, Sjogren's syndrome, The spondylarthrosis, Behet's syndrome, sarcoidosis

**B.Disorders of immune mediated injury**
Allergies, anaphylaxis and systemic mastocytosis, autoimmunity and autoimmune, disease, systemic lupus erythematosus, antiphospholipid syndrome, rheumatoid arthritis, systemic sclerosis (scleroderma) and related disorder, sjogren's syndrome, The spondyloarthritis, Behet's syndrome, sarcoidosis

**C.Disorders of the joint and adjacent disease**
Approach to the articular and musculoskeletal disorders, Osteoarthritis, Gout and other crystal-association arthropathies, Fibromyalgia, Arthritis associated with systemic disease and other arthritis, Periarticular disorders of the extremities

10. **Endocrinology and Metabolism**

**A.Endocrinology**
Approach to the patient with endocrine disorders, Mechanisms of hormone action, Anterior pituitary: physiology of pituitary hormone, Hypopituitarism, Anterior pituitary tumor syndrome, Disorders of the neurohypophysis, Disorders of the thyroid gland, Disorders of the adrenal cortex, Pheochromocytoma, Multiple endocrine neoplasia, Autoimmune polyendocrine syndromes

**B.Reproductive endocrinology**
Disorders of sex development, Disorders of the testes and male reproductive system, Disorders of female reproductive system, Menopause and postmenopausal hormone therapy, Infertility and contraception

**C.Obesity, Diabetes Mellitus and Metabolic syndrome**
Biology of obesity, Evaluation and management of obesity, Diabetes mellitus: diagnosis, classification and pathophysiology, Diabetes mellitus: management and therapies, Diabetes mellitus: complications, Hypoglycemia, Disorders of lipoprotein metabolism, The metabolic syndrome

**D.Disorders of bone Mineral Metabolism**
Bone and mineral metabolism in health and disease, Disorders of the parathyroid gland and calcium homeostasis, Osteoporosis, Paget's disease and other dysplasia's of bone
E. Disorders of Intermediary Metabolism
Heritable disorders of connective tissue, Hemochromatosis, Wilson's disease, The porphyria, Disorders of purine and pyrimidine metabolism, Lysosomal storage disease, Glycogen storage disease and other inherited disorders of carbohydrate metabolism, Inherited disorders of amino acid metabolism in adults, Inherited defects of membrane transport

11. Neurological disorders
A. Diagnosis of Neurologic disorder
Approach to the patient with neurologic disease, The neurologic screening exam, Neuroimaging in neurologic disorders, Electrodiagnostic studies of nervous system disorders: EEG, evoked potentials, and EMG, Biology of neurologic disease

B. Disease of the central nervous system
Seizures and epilepsy, Cerebrovascular disease, Migraine and other primary headache disorders, Alzheimer’s disease and other dementias, Parkinson's disease and other movement disorders, Ataxic disorders, Classification of spinocerebellar ataxia, Amyotrophic lateral sclerosis and other motor neuron disease, Prion disease, Disorders of the autonomic nervous system, Disease of the spinal cord, Trigeminal neuralgia, bell’s palsy and other cranial nerve disorders, Concussion and other traumatic brain injuries, Multiple sclerosis and other demyelinating disease

C. Chronic fatigue syndrome

12. Disorders of eyes, ear, nose and throat
Disorders of the eye, Disorder of smell and taste, Disorders of hearing, Sore throat, arache and upper respiratory symptoms, Oral manifestations of disease

13. Dermatological disorder
A. Common clinical symptom and sign of dermatological disorder:
B. Disorder of the skin
Eczema, Psoriasis, acne vulgaris, Urticaria, Skin manifestations of internal disease, other common skin manifestations etc

14. Disorders associated with Environmental Exposures
Altitude illness, Hyperbaric and diving medicine, Hypothermia and frostbite, Heat related illnesses

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PAPER- IV THERAPEUTIC SIDHAR YOGAM

1. Swasa mandala noigal (Disorders of Respiratory system)
   a. Introduction - Kuarl kammal - Mookadaippu noi - Irumal noi - Eraippu noi - Elaiippu noi - kanda maalai and other respiratory disorders mentioned in modern science relevant to yoga therapy.
   b. Yogic Management
      • Customized and Specific Yoga Module protocol for above mentioned Ailments
      • Yogic Counselling
      • Dietary regimen

2. Thamaraga noigal (Disorders of Cardiovascular system)
   a. Introduction - Thamaraga noi - Kuruthiazhal noi and other cardiac disorders mentioned in modern science relevant to yoga therapy.
   b. Yogic Management
      • Customized and Specific Yoga Module protocol for above mentioned Ailments
      • Yogic Counselling
      • Dietary regimen

3. Seerana mandala noigal (Disorders of Gastrointestinal system)
   b. Yogic Management
      • Customized and Specific Yoga Module protocol for above mentioned Ailments
      • Yogic Counselling
      • Dietary regimen

4. Sala uruppu noigal (Disorders of Genitourinary tract)
   b. Yogic Management
      • Customized and Specific Yoga Module protocol for above mentioned Ailments
      • Yogic Counselling
      • Dietary regimen

5. Narambu mandala noigal (Disorders of Nervous system)
   a. Introduction - Valippu Noi - Moolai noigal - Pakka vayu - Nadukkuvatham Kudiveri noi and other neurological disorders mentioned in modern science relevant to yogatherapy.
   b. Yogic Management
      • Customized and Specific Yoga Module protocol for above mentioned Ailments
      • Yogic Counselling
      • Dietary regimen

6. Naalamilla surappi & Valarchithai maatra kolarugal (Endocrine
and Metabolic Disorders)
a. Introduction – Kanaya chathu kolarugal - veedhana kolarugal – Suvali chathu kolarugal-
Pirukobari chathu kolarugalaland other endocrinological and metabolic disorders
mentioned in modern science relevant to yoga therapy.
b. Yogic Management
   • Customized and Specific Yoga Module protocol for abovementioned Ailments
   • Yogic Counselling
   • Dietary regimen

7. Udal Vanmai and Enbu, Poruthiyal (Disorders of Immune system and
   Rheumatology)
a. Introduction – Keel vayu - vali noigal and other Immunological and Rheumatological
disorders mentioned in modern science relevant to yoga therapy.
b. Yogic Management
   • Customized and Specific Yoga Module protocol for above mentioned Ailments
   • Yogic Counselling
   • Dietary regimen

8. Mana noigal (Psychiatric Disorders)
   Mayakka noi – Soothika vaatham and other Psychiatric disorders mentioned in modern
science relevant to yoga therapy.
b. Yogic Management
   • Customized and Specific Yoga Module protocol for above mentioned Ailments
   • Yogic Counselling
   • Dietary regimen

9. Thol noigal (Dermatological problems)
a. Introduction – Kuttam – Karappan – Muga paru – Thol varatchi -Kaanaakadi -
   Padarthamarai – themal – Puzhu vettu – Narai, Mayir Udhirthal, Vazhukkai - Kalanjaga
   padai and other skin manifestations mentioned in modern science relevant to yoga
   therapy.
   B.Yogic Management
   • Customized and Specific Yoga Module protocol for above mentioned Ailments
   • Yogic Counselling
   • Dietary regimen

10. Kan, Kadhu and Thondai noigal (Disorder of Eyes, Ear and Throat)
a. Introduction – Kan noigal – Sevi noigal – Mookku noigal – Naakku noigal and other ENT
disorders mentioned in modern science relevant to yoga therapy.
b. Yogic Management
   • Customized and Specific Yoga Module protocol for above mentioned Ailments
   • Yogic Counselling
   • Dietary regimen

11. Pirappuruppu noigal (Disorders of Reproductive system)

b. Yogic Management
   - Customized and Specific Yoga Module protocol for above mentioned Ailments
   - Yogic Counselling
   - Dietary regimen

12. **Yoga for Pregnancy**

   a. Introduction - Sool sugaranam – Sool kugaranam

   b. Yogic Management
      - Customized and Specific Yoga Module protocol for above mentioned Ailments
      - Yogic Counselling
      - Dietary regimen

13. **Aruvai parigara noigal (Surgical disorders)**

   a) Yanai kal noi – Kattikal – Kirandhi –Naala vipatham– Anda Rogam ,AdithallalKudal erakkam–Nakil katti and other surgical condition mentioned in modern science relevant to yoga therapy.

   b) Yogic Management
      - Customized and Specific Yoga Module protocol for above mentioned Ailments
      - Yogic Counselling
      - Dietary regimen

14. **Yoga maruthuvam for Mudhumai noigal (geriatric disorders)**

15. **Yoga maruthuvam for Balar noigal (paediatric disorders)**


   b. Yogic Management
      - Customized and Specific Yoga Module protocol for above mentioned Ailments
      - Yogic Counselling
      - Dietary regimen

16. **Yoga maruthuvam for Vanmeegam (Oncology)**

17. **Yoga maruthuvam for general wellbeing**

18. **Nutrition and Dietetics**

19. **Diet and Siddha system of medicine**

   a. Six taste medicine (Arusuvayum maruthuvamum)
   b. Three Gunam and food
   c. Three Dhosham and food
   d. Seasonal food
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**Dissertation**

Kindly refer the regulation 11 of IMCC (Post-Graduate Siddha Education) regulations, 2016.