

# FACULTY OF SIDDHA MEDICINE UNDERGRADUATE PROSPECTUS 2022/2023



**Trincomalee Campus**  
**Eastern University, Sri Lanka**  
**2024**



# **Undergraduate Prospectus (2022/2023)**

## **FACULTY OF SIDDHA MEDICINE**

**Trincomalee Campus**

**Eastern University Sri Lanka**

**2024**

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## **University Vision**

World-class knowledge Centre with excellent teaching-learning and research for enhancement of community well-being

## **University Mission**

Producing abled graduates with moral values and enhancing research culture to achieve a sustainable global, national and regional development by creating local and foreign linkages with optimizing the regional resources.

## **Faculty Vision**

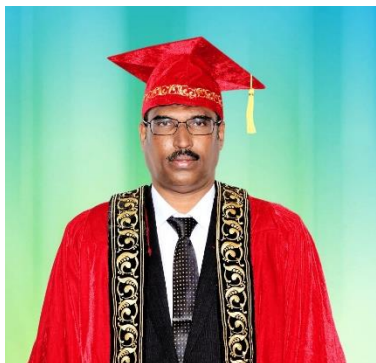
To be the genius faculty of excellence of teaching, higher learning research and clinical care with an ultimate target of serving mankind in knowledge.

## **Faculty Mission**

Provide skill and knowledge to produce competent Siddha Medical Graduates to practice Siddha Medicine more effectively for the medical profession with social responsibility and to become compassionate dedicated Siddha Medical professionals by understanding human values, obeying highest ethical conduct and mutual respect in an environment to meet the current needs of the national and global community.



## **MESSAGE FROM VICE-CHANCELLOR**



Trincomalee Campus, Eastern University Sri Lanka, is a higher education institution in the Eastern Province, thriving to achieve its best academic excellence for the last four decades. The Unit of Siddha Medicine which was established in 2008 is now upgraded as Faculty of Siddha Medicine recently, in 2023. The newly established Faculty in Trincomalee Campus, Eastern University, Sri Lanka located in the traditional city of Sri Lanka where the father of Siddha Medicine “Akashtheyer started his own Siddha Medicine Kurukulam in Kanguweli” 2000 years ago. Siddha Medicine is an important part of well-being with a rich cultural heritage, and it has been used to treat a wide range of ailments for thousands of years. In general, it is an ‘One Health’ approach which is an internationally accepted health approach for a healthy life. The Faculty of Siddha Medicine provides the Bachelor of Siddha Medicine and Surgery (BSMS) degree program with a wide curriculum, that address the demands of diverse learners in the national and international communities, to face the current challenges. The staff of the Faculty are dedicated to give a top-notch education in a positive learning atmosphere.

One of the fundamental components of the United Nations' Sustainable Development 2030 agenda is quality education. It is ensured in the latest version of the curriculum. I am excited to invite you all for enrolling to the new curriculum is a road map for academic staff and students which was designed with unique features such as a semester-based programme & the medium of instruction is in English. In addition, you will be exposed to teaching hospital for practical and clinical trainings. Moreover the Faculty will offer exposure to Herbal Garden and experience with Yoga & Meditation throughout your academic programme.

This undergraduate prospectus is an essential guide that will enable to navigate your way through the institution. It includes important information about the degree program, policies, and procedures, as well as the resources and services available to students. It includes details about academic requirements, Campus life, student support services, etc. We believe that the information contained in this undergraduate prospectus will help the students to achieve all their academic goals.

I am appreciating Prof S Sutharsan Acting Dean, Dr V Anavarathan, Former Head and other staff of Faculty of Siddha Medicine for their tireless efforts to bring this revised curriculum into practice from the academic year 2021/22.

Good Luck to all.

Prof. V. Kanagasingam (AMIPM-SL),  
Ph.D. (PIM-USJP), M Sc. (Management) (USJP), BBA (Hons.) EUSL, CTHE (UoC), CRHEM (Thailand)

## **MESSAGE FROM RECTOR**



It is a matter of immense pleasure to be me a part of the Trincomalee Campus, Eastern University, Sri Lanka as Rector. I take this opportunity for welcoming the students from all over the Island of Sri Lanka to Trincomalee Campus which is surrounded with commercial and economical hub. Bachelor of Siddha Medicine and Surgery (BSMS) degree programme was delivered from the academic year 2007 / 2008 with the student number 20 initially by the Faculty of Applied Science, Trincomalee Campus. Since the medium of instruction is English in Trincomalee Campus, students numbers increased gradually and reached 75 students in the academic year 2015/2016 . The Siddha Medicine has immense potential and a promising future as it is traditional and indigenous herbal medicine. The Siddha medical system is very deep-rooted system in Eastern province and long felt need of the people who dwell in Eastern part of Sri Lanka since the father of Siddha medicine Saint Ahathiyar lived in East and established Siddha medicine in South India. BSMS programme offering by the faculty of Siddha Medicine, Trincomalee Campus, Eastern University, Sri Lanka, is enabling students to develop an analytical mind, intellectual curiosity, moral integrity, a strong sense of values and a disciplined lifestyle that will transcend social, cultural cohesion and prejudices. With the earnest efforts of the competent Faculty of Siddha Medicine, the students will accomplish their academic goals with acquiring knowledge on traditional medicine and will self- reliant to cope up with the pressures of the modern times. Students who are enrolling to the Bachelor of Siddha Medicine and Surgery would excel academically and clinically. My best regards to the Dean, Heads, and the staff for bringing out the prospectus with dynamic curriculum and extend my best wishes to the students for their future endeavors.

Prof (Mrs) Chandravathany .G. Devadason , PhD, MPhil, MSc, BSc(Hons)  
Rector/Trincomalee Campus, Eastern University, Sri Lanka

## **MESSAGE FROM THE DEAN**



It is with great pleasure that I welcome you to the Faculty of Siddha Medicine at Trincomalee Campus, Eastern University, Sri Lanka, for the academic year 2022/2023. As you begin this exciting journey, you are stepping into a world where the ancient wisdom of Siddha Medicine meets contemporary scientific advancements, offering a unique and holistic approach to health and healing.

This combined prospectus serves as your comprehensive guide to the academic programs, policies, and opportunities that await you. It is designed to help you navigate your studies and make the most of your time at our faculty. Within these pages, you will find valuable information on our curriculum, academic resources, and support services, all aimed at helping you succeed in your academic and professional endeavors.

The Faculty of Siddha Medicine is committed to providing an education that is both rigorous and nurturing. Our curriculum integrates the timeless principles of Siddha Medicine with modern healthcare practices, preparing you to become knowledgeable, skilled, and compassionate practitioners. We encourage you to immerse yourself fully in your studies, engage in research, and take advantage of the diverse learning experiences available to you.

As you progress through your academic journey, remember that education is not just about acquiring knowledge; it is also about developing character, critical thinking, and a commitment to ethical practice. Our dedicated faculty and staff are here to support you every step of the way, ensuring that you have the guidance and resources needed to achieve your goals.

Your time at the Faculty of Siddha Medicine will be transformative, filled with opportunities for learning, growth, and personal development. I urge you to embrace these opportunities with enthusiasm and determination. The challenges you encounter will shape you into a well-rounded professional, ready to contribute meaningfully to the field of healthcare and the well-being of society.

I wish you all the best for a successful and fulfilling academic year. May your journey at the Faculty of Siddha Medicine be one of discovery, inspiration, and achievement.

Warm regards,

Dr. V. Anavarathan  
Dean / Faculty of Siddha Medicine,  
Trincomalee Campus,  
Eastern University Sri Lanka.



**Faculty of Siddha Medicine,  
Trincomalee Campus,  
Eastern University Sri Lanka.  
Konesapuri.  
Nilaveli - 31010**

Tel. No : +94 26 2222 644  
Fax : +94 26 2222 644  
Website : fsm.tc.esn.ac.lk

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## **1. INTRODUCTION**

### **1.1. EASTERN UNIVERSITY**



The Eastern University Sri Lanka was established on the 1<sup>st</sup> October 1986 by a University order dated 26<sup>th</sup> September 1986 issued under Section 2 of the University Act No: 16 of 1978. The University was preceded by the Batticaloa University College established on the 1<sup>st</sup> of August 1981 to fulfill the long felt need for the development of the Higher Educational Institution in the Eastern Province of Sri Lanka. The Batticaloa University College began with two Faculties: The Faculty of Agriculture and the Faculty of Science, both these faculties were affiliated to University of Peradeniya. In October 1986, the Batticaloa University College was elevated to the status of University under the name of Eastern University Sri Lanka. Two new Faculties, the Faculty of Commerce and Management and the Faculty of Cultural Studies were established in 1988. The Faculty of Cultural studies was then expanded and renamed as Faculty of Arts and Culture in 1991. In 2005, the Faculty of Health Care Science was established in the University and located in Batticaloa town. A Campus of the Eastern University functions at Trincomalee with the Faculty of Applied Science, Communication and Business Studies and Siddha Medicine. The Swami Vipulananda College of Music and Dance was established in 1981 and was subsequently handed over to the Eastern University in 2001. The SVCMD was then converted to a separate Institute and renamed as Swami Vipulananda Institute of Aesthetics Studies (SVIAS) offering degree programmes in Music and Dance. The Faculty of Technology was started in 2014 as sixth faculty of Eastern University, Sri Lanka.

### 1.1.1. OFFICERS OF THE EASTERN UNIVERSITY SRI LANKA

Chancellor	<b>Prof. M. Selvarajah</b> B.Ed. Hons. (UPDN), PGDEM (NIE), M.Ed. (CMB), M.Ed. (Admin.& Mgt.)(UL-UK), M.Phil. (CMB)
Vice Chancellor	<b>Prof. V. Kanagasingam</b> (AMIPM-SL) Ph.D. (PIM-USJP), M Sc. (Management) (USJP), BBA (Hons.) EUSL, CTHE (UoC), CRHEM (Thailand)
Rector	<b>Prof (Mrs) C. G. Devadason</b> Ph.D (Food Science and Technology, LK &JP) M.Phil (Fish Microbiology, UK), M.Sc( Aquatic Pathobiology, UK), B.Sc(Hons)
Registrar	<b>Mr. A. Pahirathan</b> B Com., MBA
Bursar	<b>Mr. M. M. Mohamed Fareez</b> BBA (Hon), ACMA (UK), CGMA (USA), ACMA (SL)



## 1.2. TRINCOMALEE CAMPUS

The Trincomalee Campus served as an Associated University College (AUC) during its formative years, functioning under the patronages of affiliated colleges financed by the University Grants Commission in the early 1990s to assist students whose conventional universities had closed their doors. In turn, the Trincomalee Affiliated University College provided two diploma programs, the Diploma in English and the Diploma in Accounting and Finance, the former under the auspices of the University of Sri Jayewardenepura and the latter under the auspices of the Eastern University of Sri Lanka. As the affiliated University college structure was dismantled, Trincomalee AUC found itself vested with the Eastern University. Subsequently, this college got its identity as Trincomalee Campus of the Eastern University, Sri Lanka through a gazette notification from mid-2001 with provision for two faculties, Faculty of Communication & Business Studies, and Faculty of Applied Science as its primary educational institutions. Furthermore, the Unit of Siddha Medicine was established in 2008 and now in 2023 upgraded as Faculty of Siddha Medicine.



### Vision and Mission of the Campus

#### Vision

World recognized educational and research institute/ institution with academic excellence and human values.

#### Mission

Creating transforming and disseminating knowledge through teaching, learning and research to fulfill the needs of the dynamic stakeholders and to meet new challenges while upholding the human values for the sustainable development of the region, nation, and globe with a good governance.

#### Goals

- To pursue excellence in teaching, research, and dissemination of knowledge
- To enhance the institutional capacity through human resources, infrastructure, and other resource development
- To serve socio-economic and cultural needs of the community
- To maintain and enhance good governance.

## **1.3. FACULTY OF SIDDHA MEDICINE**

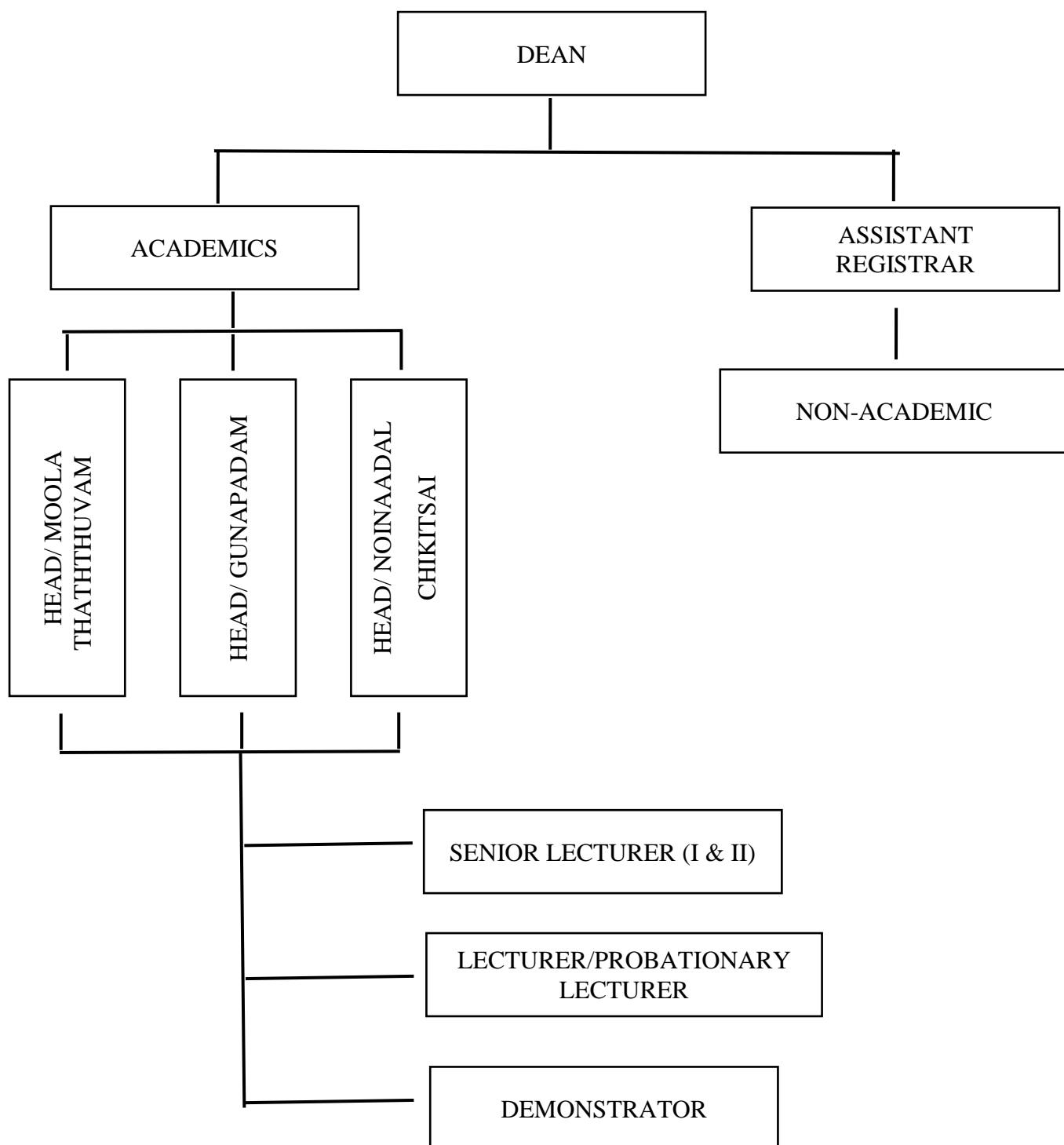
### **1.3.1. HISTORY OF SIDDHA MEDICINE**



The Faculty of Siddha Medicine is the foremost Higher Education Institute in Sri Lanka that provides instructions in the Siddha system of Medicine in English medium for undergraduates. It was established in 2008 at Trincomalee Campus, Eastern University, Sri Lanka with the approval of the University Grants Commission and Ministry of Higher Education for training and research in Siddha Medicine.

The Faculty of Siddha Medicine produce qualified graduates to maximize the contribution of Siddha Medicine to global health and sustainable development. Furthermore, the Faculty of Siddha Medicine has focused on evidence-based learning with research. At the same time, the Faculty of Siddha Medicine maintains its local heritages, resources, and traditional principles. In addition, the syllabi contain study material on Siddha Medicine and other integrative medicine approaches to produce a competent Siddha Medical graduate to enhance the Siddha Medical system in Sri Lanka and meet the current challenges in health.

### 1.3.2. ORGANIZATINAL STRUCTURE



### **1.3.3. OFFICE OF THE DEAN**

Dean

Dr. V. Anavarathan  
MD (Siddha) (India), M.Phil (UoJ),  
Dip.in.Coun.Psy, BSMS (UoJ)

Senior Asst. Registrar

Mr. V. Mugunthan,  
B.A. (General) (SEUSL)

#### **Heads of Departments**

Gunapadam

(Siddha Pharmacology)

Dr. N. Varnakulendran  
PhD in Siddha Medicine, MD (Siddha) in  
Gunapadam (India), BSMS (UoJ)

Noinaadal Chikitsai

(Pathology & Clinical Sciences)

Dr. B. Uthayanan  
MD (Siddha) (India), BSMS (UoJ)

Moola Thatthuvam

(Basic Philosophy)

Dr. S. Ushakhanthan  
MD (Siddha) (India), BSMS (UoJ)



### 1.3.4. ACADEMIC STAFF OF THE DEPARTMENTS

#### 1.3.4.1. DEPARTMENT OF GUNAPADAM

<b>Dr. N. Varnakulendran</b>	PhD in Siddha Medicine, MD (Siddha) in Gunapadam (India), BSMS (UoJ)	Senior Lecturer Gr. I
<b>Dr. S. Ushakhanthan</b>	MD (Siddha) (India), BSMS (UoJ)	Senior Lecturer Gr. I
<b>Dr. S. Janani</b>	MD (Siddha) (India), BSMS (EUSL)	Senior Lecturer Gr. II

#### 1.3.4.2. DEPARTMENT OF MOOLA THATHTHUVAM

<b>Dr. V. Paheerathan</b>	M.Phil (UoJ), BSMS (UoJ)	Senior Lecturer Gr. I
<b>Dr. R. Pratheepkumar</b>	M. Sc in Clinical Biochemistry (Up), BSMS (UoJ)	Lecturer (Confirmed)
<b>Dr. V. Varuna</b>	BSMS (EUSL)	Lecturer (Probationary)

#### 1.3.4.3. DEPARTMENT OF NOINAADAL CHIKITSAI

<b>Dr. V. Anavarathan</b>	MD (Siddha) (India), M.Phil (UoJ), Dip.in.Coun.Psy, BSMS (UoJ)	Senior Lecturer Gr. II
<b>Dr. B. Uthayanan</b>	MD (Siddha) (India), BSMS (UoJ)	Senior Lecturer Gr. II
<b>Dr. K. Vidya dharshini</b>	MD (Siddha) (India), BSMS (UoJ), D.Ac.	Senior Lecturer Gr. II
<b>Dr. B. Mithurendran</b>	MD (Siddha) (India), BSMS (EUSL)	Senior Lecturer Gr. II

### **1.3.5. COMPOSITION OF THE FACULTY BOARD**

Dr. V. Anavarathan	Dean/ Faculty of Siddha Medicine
Dr. N. Varnakulendran	Head /Dept. of Gunapadam
Dr. S. Ushakhanthan	Head/Dept. of Moola Thatththuvam
Dr. B. Uthayanan	Head/Dept. of Noinaadal Chikitsai

#### **Senior Lecturer Gr. I**

Dr. V. Paheerathan

#### **Senior Lecturer Gr. II**

Dr. B. Uthayanan  
Dr. K. Vidya dharshini  
Dr. B. Mithurendran  
Dr. S. Janani

#### **Lecturer Confirmed**

Dr. R. Pratheepkumar

#### **Two members elected from the Probationary Lectures**

Dr. V. Varuna

#### **Appointed Members**

Prof. R. Sivakanesan  
Dr. R. Srithar  
Dr. A. Manoraj

#### **Senior Assistant Registrar - Convener**

Mr. V. Mugunthan

### **1.3.6. LINKAGES AND SERVICES**

#### **1.3.6.1. SKILLS - LABORATORIES**

Laboratories for Anatomy, Physiology, Biochemistry, Gunapadam, Pharmacy, Pharmacology, Pathology, Toxicology, and Research laboratory are available with adequate facilities. These laboratories are used for teaching and research purpose.



### **1.3.6.2. HOSPITALS AVAILABLE FOR CLINICAL ATTACHMENTS AND TEACHING**

The students receive their clinical training at the following hospital.

#### **1. Siddha Teaching Hospital - Konesapuri**

This is situated around 02 km from the main entrance of the Trincomalee Campus. It provides medical care to the patients. In addition to providing medical care to patients, it provides learning opportunities to the Siddha Medical students. The hospital provides several special clinics for patients benefit.

#### **2. Base Ayurveda Hospital – Kappalthurai**

This is situated in Kappalthurai, around 17 km away from Trincomalee Campus, offering wide range of medical services and conducts undergraduate training for students of the Faculty of Siddha Medicine. The hospital has 06 wards, and 04 special units as well as outpatients' services and specialized clinics. The large number of patients visiting the Base Ayurveda Hospital, Kappalthurai provides ample learning material for students.

#### **3. District Siddha Ayurveda hospital - Gopalapuram**

Located in Gopalapuram, Nilaveli about 10 km from Trincomalee Campus, hospital provides a comprehensive range of medical services as well as undergraduate training for Faculty of Siddha Medicine students. Along with unique clinics and outpatient services, the hospital has two wards and one special Unit.



## **2. ADMISSION OF STUDENTS TO THE FACULTY OF SIDDHA MEDICINE**

### **2.1. REGISTRATION, RE-REGISTRATION AND STUDENTSHIP**

The Trincomalee Campus, Eastern University Sri Lanka shall register the new students at a date determined by the faculty upon the receipt of the list of selected students from the University Grants Commission.

Registration for course units for the entire academic year commences one week prior to the start of the first semester and continues during the first two week of this semester. Students only have registered are allowed to sit for examinations of that course unit and should registers using the appropriate form on or before a date specified by Office of the Dean, and he/she can offer only these course units to earn credit. The stipulated period and the maximum period need to complete a degree programme shall commence from the registration date.

Students can obtain guidance from Academic Advisors to select course units judiciously. All information regarding above is made available at the Office of the Dean and the students are requested to contact the Assistant Registrar of the Faculty for further information.

## **2.2. STUDENT IDENTITY CARD AND RECORD BOOK**

### **2.2.1. IDENTITY CARD**

All students registered in the Trincomalee campus, Eastern University Sri Lanka are issued an identity card by the Student Affairs Division, Trincomalee campus. Student identity cards are the property of the University. Therefore, students should return them to the Dean's Office at the end of the final BSMS examination. Students should produce the student identity card in proof of identity on request of officers of the faculty, members of academic staff or security personnel of the Trincomalee Campus. Rejection of such a request made by the aforesaid categories of authorities of the Faculty will lead to disciplinary action against such student. Students who lose this identity card must obtain a duplicate card at their own expense. A written request should be made to the Dean's Office along with a duplicate copy of the complaint lodged at the respective Police Station.

### **2.2.2. RECORD BOOK**

Students are issued with a record book. Re-registration is mandatory. Students who lose this record book must obtain a duplicate book and obtain all missing details from the relevant academic staff.

## **2.3. CANCELLATION AND POSTPONEMENT OF THE PROGRAMME**

If a student wishes to withdraw or postpone the degree program, he or she may inform the relevant Head of the Department, providing justification. The Faculty Board will decide in accordance with the recommendation of the head.

Furthermore, to transfer from Eastern University to another University or from another University to the Eastern University, the recommendation of the Deans of the respective Universities and the approval of the UCG are required.

## **2.4. DEFERMENT OF THE PROGRAMME**

The new students after registering for the degree program and before commencing the academic programmes shall be allowed on a case-by-case basis.

### **2.4.1. DEFERMENT ON MEDICAL GROUNDS**

Deferments on medical grounds shall be allowed during all academic years. The period of deferments allowed under medicals approved by the Medical Officer (MO)/Medical Board shall be excluded from computing the stipulated period. A student under this category shall be eligible for class if the degree is completed within the stipulated period. The period of such leave shall be included for calculating the maximum period to complete a degree.

### **2.4.2. DEFERMENT OF OTHER GROUNDS**

Deferments on other grounds shall be allowed for up to 3 years. The period of deferments allowed under this category shall be excluded from computing the stipulated period to complete a degree. A student under this category shall not be eligible for a class if the degree is completed within the stipulated period. The period of such leave shall be included for calculating the maximum period to complete a degree.

All requests for deferments shall be made with valid evidence.

## **2.5. STUDENT GUIDANCE**

### **2.5.1. SENIOR STUDENT COUNSELOR**

The Campus maintains a student counseling service to assist students who require guidance pertaining to academic or personal matters. The student services are offered by senior member of the academic staff. Many students utilize this service, which is totally confidential.

### **2.5.2. STUDENT COUNSELORS (AT FACULTY)**

This may be the first time you are away from home. It's natural to be worried when you are in an unfamiliar environment facing new experiences. **You are not alone.** It will help and provide relief to talk about your worries and anxieties.

The Faculty of Siddha Medicine have Student counsellors. The Faculty annually appoints student counselors for the Faculty to provide counseling and advice to students. Counselors will help you to resolve any concerns you may have adjusting to university life (emotional issues, being away from home, etc.). Your counselor will work with you to help you resolve your issues and offer suggestions for the best course of action. They will pay attention to you, feel your pain, support you, and help you try to solve your situation. Students are encouraged to meet the student counselor to discuss their problems.

Please call / text/ email and make appointment to meet any one of the student counselors if you are faced with any problem.

### **2.5.3. ACADEMIC ADVISOR**

Academic advisor give service to needed students with the concerning their academic plans and progress, academic schedule, academic activities and career goals, to assist the student in making decisions concerning personal educational goals leading to graduation.

### **2.5.4. ACADEMIC MENTORING**

Students will receive academic mentoring throughout their undergraduate careers to help them reach their full potential. In addition to assisting students with whatever challenges they encounter; they also serve as mentors who help students achieve their academic objectives.

One academic staff member will be assigned to a batch of students to serve as their academic mentor during their undergraduate studies. Academic mentoring gives students the chance to speak with an academic staff member privately and individually about certain academic concerns. They might address other problems affecting academic success or recommend ways to boost academic performance. This is an opportunity to talk about academic performance as well as any other issues you may be having. Academic advisors will also point students in the right directions for further resources. It's crucial that the student and mentor connect at least once per semester.

#### **2.5.5. ACADEMIC AFFAIRS BRANCH**

In the administrative structure of Campus, a branch named “Students Affairs branch” has been established aimed at providing access of welfare needs to the students. Under the above said branch the following activities being carried out.

- Handling all matters pertaining to student accommodation
- Handling matters regarding providing financial assistance to students. (Mahapola Scholarship, Bursary, and other endowments)
- Coordinating matters relating to health care, recreation, physical education, and sport activities of students in liaison with Campus Medical Officer, Coordinator Physical Education, etc.
- Coordinating matters relating to student’s welfare and counselling in liaison with Welfare and Student Counsellor.
- Handling all matters pertaining to student unions and associations.
- Assisting the General Administration Department in Maintenance of Hostels and Canteens.
- Convening the meetings of Board of Discipline and Advisory Board of Student Welfare and follow up work.
- Coordinating all undergraduate student admission matters in liaison with Faculties and the UCG (student registration is to be handled by the faculty concerned).
- Coordinating annual student registration for all batches of students in all faculties.
- Coordinating all matter regarding issuing of identity Cards to students.
- Maintenance of student database for all undergraduate students.

### **3. DESCRIPTION OF DEGREE PROGRAMME**

#### **3.1. STRUCTURE OF THE DEGREE PROGRAM (INTRODUCTION)**

Bachelor of Siddha Medicine & Surgery (BSMS) degree Course is designed to be a semester and stream with Professional system.

The degree program is organized at four professionals namely 1<sup>st</sup> Professional, 2<sup>nd</sup> Professional, 3<sup>rd</sup> Professional and Final Professional. The 1<sup>st</sup> and 2<sup>nd</sup> Professionals known as Basic Stream (BS). The 3<sup>rd</sup> Professional known as Applied Siddha Medical Sciences Stream (AS), each professional consists of two Semesters. The Final Professional known as Siddha Medical Clinical Stream (CS) which consists of four Semesters including two years. Each semester of academic program includes 15 weeks of academic session.

#### **3.2. PROGRAMME OUTCOMES ALIGNED TO GRADUATE PROFILE**

On the completion of the BSMS study programme, the graduate should be competent to practice Siddha Medicine with an in depth knowledge of the Siddha basic principles. They will have a strong sense of intellectual integrity and personal and professional ethics and be able to be critical and creativethinkers, with an aptitude for continued self-directed learning. Specifically, the graduate should have the following skills and attributes.

##### **3.2.1. KNOWLEDGE**

- Critical thinking for the fundamental importance Siddha Medical knowledge and professional practice.
- Understanding the Siddha basic principles and appreciation of current challenges through Siddha knowledge.



### **3.2.2 SKILLS**

- The capacity to be a critical thinker, capable of weighing, evaluating and integrating new information into his or her understanding of issues.
- Understanding of the legal framework surrounding Siddha medical practice in Sri Lanka.
- Skills in the management of emergencies and other advanced medical conditions.
- Ability to facilitate the learning experience of individuals and communities.
- The ability to be organized and the skills for time management, so that time and resources are used effectively and efficiently.
- A dedication to appropriate ethical behaviour, based on a well-developed awareness of his or her own moral values, and knowledge and application of principles of medical ethics.
- Demonstrate skills for prescription writing.
- Perform in vivo and in vitro animal experiments.
- Be able to analyze and write a research paper.

### **3.2.3. ATTITUDES**

- Dedication and enjoyment of discovering and learning new ideas.
- Ability to work independently as well as competence in teamwork.
- Understanding to accept the roles of health professionals and healthcare teams.
- Respect for the rights and values of patients, different individuals and group.
- Ability to respond to the cultural and social context.

### **3.2.4. MINDSET**

- Able to predict efficacy and adverse effects associated with use of Siddha drugs.
- Understanding of the roles and functions of Siddha, Ayurveda and allied healthcare institutions.
- Ability to communicate effectively with individuals, groups and communities.
- To develop towards becoming a caring, compassionate and competent health professional.
- Identify the importance of self-awareness, attitudes of the Siddha physician and judging.
- Identify interpersonal communication skill needed to face challenging situation.

### 3.3. PROGRAMME STRUCTURE

In addition to the Siddha Medical Courses, the non- Siddha Medical Courses were incorporated in 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> professional respectively. The 2<sup>nd</sup> professional examination will be considered as **Bar Examination**.

- Students will not be allowed to enter into 3<sup>rd</sup> professional until they pass all the medical courses in the 1<sup>st</sup> and 2<sup>nd</sup> professional.
- An immediate repeat exam for 1<sup>st</sup> and 2<sup>nd</sup> professional will be scheduled only followed by the 2<sup>nd</sup> professional examination after 04 weeks from the date of 2<sup>nd</sup> professional examination (BS2) results release.

### 3.4. MEDIUM OF INSTRUCTION

All lectures, practical, clinical and examinations related to course will be conducted in English medium except *Siddhar Elakkiyam* (Tamil medium). Since the *Siddhar Elakkiyam* contains poems in Tamil and it is important for students to be aware of their ancient Tamil ancestors for future references. In addition, the Basic Tamil and Basic Sinhala will be taught in Tamil and Sinhala medium respectively to develop the language profession.

### **3.5. CREDIT VALUE**

The volume of learning is described in terms of credits. The student workload of a study programme is about 1500 notional learning hours per academic year. The notional learning hours include direct contact hours with teachers and trainers, time spent in self-learning, preparation for assignments, carrying out assignments and assessments.

A. One credit of taught course, laboratory studies or field studies is equivalent to 50 notional learning hours.

- 15 hours of lectures and 35 hours of independent learning and assessments; or
- 30-45 hours of laboratory work or 45 hours of field work with additional time for independent learning and assessments; or
- A blend of 50 notional learning hours of lecture, practical (and/or field work), independent learning and assessments.

B. One credit of industrial training (including time allocated for assessments) or research (including time allocated for literature survey) is considered equivalent to a minimum of 100 notional hours.

Credits must be earned by students after successful completion of the work required and appropriate assessment of learning outcomes.

## 3. 6. COURSE UNITS

A Course Unit is a selectively organized section of academic activity that may comprise either theory or practical, or a blend of both (50 notional hours per credit). There are few course units that comprise research or industrial training / internship / group project activity (100 notional hours per credit) in the programmes. Content, teaching learning strategies and assessment of a course unit are carefully structured to facilitate the achievement of intended learning outcomes (ILOs) of a course unit, and course units are assessed based on the students 'attainment of ILOs.

### 3.6.1. COURSE CODES

#### 3.6.1.1. CODE FOR COURSE UNIT

Every course is assigned a subject code. The code will be of the pattern **XXX LPPC**, Where,

- First three characters (XXX) refer to course.
- Fourth character (L) refers to **L**evel of the Professional
- Fifth and sixth character (PP) refers to **P**hase of each professional
- Seventh character (C) refers to **C**redit value of the course.

#### 3.6.1.2. CODE FOR THE COURSES IN PROFESSIONAL EXAMINATION

Each course in Professional Examination is assigned a code. The code will be of the pattern **XXX PSCC**, where,

First three characters (XXX) refer to course, fourth character (P) refer to Professional, fifth character (S) refers to Serial number of the course and sixth and seventh character (CC) refers to the total number of credits of the course.

### 3. 7. PRINCIPLE COURSE AREAS

The principle courses are undertaken by the department shown in the Table stated below,

**The principle courses and Departments**

Courses	Department
<ul style="list-style-type: none"> <li>• <i>Siddha Adippadai Thaththuvamum Maruthuva Varalarum</i> (Basic Principles of Siddha Medicine and History)</li> <li>• Research Methodology</li> <li>• <i>Udalkootriyal</i> (Anatomy)</li> <li>• <i>Udalthathuvam &amp; Uyirvediyal</i> (Physiology &amp; Biochemistry)</li> <li>• <i>Addangayogam</i> (Yoga)</li> <li>• English for Communication</li> <li>• Basic Tamil / Basic Sinhala</li> <li>• Information Technology</li> <li>• Research Project</li> </ul>	Department of Moola Thaththuvam
<ul style="list-style-type: none"> <li>• <i>Gunapadam - Moolikaieyal</i> (Siddha Pharmacology – Herbs)</li> <li>• <i>Gunapadam - Thathu Jeeva Vakuppu</i> (Siddha Pharmacology - Metal, Minerals, and Animal kingdom)</li> <li>• <i>Siddhar Elakkiyam</i> (Siddha Literature)</li> <li>• Medical Ethics and Professionalism</li> <li>• <i>Gunapadam - Marunthu Seymuraieyal</i> (Siddha Pharmacology – Pharmaceutical Sciences)</li> </ul>	Department of Gunapadam
<ul style="list-style-type: none"> <li>• <i>Noi Naadal</i> (Pathology)</li> <li>• <i>Chikitsai Adippadaithaththuvam</i> (Fundamentals of Therapeutics in Siddha)</li> <li>• <i>Samooga Nala Maruththuvam</i> (Community Medicine)</li> <li>• <i>Nanchiyalum Satta Maruthuvamum</i> (Forensic Medicine &amp; Toxicology)</li> <li>• <i>Siddha Maruthuvam- Pothu</i> (Medicine-General)</li> <li>• <i>Siddha Maruthuvam - Sirappu</i> (Medicine – Special)</li> <li>• <i>Kuzhanthai Maruththuvam</i> (Paediatrics)</li> <li>• <i>Siroroga Maruththuvam</i> (ENT)</li> <li>• <i>Paramparai Maruthuvam</i> (Traditional Medicine)</li> <li>• <i>Aruvai Maruththuvam</i> (Surgery)</li> <li>• <i>Mahalir Maruthuvamum Sool Maruththuvamum</i> (Gynaecology &amp; Obstetrics)</li> </ul>	Department of Noinaadal Chikitsai

### **3. 8. PROGRAMME DESIGN**

#### **Outline of Programme**

Name of the degree: Bachelor of Siddha Medicine and Surgery

Abbreviation: BSMS

Duration: 05 years

Subject Benchmark Statements are aligned with graduate profile and Sri Lanka Qualification Framework (SLQF)

The course design is aligned with the Subject Benchmark statement Indigenous Medicine, University Grants Commission.



**1<sup>st</sup> Professional (Basic Stream-BS1)**

<b>Semester I</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>T/P/IL</b>	
SAT 1013	<i>Siddha Adippadai Thaththuvamum Maruthuva Varalarum- I</i> (Basic Principles of Siddha Medicine and History -I)	30/30/90	3
GNA 1013	<i>Gunapadam- I Moolikaieyal</i> (Siddha Pharmacology – I Herbs)	30/30/90	3
UDK 1012	<i>Udalkootriyal- I</i> (Anatomy - I)	15/30/55	2
UDT 1012	<i>Udalthathuvam &amp; Uyirvediyal I</i> (Physiology & Biochemistry I)	15/30/55	2
ADY 1012	<i>Addangayogam - I</i> (Yoga - I)	15/30/55	2
ENG 1012	English for Communication - I	30/00/70	2
TAM 1011 / SIN 1011	Basic Tamil - I / Basic Sinhala – I	15/00/35	1
<b>Total</b>		<b>150/150/450</b>	<b>15</b>

<b>Semester II</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>T/P/IL</b>	
SAT 1023	<i>Siddha Adippadai Thaththuvamum Maruthuva Varalarum-II</i> (Basic Principles of Siddha Medicine and History -II)	30/30/90	3
GNA 1023	<i>Gunapadam-II Moolikaieyal</i> (Siddha Pharmacology – II Herbs)	30/30/90	3
UDK 1022	<i>Udalkootriyal- II</i> (Anatomy -II)	15/30/55	2
UDT 1022	<i>Udalthathuvam &amp; Uyirvediyal II</i> Physiology & Biochemistry II	15/30/55	2
ADY 1022	<i>Addangayogam - II</i> ( Yoga - II)	15/30/55	2
ENG 1022	English for communication - II	30/00/70	2
TAM 1021 / SIN 1021	Tamil - II / Sinhala – II	15/00/35	1
<b>Total</b>		<b>150/150/450</b>	<b>15</b>

**2<sup>nd</sup> Professional (Basic Stream- BS2)**

<b>Semester III</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>L/P/IL</b>	
SEK 2031	<i>Siddhar Elakkiyam-I</i> (Siddha Literature - I)	15/00/35	1
GNA 2033	<i>Gunapadam III - Thathu Jeeva Vakuppu</i> (Siddha Pharmacology - III Metal, Minerals, and Animal kingdom)	30/30/90	3
UDK 2032	<i>Udalkootriyal- - III</i> (Anatomy -III)	15/30/55	2
UDT 2033	<i>Udalthathuvam &amp; Uyirvediyal III</i> Physiology & Biochemistry III	30/30/90	3
INT 2032	Information Technology - I	15/30/55	2
MEP 2032	Medical Ethics and Professionalism - I	30/00/70	2
RMS 2032	Research Methodology	30/00/70	2
<b>Total</b>		<b>165/120/465</b>	<b>15</b>

<b>Semester IV</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>T/P/IL</b>	
SEK 2041	<i>Siddhar Elakkiyam II</i> (Siddha Literature - II)	15/00/35	1
GNA 2044	<i>Gunapadam-IV Thathu Jeeva Vakuppu</i> (Siddha Pharmacology- IV - Metal, Minerals, and Animal kingdom)	30/60/110	4
UDK 2043	<i>Udalkootriyal- IV</i> (Anatomy - IV)	30/30/90	3
UDT 2043	<i>Udalthathuvam &amp; Uyirvediyal – IV</i> (Physiology & Biochemistry – IV)	30/30/90	3
INT 2042	Information Technology - II	15/30/55	2
MEP 2042	Medical ethics and professionalism - II	30/00/70	2
<b>Total</b>		<b>150/150/450</b>	<b>15</b>

### 3<sup>rd</sup> Professional (Applied Stream-AS)

Semester V			
Course Code	Course Title	Hours	Credit
		T / (P / FV) / IL	
NNL 3054	<i>Noi Naadal - I (Pathology - I)</i>	45/30/125	4
CHA 3051	<i>Chikitsai Adippadaithaththuvam - I (Fundamentals of Therapeutics in Siddha - I)</i>	15/00/35	1
GNA 3054	<i>Gunapadam -V Marunthu Seymuraieyal (Siddha Pharmacology – V Pharmaceutical Sciences)</i>	30/60/110	4
SNM 3053	<i>Samooga Nala Maruththuvam - I (Community Medicine - I)</i>	30/30/90	3
NSM 3053	<i>Nanchiyalum Sadda Maruthuvamum – I (Forensic Medicine &amp; Toxicology) - I</i>	30/30/90	3
<b>Total</b>		<b>150/150/450</b>	<b>15</b>

Semester VI			
Course Code	Course Title	Hours	Credit
		T / (P / FV) / IL	
NNL3064	<i>Noi Naadal- II (Pathology-II)</i>	45/30/125	4
CHA 3061	<i>Chikitsai Adippadaithaththuvam- II (Fundamentals of Therapeutics in Siddha –II)</i>	15/00/35	1
GNA3064	<i>Gunapadam-VI Marunthu Seymuraieyal (Siddha Pharmacology – VI Pharmaceutical sciences)</i>	30/60/110	4
SNM3063	<i>Samooga Nala Maruththuvam – II (Community Medicine – II)</i>	30/30/90	3
NSM3063	<i>Nanchiyalum Sadda Maruthuvamum – II (Forensic medicine &amp; Toxicology – II)</i>	30/30/90	3
<b>Total</b>		<b>150/150/450</b>	<b>15</b>

**Final Professional (Clinical Stream-CS)**

<b>Semester VII</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>T/P/IL</b>	
SMP 4073	<i>Siddha Maruthuvam- Pothu - I</i> (Medicine – General - I)	30/45/75	3
SMS 4073	<i>Siddha Maruthuvam- Sirappu - I</i> ( <i>Kayakarpam</i> , Yoga & Psychiatric) (Medicine – Special - I)	30/45/75	3
KUM 4073	<i>Kuzhanthai Maruththuvam-I</i> (Paediatrics - I)	30/45/75	3
SRM 4073	<i>Siroroga Maruththuvam – I</i> (ENT- I)	30/45/75	3
PPM 4071	<i>Paramparai Maruthuvam - I</i> (Traditional Medicine - I)	00/45/05	1
RPT 4072	Research Project I	00/200/00	2
<b>Total</b>		<b>120/425/305</b>	<b>15</b>

<b>Semester VIII</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Hours</b>	<b>Credit</b>
		<b>T/P/IL</b>	
SMP 4083	<i>Siddha Maruthuvam - Pothu- II</i> (Medicine -General - II)	30/45/75	3
SMS 4083	<i>Siddha Maruthuvam - Sirappu</i> (External therapy & Varmam) - II (Medicine-Special - II)	30/45/75	3
KUM 4083	<i>Kuzhanthai Maruththuvam-II</i> (Paediatrics - II)	30/45/75	3
SRM 4083	<i>Siroroga Maruththuvam - II</i> (ENT - II)	30/45/75	3
PPM 4081	<i>Paramparai Maruthuvam - II</i> (Traditional Medicine - II)	00/45/05	1
RPT 4082	Research Project II	00/200/00	2
<b>Total</b>		<b>120/425/305</b>	<b>15</b>

Semester IX			
Course Code	Course Title	Hours	Credit
		T/P/IL	
SMP 4094	<i>Siddha Maruthuvam – Pothu –III</i> (Medicine - General - III)	45/45/110	4
SMS 4093	<i>Siddha Maruthuvam – Sirappu - III</i> (Skin) (Medicine - Special - III)	30/45/75	3
ARM 4093	<i>Aruvai Maruththuvam - I</i> (Surgery - I)	30/45/75	3
MMS 4093	<i>Mahalir Maruthuvamum Sool</i> <i>Maruththuvamum – I</i> (Gynaecology & Obstetrics - I)	30/45/75	3
RPT 4092	Research Project III	00/200/00	2
<b>Total</b>		<b>135/380/335</b>	<b>15</b>

Semester X			
Course Code	Course Title	Hours	Credit
		T/P/IL	
SMP 4104	<i>Siddha Maruthuvam- Pothu -IV</i> (Medicine-General - IV)	00/180/20	4
SMS 4103	<i>Siddha Maruthuvam - Sirappu IV</i> (Medicine – Special - IV)	00/135/15	3
ARM 4104	<i>Aruvai Maruththuvam - II</i> (Surgery - II)	00/180/20	4
MMS 4104	<i>Mahalir Maruthuvamum Sool</i> <i>Maruthuvamum II</i> (Gynaecology & Obstetrics II)	00/180/20	4
	<b>Total</b>	<b>00/675/75</b>	<b>15</b>

\*T,P,C,IL, FV -Theory hours, Practical hours, Clinical hours, Independent Learning hours and Field Visit.

### **3.9. ACADEMIC PROGRESSION**

Five years duration with four Professionals (10 Semesters) as mentioned below.

- First Professional (02 Semesters) - 48 Weeks
- Second Professional (02 Semesters) - 56 Weeks
- Third Professional (02 Semesters) - 52 Weeks
- Final Professional (04 Semesters) - 104 Weeks

#### **3.9.1. FALL BACK OPTION**

##### **Award of fall back Qualification**

Fall back qualification should be available to any undergraduate students only after completion of the course period of study (05 Academic Years) of the program for which those students have been registered.

The effective date of a fall-back qualification should be the 1<sup>st</sup> day of the month after which the Senate of Eastern University Sri Lanka has approved award of the qualification, at the request of student and on the recommendation of the Faculty Board of Siddha Medicine. Provision for the fallback option will be accordance with the By-laws of Faculty of Siddha Medicine, EUSL and the UGC circular No: 04/2021.

##### **Requirements**

Accumulated grade of 'C' or better in course unit aggregate at least 60 credits at SLQF level 4



### 3. 10. CURRICULUM MAP

Courses in the Curriculum		Graduate Profile			
Course Code	Courses	Knowledge	Skills	Attitudes	Mind-set
SAT 1013	Siddha Adippadai Thaththuvamum maruthuva varalarum- I (Basic Principles of Siddha Medicine and History -I)	√			
GNA1013	Gunapadam- I Moolikaieyal (Siddha Pharmacology – I Herbs)	√	√		
UDK1012	Udalkootriyal- I (Anatomy - I)	√	√		
UDT 1012	Udalthathuvam & Uyirvediyal I (Physiology & Biochemistry I)	√	√		
ADY1012	Addangayogam - I (Yoga - I)	√	√		
ENG1012	English for Communication - I	√	√		
TAM1011 / SIN 1011	Tamil – I / Sinhala – I	√	√		
SAT 1023	Siddha Adippadai Thaththuvamum maruthuvavaralarum-II (Basic Principles of Siddha Medicine and History -II)	√			
GNA 1023	Gunapadam-II Moolikaieyal (Siddha Pharmacology – II Herbs)	√	√		
UDK 1022	Udalkootriyal- II (Anatomy -II)	√	√		
UDT 1022	Udalthathuvam & Uyirvediyal II Physiology & Biochemistry II	√	√		
ADY 1022	Addangayogam - II (Yoga - II)	√	√		
ENG 1022	English for communication - II	√	√		
TAM 1021 / SIN 1021	Tamil – II / Sinhala – II	√	√		
SEK 2031	Siddhar Elakkiyam-I (Siddha Literature - I)	√	√		
GNA 2033	Gunapadam III - Thathu Jeeva Vakuppu (Siddha Pharmacology - III Metal, Minerals, and Animal kingdom)	√	√		
UDK 2032	Udalkootriyal- - III (Anatomy -III)	√	√		
UDT 2033	Udalthathuvam & Uyirvediyal III Physiology & Biochemistry III	√	√		

Course Code	Courses	Knowledge	Skills	Attitudes	Mind-set
INT 2032	Information Technology - I	√	√		
MEP 2032	Medical Ethics and Professionalism - I	√	√	√	√
RMS 2032	Research Methodology	√	√		
SEK 2041	<i>Siddhar Elakkiyam II</i> (Siddha Literature - II)	√			
GNA 2044	<i>Gunapadam-IV ThathuJeevaVakuppu</i> (Siddha Pharmacology- IV -Metal, Minerals, and Animal kingdom)	√	√		
UDK 2043	<i>Udalkootriyal- IV</i> (Anatomy - IV)	√	√		
UDT 2043	<i>Udalthathuvam &amp; Uyirvediyal IV</i> Physiology & Biochemistry - IV	√	√		
INT 2042	Information Technology - II	√	√		
MEP 2042	Medical ethics and professionalism - II	√	√	√	√
NNL 3054	<i>Noi Naadal - I</i> (Pathology - I)	√	√	√	√
CHA 3051	<i>Chikitsai Adippadaithaththuvam - I</i> (Fundamentals of Therapeutics in Siddha - I)	√			
GNA 3054	<i>Gunapadam -V Marunthu seymuraieyal</i> (Siddha Pharmacology – V Pharmaceutical sciences)	√	√		
SNM 3053	<i>Samooga Nala Maruththuvam - I</i> (Community Medicine - I)	√	√	√	
NSM 3053	<i>Nanchiyalum Satta Maruthuvamum – I</i> (Forensic Medicine & Toxicology) - I	√	√		
NNL3064	<i>Noi Naadal- II</i> (Pathology-II)	√	√	√	√
CHA 3061	<i>Chikitsai Adippadaithaththuvam- II</i> (Fundamentals of therapeutics in Siddha –II)	√			
GNA 3064	<i>Gunapadam-VI Marunthu seymuraieyal</i> (Siddha Pharmacology – VI Pharmaceutical sciences)	√	√		
SNM3063	<i>Samooga Nala Maruththuvam – II</i> (Community Medicine – II)	√	√	√	
NSM3063	<i>Nanchiyalum Satta Maruthuvamum – II</i> (Forensic medicine & Toxicology – II)	√	√		
SMP 4073	<i>Siddha Maruthuvam- Pothu - I</i> (Medicine–General - I)	√	√	√	√
SMS 4073	<i>Siddha Maruthuvam- Sirappu</i> ( <i>Kayakarpam</i> , Yoga & Psychiatric) - I (Medicine – Special - I)	√	√	√	√

Course Code	Courses	Knowledge	Skills	Attitudes	Mind-set
KUM 4073	<i>Kuzhanthai Maruththuvam-I</i> (Paediatrics - I)	√	√	√	√
SRM 4073	<i>Siroroga Maruththuvam – I</i> (ENT- I)	√	√	√	√
PPM 4071	<i>Paramparai Maruthuvam -I</i> (Traditional Medicine -I)	√	√	√	√
RPT 4072	Research Project I	√	√		
SMP 4083	<i>Siddha Maruthuvam -Pothu- II</i> (Medicine -General - II)	√	√	√	√
SMS 4083	<i>Siddha Maruthuvam - Sirappu</i> (External therapy,& Varmam) -II (Medicine-Special - II)	√	√	√	√
KUM 4083	<i>Kuzhanthai Maruththuvam-II</i> (Paediatrics - II)	√	√	√	√
SRM 4083	<i>Siroroga Maruththuvam- II</i> (ENT - II)	√	√	√	√
PPM 4081	<i>Paramparai Maruthuvam -II</i> (Traditional Medicine - II)	√	√	√	√
RPT 4082	Research Project II	√	√		
SMP 4094	<i>Siddha Maruthuvam – Pothu –III</i> (Medicine - General - III)	√	√	√	√
SMS 4093	<i>Siddha Maruthuvam – Sirappu -III</i> (Skin) (Medicine - Special - III)	√	√	√	√
ARM 4093	<i>Aruvai Maruththuvam - I</i> (Surgery - I)	√	√	√	√
MMS 4093	<i>Mahalir Maruthuvamum Sool</i> <i>Maruththuvamum –I</i> (Gynaecology & Obstetrics - I)	√	√	√	√
RPT 4092	Research Project III	√	√		
SMP 4104	<i>Siddha Maruthuvam- Pothu -IV</i> (Medicine-General - IV)	√	√	√	√
SMS 4103	<i>Siddha Maruthuvam - Sirappu IV</i> (Medicine – Special - IV)	√	√	√	√
ARM 4104	<i>Aruvai Maruththuvam - II</i> (Surgery - II)	√	√	√	√
MMS 4104	<i>Mahalir Maruthuvamum Sool</i> <i>Maruthuvamum II</i> (Gynaecology &Obstetrics II)	√	√	√	√

### 3. 11. CURRICULUM MATRIX

Degree and Year	Level of offered courses	Number of credits in principal courses					Enhancement (EN) courses & credits		Total credits for the award	
		SAT	GNA	UDK	UDT	ADY	Courses	Credit		
Bachelor of Siddha Medicine and Surgery (BSMS)  <b>1<sup>st</sup> Professional</b>	First Semester	3	3	2	2	2	ENG 1012 - English for Communication - I	2	24 + 6	
							TAM 1011 / SIN 1011 - Tamil – I / Sinhala – I	1		
	Second Semester	3	3	2	2	2	ENG 1022 - English for Communication - II	2		
							TAM 1021 / SIN 1021 – Tamil - II / Sinhala – II	1		
Bachelor of Siddha Medicine and Surgery (BSMS)  <b>2<sup>nd</sup> Professional</b>	Third Semester	SEK	GNA	UDK	UDT	RMS	MEP	Courses	Credit	26 + 04
		1	3	2	3	2	2	INT 2032 - Information Technology - I	2	
	Fourth Semester	1	4	3	3	-	2	INT 2032 - Information Technology – II	2	
Bachelor of Siddha Medicine and Surgery (BSMS)  <b>3<sup>rd</sup> Professional</b>	Fifth Semester	NNL	CHA	GNA	SNM	NSM	Courses	Credit	30	
		4	1	4	3	3	-	-		
	Sixth Semester	4	1	4	3	3	-	-		

## 4. EXAMINATION AND EVALUATION

### 4.1. EXAMINATION

#### 4.1.1. TYPES OF EXAMINATION AND EVALUATION PROCEDURE

The examination procedure of the BSMS Programme consists of ten Continuous Assessment Test (CAT) and four professional examinations.

##### 4.1.1.1. CONTINUOUS ASSESSMENT TEST (CAT)

The CAT will be conducted at the end of each course. The average CAT marks (20%) will be added in each Professional examination. The CAT marks will only be considered for 1<sup>st</sup> repeat examination.

The method of CAT and marks distribution is as follows,

##### Method of CAT for Siddha Medical Courses

Evaluation method	Marks
MCQ / SEQ / OSPE / OSCE	20%

##### Method of Semester Assessment for Non-Siddha Medical courses

Evaluation method	Marks
Presentation / Communication skill / Quiz / Debate / MCQ / SEQ	20%

##### 4.1.1.2. PROFESSIONAL EXAMINATION

There are four professional examinations. A professional examination will be conducted at the end of each profession.

**Allocation of marks as is follows.**

##### (a) Marks distribution for professional Examination for Siddha Medical courses

Method of assessment	Written	Practical/ Clinical	CAT (Average)	Total
All four Professional Examination	40%	40%	20%	100%

**(b) Marks distribution for Professional Examination subjects without Practical / Clinical courses**

Method of assessment	Written	CAT (Average)	Total
1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> Professional Examination	80%	20%	100%

**4.1.1.2.1. Research project**

Research project will be begins at Semester VII and ends in semester IX for consecutive 3 Semesters, the evaluation will be in final professional. Method of evaluation as follows:

- Supervisor Assessment - 15%
- Dissertation - 60%
- Viva - Voce Presentation - 25%

Can refer the Guidelines for research Project (RPT) with Curriculum

**Guidelines for Research project**

- Student is allowed to undertake the work in the project with the title of the RPT which must be registered at the Faculty of Siddha Medicine.
- Students are allowed to begin RPT work at the beginning of the 7<sup>th</sup> Semester
- The title should be based on the quotation from the authenticated Siddha literature or concepts of the Siddha literature
- The student should engage in research work within their knowledge of the study.
- The progress of the research project will be evaluated at the end of the 9<sup>th</sup> Semester by the three Siddha Senior Academic Panel / Supervisors.
- The research project work will be representing the outline of methodology and scientific pursued by the students on the problem selected by the students with the concurrence of the supervisor.
- The student will be required to submit the Research project certified by the supervisor to the Head of the department eight weeks before the scheduled final professional examination.



#### **4.1.1.2.2. Elective appointment**

##### **Guidelines for the Electives Appointment**

The Electives programme is an integral part of the Clinical Sciences Stream. It consists of a four-week continuous period. During this period, it will be a self-guided training under supervision on an area of interest of the student. It is essential that the topic must be directly related to health.

The Electives program is placed before your final professorial appointments. If a student wishes to do the electives appointment at an alternative time or for a longer period due to a genuine reason, approval should be obtained from the Faculty after ensuring that it is not interfering with any other scheduled academic teaching / learning activity or assessment.

Planning your elective appointment should be done prior to the commencement of the Electives Programme. An elective project should be carried out by a single student or collaboratively by two students.

##### **Selection of Title**

Select a topic based on students' interests that will allow them to broaden their perspectives and lead to personal development. Students should show evidence that you have considerably advanced your abilities in the subject topic beyond the standard curriculum. The work planned should be sufficient to cover four weeks of full-time work.

##### **Selection of Supervisor**

Identify a suitable internal supervisor from University and External supervisor from workplace who are knowledgeable and skilled in guiding you through the proposed elective, and also capable of supervising and evaluating your progress during the elective.

In Semester IX, the students will be following a mandatory elective program of four weeks.

1. Ayurvedic Medicine
2. Unani Medicine
3. Acupuncture
4. Modern Medicine
5. Traditional Medicine (Different specialty)

#### **4.1.1.3. REPEAT PROFESSIONAL EXAMINATION**

- A student may submit any justifiable reason for the absent of schedule examinations which must be recommended by the Faculty Board, Campus Board and approved by the University Senate or under the medical ground supported by a valid medical certificate the chance will be retained. Other than this, a student absent for scheduled examinations will be treated as a repeat candidate.
- A student who obtains grades less than “C” in a medical courses must be repeated the professional examination for that respective course and the maximum grade for the repeat examination shall be “C”.
- A student who obtains grades less than “D<sup>+</sup>” in a non- Siddha Medical courses must be repeated the examination for that respective course and the maximum grade for the repeat examination shall be “D<sup>+</sup>”.
- A student who failed in a course (s) in the 2<sup>nd</sup> / final professional examination at the 1<sup>st</sup> attempt an immediate repeat examination will be scheduled after 04 weeks from the release of results to complete the barrier / commence their internship training respectively.
- Students are allowed to repeat the professional examinations of any subject only **Thrice** at the next available opportunity. One grace chance per course may be granted in exceptional circumstances with the approval of the Senate on the recommendation of the Faculty Board and Campus Board.
- Repeat students may be allowed to follow the lectures / practical / clinical with the permission of the Head of the Department and concurrence of the concerned Lecturer / Consultant.
- The Programme of study should be completed within 10 Academic years including grace chances

## **4.1.2. TYPES OF EXAMINATION AND EVALUATION PROCEDURE**

### **4.1.2. ATTENDANCE**

#### **4.1.2.1. Professional examination**

80% of attendance for lectures, and practical sessions in every Semester and 100 % attendance for clinical sessions in every Semester are compulsory to sit the professional examinations. A student who has less than the above-mentioned attendance shall allow sitting the relevant professional examination at the next available opportunity with deferment subjected to submitting the re-work records for the practical session and clinical to sit the exam.

#### **4.1.2.2. Continuous Assessment Test (CAT)**

Students must attend all the lectures, practical and clinical sessions of all course. The student must have minimum 80% of attendance for theory and practical sessions and 100 % attendance in clinical component to sit the Semester assessment. Each Semester 10% absentee (minimum attendance of 70% for theory and practical and 90% for clinical) may be permitted with the medical or valid reason approved by the Faculty Board subjected to submit the re-work records for clinical to sit the Semester assessment which is submitted by the Head of the Departments via concerned lecturer.

#### **4.1.2.3. Medical Certificates**

##### **Academic activity**

A student who is unable to attend the academic activity due to a medical reason / valid reason should be evidenced within 10 working days to the Head of the relevant department.

##### **Examination**

A student who is unable to appear for the professional examination due to medical reasons / valid real reasons should submit the evidence to the Head of the relevant department within 10 working days. The request based on a medical certificate should be certified by the University Medical Officer, Trincomalee Campus. And it has to be recommended by the Faculty Board and Campus Board and approved by the Senate. For any other valid reason supported by the evidence will be referred to the recommendation of the Faculty Board and Campus Board and approved by the Senate of the EUSL.

##### **Note: For disabled students**

The University will make reasonable Appropriate Adjustment to course content, delivery and assessment methods without compromising the academic standards.

## 4.2. EVOLUTION

### 4.2.1. THE RANGE OF MARKS, GRADE AND GRADE POINT

The range of marks and grade for the course is as follows;

Marks	Grade	Grade Point
85 - 100	A <sup>+</sup>	4.00
70 - 84	A	4.00
66 - 69	A <sup>-</sup>	3.70
62 - 65	B <sup>+</sup>	3.30
58 - 61	B	3.00
54 - 57	B <sup>-</sup>	2.70
50 - 53	C <sup>+</sup>	2.30
<b>46 - 49</b>	<b>C</b>	<b>2.00</b>
42 - 45	C <sup>-</sup>	1.70
38 - 41	D <sup>+</sup>	1.30
34 - 37	D	1.00
00 - 33	E	0.00

#### 4.2.1.1. Pass / Fail criteria

- Grade C (GPA 2.00) or better grades in all Siddha Medical courses including Research Methodology are considered as pass.
- Grade D<sup>+</sup> (GPA 1.30) or better grades in Non-Siddha Medical courses (English, Basic Tamil / Basic Sinhala and Information Technology) is considered as pass.

### 4.2.2. COMPUTATION OF GRADE POINT AVERAGE (GPA)

The GPA for each Professional for the degree program shall be calculated as follows, there are Four Summative assessments of learning in four Professional of BSMS Programme.

- 1<sup>st</sup> Professional Examination (P1) will be held at the end of the Semester II (**BS1**)
- 2<sup>nd</sup> Professional Examination (P2) will be held at the end of the Semester IV (**BS2**)
- 3<sup>rd</sup> Professional Examination (P3) will be held at the end of the Semester VI (**AS**)
- Final Professional Examination (P4) will be held at the end of the Semester X (**CS**)

**NOTE: Non-Siddha Medical courses will not be considered for the calculation of GPA.**

**Average GPA of Professional (AGPA) shall be computed as follows:**

$$AGPA^J = \frac{\sum_1^n GPA_i \times C_i}{\sum_i^n C_i}$$

The Overall GPA (OGPA) of the degree shall be calculated as follows:

$$OGPA = \frac{(AGPA^1 + AGPA^2 + AGPA^3 + 2AGPA^4)}{5}$$

where,

$C_i$  is the number of credits of  $i^{th}$  Course

$GPA_i$  – Grade Point Average of  $i^{th}$  Course

$AGPA^J$  - Average GPA for the  $j^{th}$  Professional (calculated by rounding for four decimal points)

$OGPA$ - Overall GPA (calculated by rounding for two decimal points)

### 4.3. AWARD OF DEGREE AND CLASS

#### 4.3.1. AWARD OF DEGREE

A student will be awarded the BSMS Degree if he / she has obtained the following within Ten Academic years:

- a. C or better grades in all Siddha Medical courses including Research Methodology and Elective Appointment
- b. D<sup>+</sup> or better grades in Non-Siddha Medical courses (English, Information Technology, Basic Tamil / Basic Sinhala)

#### 4.3.2. CRITERIA FOR AWARD FOR BSMS PROGRAM

At the completion of BSMS Degree program.

#### 4.3.3. AWARD OF CLASS AT THE END OF BSMS DEGREE

A student who has fulfilled all the conditions for the award of a degree within five academic years, except for the situation accepted by the Faculty Board and approved by the Senate, shall be awarded a class if he/she fulfills the following requirement,

Awards	GPA
First Class	3.70 or above
Second (Upper division)	3.30 - 3.69
Second (Lower)	3.00 - 3.29
Pass	2.00 - 2.99

**Note:** A student who is punished for the offences by the authority of the Eastern University, Sri Lanka, will not be eligible to get a class.

#### **4.4. EFFECTIVE DATE OF THE DEGREE**

The effective date of the degree shall be the date of the viva voice presentation of dissertation or last date of the examination of the particular Professional examination whichever comes latest.

#### **4.5. OFFICIAL TRANSCRIPT**

The grades obtained in all subjects including the elective should be appeared in the transcript. The transcript should include the class with OGPA.

#### **4.6. AYURVEDA MEDICAL COUNCIL (AMC) REGISTRATION**

In order to practice as a Siddha Medical Practitioner in Sri Lanka, all BSMS graduates must be registered with the Ayurveda Medical Council (AMC). Ayurveda act No.31 of 1961, which deals with registration of medical practitioners, stipulates that applicants must be “of good character”.

## 5. COURSE SPECIFICATION

### 5.1. PRINCIPLES SUBJECTS

#### 5.1.1. SUBJECTS OFFERED BY DEPARTMENT

##### 5.1.1.1. DEPARTMENT OF MOOLA THATTHUVAM

- *Siddha Adippadai Thatthuvamum Maruthuva Varalarum* (Basic Principles of Siddha Medicine and History)
- *Udalkootriyal* (Anatomy)
- *Udalthatthuvam & Uyirvediyal* (Physiology & Biochemistry)
- *Addangayogam* (Yoga)
- Research Methodology
- English for Communication
- Basic Tamil / Basic Sinhala
- Information Technology
- Research Project

##### 5.1.1.2. DEPARTMENT OF GUNAPADAM

- *Gunapadam - Moolikaieyal* (Siddha Pharmacology – Herbs)
- *Gunapadam - Thathu Jeeva Vakuppu* - (Siddha Pharmacology - Metal, Minerals, and Animal kingdom)
- *Gunapadam - Marunthu Seymuraieyal* - (Siddha Pharmacology – Pharmaceutical Sciences)
- Siddhar Elakkiyam (Siddha Literature)
- Medical Ethics and Professionalism

##### 5.1.1.3. DEPARTMENT OF NOINAADAL CHIKITSAI

- *Noi Naadal* (Pathology)
- *Chikitsai Adippadaithaththuvam* (Fundamentals of Therapeutics in Siddha)
- *Samooga Nala Maruththuvam* (Community Medicine)
- *Nanchiyalum Satta Maruthuvamum* (Forensic Medicine & Toxicology)
- *Siddha Maruthuvam - Pothu* (Medicine-General)
- *Siddha Maruthuvam - Sirappu* (Medicine – Special)
- *Kuzhanthai Maruththuvam* (Paediatrics)
- *Siroroga Maruththuvam* (ENT)
- *Paramparai Maruthuvam* (Traditional Medicine)
- *Aruvai Maruththuvam* (Surgery)
- *Mahalir Maruthuvamum Sool Maruththuvamum* (Gynaecology & Obstetrics)



<b>Subject Title</b>	: <i>Siddha Adippadai Thaththuvamum maruthuvavaralarum I</i> (Basic Principles of Siddha Medicine and History I)	
<b>Subject Code</b>	: SAT 1013	
<b>Year &amp; Semester</b>	: Profession I Semester I	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Siddha Adippadai Thaththuvamum</i></div><div>2. Understand the <i>maruthuvavaralaru</i> (History of Siddha Medicine)</div><div>3. Comprehend the specialty of Siddha Medicine</div><div>4. Get practical knowledge in <i>Siddha Adippadai Thaththuvamum</i></div><div>5. Develop skill in PBL based on <i>Siddha Adippadai Thaththuvamum</i></div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>Siddha Adippadai Thaththuvamum</i> and the foundations of Siddha Medicine including the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and specialty of Siddha Medicine		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div>• Gain through knowledge in the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and <i>maruthuvavaralaru</i></div>	Knowledge	1, 2
<div>• Able to interpret the <i>Siddha Adippadai Thaththuvamum</i></div>	Skills	3, 4, 5, 8
<div>• Establish the basic concepts of <i>Siddha Adippadai Thaththuvamum</i></div>	Attitude	9,10,11
<div>• Explore the knowledge in <i>Adippadai Thaththuvamum</i> towards Siddha system of medicine</div>	Mindset	12
<b>Content:</b> <div><div>1. Introduction of Siddha Medicine and related <i>Thaththuvamum</i> to Siddha Medicine</div><div>2. <i>Siddharkalin muthatkotpaadu - uyilkalin thotram</i> (origin of life)<div>2.1 <i>Siddharkalin koorpu kolgai</i> (evolution theory according to Saints)</div></div><div>3. <i>Iympootha kolkai / Panchabhootham</i> (five element theory)<div>3.1 <i>Iympoothankal</i></div><div>3.2 Combination of <i>impori</i> and <i>impulungal</i> and relations between them</div><div>3.3 Combination of five elements and relation among five elements with medicine</div><div>3.4 Theory of <i>Panchabhootha panchekearanam</i></div></div></div>		

4. *Mukkuṭrankal* (trihumours) – *Vatham*, *Piththam* and *Kabham*
  - 4.1 Formation of *Mukkuṭrangal*
  - 4.2 Relations among the *Mukkuṭrangal*, *Panchabhootham* and *Suvaihal*
5. *Anda pinda thathuvam* (theory of connection between universe and body)
6. *Thottramum odukkamum* (origin and condensation)
  - 6.1 *Matraththal aayathu ulakam*
  - 6.2 *Pahuthikalal aayathu ulakam*
  - 6.3 *Anukkalal aayathu ulakam*
7. History of Siddha Medicine
  - 7.1 *Kumarikkandam* (Lemuria)
  - 7.2 *Siddhu veli nagarikam*
  - 7.3 *Sanga kaalam*,
  - 7.4 *Sankamaruviya kalam*
  - 7.5 *Siddhar kalam*
  - 7.6 Status of Siddha Medicine after 20<sup>th</sup> Century
  - 7.7 Current status of Siddha Medicine in Sri Lanka
  - 7.8 Siddha literature in Sri Lanka
8. Detail study of *Pathinen Siddhars*
  - 8.1 Classification of Siddhars
  - 8.2 *Pathinen Siddhars* (Saints)
  - 8.3 *Ellaththu Siddharkal* (Sri Lankan Saints)
  - 8.4 *Siddharkalin thanich sirappu* (specialty of Saints)
  - 8.5 *Siddharkalin kanmani* (rasavatham)
  - 8.6 *Siddharkalin manimakudam* (muppu)
  - 8.7 *Enperum siddhikal* (attama siddhi)
  - 8.8 *Attanka yogam*
9. Excellence of Siddha Medicine

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. LMS based learning		30
	2. Self-study using study guide		50
	3. Case Study/Problem Based Learning		15
	4. Virtual/Real Group Discussion		20
	5. Resource based Learning		35
	<b>Total</b>		<b>150</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	03
Recommended Readings:	1. Uththamanarayanan K.S. Thortrakirama arayichchiyum Siddha maruththuva varalaarum,		

	<p>Department of Indian Medicine and Homoeopathy, Chennai.</p> <ol style="list-style-type: none"><li>2. Anaivaari R.Anandan. A Compedium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li><li>3. Uththamanarayanan K.S. Siddha Maruththuvankach sukkam. Department of Indian Medicine and Homoeopathy, Chennai.</li><li>4. Atarajan K and Anaivaari R.Anandan. Principles of diagnosis in Siddha. Department of Indian Medicine and Homoeopathy, Chennai.</li><li>5. Pon. Ramanathan. Siddha Maruthtuvaththin Thotramum valarchchiyum. Jaffna.</li><li>6. S. Sivashanmugaraja. Irupatham nootrandil elaththuch siddha maruththuvam. Siddha Medical development Society, Jaffna.</li><li>7. Pon. Ramanathan. Maruththuva nokkil Siddharkalum ththuva Sinthanaikalum. Jaffna.</li><li>8. Related Journals</li></ol>
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<b>Subject Title</b>	: <i>Siddha Adippadai Thaththuvamum maruthuvavaralarum II</i> (Basic Principles of Siddha Medicine and History II)	
<b>Subject Code</b>	: SAT 1023	
<b>Year &amp; Semester</b>	: Profession I Semester II	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Siddha Adippadai Thaththuvamum</i></div><div>2. Get practical knowledge in <i>Siddha Adippadai Thaththuvamum</i></div><div>3. Develop experience in <i>Siddha Adippadai Thaththuvamum</i> in modern science</div></div>		
<b>Intended Learning Outcomes:</b>  At the end of this course students should be able obtain the knowledge on <i>Siddha Adippadai Thaththuvamum</i> and the foundations of Siddha Medicine including the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and specialty of Siddha Medicine		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div>• Gain through knowledge in the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and <i>maruthuvavaralaru</i></div>	Knowledge	1, 2
<div>• Able to interpret the <i>Siddha Adippadai Thaththuvamum</i></div>	Skills	3, 4, 5, 8
<div>• Establish the basic concepts of <i>Siddha Adippadai Thaththuvamum</i></div>	Attitude	9,10,11
<div>• Explore the knowledge in <i>Adippadai Thaththuvamum</i> towards Siddha system of medicine</div>	Mindset	12
<b>Content:</b> <div><div>1. <i>Siddha thaththuvamkal</i><div><div>1.1 <i>Udal thaththuvam</i></div><div>1.2 <i>Porul thaththuvam</i></div><div>1.3 <i>Aruvapporul</i>,</div><div>1.4 <i>Uruvapporul</i></div><div>1.5 <i>Pathi, pasu, and paasam</i></div></div></div><div>2. <i>Siddharkalin anukk kolkai</i> (Atomic theory of <i>Siddhars</i>)</div><div>3. <i>Uyir</i> (sole)</div><div>4. <i>Manam</i> (mind)</div><div>5. <i>Siddhantha Alavaikal</i> (logic) and <i>Siddha maruththuvam</i> (Siddha Medicine)</div></div>		

<p>6. Different school of thoughts on medical aspect of Siddha literatures</p> <p>6.1 <i>Thirukkural</i></p> <p>6.1.1. Marunthu Athikaaram with Siddha Medicine</p> <p>6.1.2 Scientific aspect of Thirukkural in health</p> <p>6.2 Thirumanthiram and Siddha Medicine</p> <p>7. Indian philosophy in Siddha Medicine</p> <p>7.1 <i>Vaitheega thatthuvam</i></p> <p>7.1.2 <i>Sankhyam</i></p> <p>7.1.3 <i>Yogam</i></p> <p>7.1.4 <i>Nyaya</i></p> <p>7.1.5 <i>Vaisheshika</i></p> <p>7.1.6 <i>Mimamsa</i></p> <p>7.1.7 <i>Vedantam</i></p> <p>7.2 <i>Avaitheega thatthuvam</i></p> <p>8.2.1 Jainism</p> <p>8.2.2 Buddhism</p> <p>8.2.3 <i>Lokayata</i></p> <p>8 <i>Vethankal</i> and <i>upanidathankal</i></p> <p>9 Siddha <i>maruththuvanin illakkanam</i> (moral code of Siddha physician) and its application</p> <p>10 <i>Ivagai nilangal</i> (geographical divisions of land)</p> <p>10.1 Detail study on <i>Ivagai nilangal</i></p>			
Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. LMS based learning		30
	2. Self-study using study guide		40
	3. Case Study/Problem Based Learning		20
	4. Virtual/Real Group Discussion		10
	5. Resource based Learning		50
	Total		150
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	03
Recommended Readings :	<p>1. Uththamanarayanan K.S. Thortrakirama arayichchiyum Siddha maruththuva varalaarum, Department of Indian Medicine and Homoeopathy, Chennai.</p>		

	<ol style="list-style-type: none"><li>2. Anaivaari R.Anandan. A Compedium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li><li>3. Uththamanarayanan K.S. Siddha Maruththuvankach sukkam. Department of Indian Medicine and Homoeopathy, Chennai.</li><li>4. Atarajan K and Anaivaari R.Anandan. Principles of diagnosis in Siddha. Department of Indian Medicine and Homoeopathy, Chennai.</li><li>5. Pon. Ramanathan. Siddha Maruthtuvaththin Thotramum valarchchiyum. Jaffna.</li><li>6. S. Sivashanmugaraja. Irupatham nootrandil elaththuch siddha maruththuvam. Siddha Medical development Society, Jaffna.</li><li>7. Pon. Ramanathan. Maruththuva nokkil Siddharkalum ththuva Sinthanaikalum. Jaffna.</li><li>8. Shanmugavelu, M. (1967). <i>Noi nadal noi mudal nadal thirattu</i> I. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</li><li>9. Related Journals</li></ol>
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<b>Subject Title</b>	: <i>Udalkootriyal- I (Anatomy I)</i>	
<b>Subject Code</b>	: UDK 1012	
<b>Year &amp; Semester</b>	: Professional I Semester I	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: 1. To study about the Siddha principles of anatomy 2. To study about the Pectoral region, Axilla and Scapula region		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>Siddha Adippadai Thaththuvamum</i> and the foundations of Siddha Medicine including the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and specialty of Siddha Medicine		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>Describe the Siddha principles of anatomy</li><li>Describe the Pectoral region, Axilla and Scapula region</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>Dissect and demonstrate the upper limb</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>Perform the dissection</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>Apply the theoretical knowledge with practical</li></ul>	Mindset	12
<b>Content:</b> <b>Part I</b> <b>Ankathipatham</b>  1. Siddha principles of anatomy 2. Concept of excellence of body propounded by Siddha saints. 3. <i>Karu urpathi</i> and <i>Yakkai</i> 4. <i>Pulan Uruppukal</i> (sensory organs) and <i>Jeerana uruppukkal</i> (Digestive organs) 5. Study on locations of Varma points in human body (Vital points) 5.1. Briefly study on Varma points 5.2. Varma points located in the head 5.2.1. <i>Thilarththa varmam</i> 5.2.2. <i>Serum – kolli varmam</i> 5.2.3. <i>Ottu varmam</i> 5.2.4. <i>Utchi varmam</i> 5.2.5. <i>Poikai Varmam</i> 5.2.6. <i>Sevikkuththi varmam</i> 5.2.7. <i>Kurunthu Kuththi varmam</i> 5.2.8. <i>Alavaadi varmam</i> 5.2.9. <i>Natchaththira kalam</i> 5.2.10. <i>Pinvetti varmam</i> 5.2.11. <i>Komberik kalam</i> 5.2.12. <i>Sulumunai varmam</i>		

- 5.2.13. *Poochanthi varmam*
- 5.2.14. *Kanmani varmam*
- 5.2.15. *Paala varmam*
- 5.2.16. *Kannadi varmam*
- 5.2.17. *Pidari Varmam*
- 5.2.18. *Valaimudintha varmam*
- 5.2.19. *Netti Varmam*
- 5.2.20. *Kaakkattai Varmam*

5.3. Varma points located in the neck

- 5.3.1. *Mun naakku thalli varmam*
- 5.3.2. *Pin kaluththu nadukku varmam*
- 5.3.3. *Pakka kaluththu nadukku varmam*
- 5.3.4. *Kaaraikkuli varmam*
- 5.3.5. *Thummi varmam*
- 5.3.6. *Urakka kalam*
- 5.3.7. *Muli thoore varmam*

## Part II

### Introduction of Anatomy

- 6. Anatomical position, median sagittal, Horizontal, coronal plane.
- 7. Meaning of Anterior- Posterior, Medial – lateral, Proximal- distal, Exterior- interior, palmar – dorsal, Plantar- Dorsal surface, Superficial – deep, Superior- inferior, Ipsilateral- contralateral, flexion- extension, Abduction – adduction, lateral rotation- medial rotation, inversion- eversion, Protraction- retraction.
- 8. Describe the Skin, Fascia, type of muscle, bone and joints skin should be described in detail.
- 9. Upper limb
  - 9.1. Description, muscles attachments and clinical aspects of clavicle, scapula, humerus, radius, ulna and hand bone, shoulder girdle, Shoulder joint, Acromioclavicular joint, Sternoclavicular joint, Elbow joint, Wrist joint and interphalangeal joint
  - 9.2. Surface landmark anterior and posterior compartment muscles, Nerves (Radial nerve, ulna Nerve, Median nerve)
  - 9.3. Radial Artery, ulna artery and brachial artery and its branches, Anastomosis around elbow joint, Superficial and deep veins of upper limb
  - 9.4. Hand – palmar aponeurosis, muscles, Flexor Retinaculum Superficial & deep Palmar arch
- 10. Pectoral region, axilla, scapula region



<p>10.1. Pectoral region- Surface landmarks mammary gland, muscles of the pectoral region</p> <p>10.2. Axilla- Boundaries of axilla, study of contents of axilla, brachial plexus.</p> <p>10.3. Back and scapula region- land marks skin &amp; fascia of back, muscles connecting upper limb with the vertebral column</p> <p>Dissect and demonstrate the upper limb</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		10
	2. LMS based learning		15
	3. Self-study using study guide		20
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		10
	6. Resource based Learning		35
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03, Practical 01
<b>Recommended Readings:</b>	<p>1. Chummy S Sinnatamby. (2006). <i>Last's Anatomy: Regional and Applied</i>. Edinburgh: Churchill Livingstone.</p> <p>2. Kanagasundaram,R. (1980). <i>A new approach to dissection of the human Body</i>. Singapore: PG Publishing</p> <p>3. Anne M R Agur, (2005). <i>Grant's atlas of Anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins,.</p> <p>4. Harold Ellis. (2002). <i>Clinical Anatomy</i>. Oxford: Blackwells,</p> <p>5. Sadler, T W. (2006). <i>Langman's Medical Embryology</i>. Philadelphia: Lippincott Williams &amp; Wilkins,</p> <p>6. Inderber Singh. (2006). <i>Text book of Human Neuro Anatomy</i>. New Delhi: Jaypee,.</p> <p>Keith L Moore, (2005). <i>Clinically oriented anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins</p>		

	<ol style="list-style-type: none"><li>7. Richard L Drake. (2005). <i>Gray's anatomy for students</i>. Philadelphia: Churchill Livingstone</li><li>8. Green. S.P, Thiyagarajan. R, <i>Udatkooru</i>, Indian Medicine and Homeopathy Chennai</li><li>9. Snell, Richard.S, Clinical Anatomy by regions, Baltimore, MD: wolters Kluwer/ Lippincott willams &amp; wilkins</li></ol>
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<b>Subject Title</b> : <i>Udalkootriyal- II (Anatomy II)</i>		
<b>Subject Code</b> : UDK 1022		
<b>Year &amp; Semester</b> : Professional I Semester II		
<b>Credits</b> : 02		
<b>Status</b> : Basic Stream (BS1)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. To study about the Siddha principles of anatomy</li> <li>2. To study about the leg and foot</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to,		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Describe the Siddha principles of anatomy, leg and foot	Knowledge	1, 2
• Dissect and demonstrate the lower limb	Skills	3, 4, 5, 8
• Perform the dissection	Attitude	9,10,11
• Apply the theoretical knowledge with practical	Mindset	12
<b>Content:</b> <b>Part II</b> <b><i>Ankathipatham II</i></b> <ol style="list-style-type: none"> <li>1. Locations of <i>Vatham, Piththam &amp; Kapam</i></li> <li>2. <i>Saptha thathukkal - Charam, Cenneer, Oon, Kozhuppu, Enbu, Moolai, Sukkilam/ Sronitham</i></li> <li>3. Study on locations of Varma points in human body (Vital points)               <ol style="list-style-type: none"> <li>3.1. Varma points located in the thorax and abdomen                   <ol style="list-style-type: none"> <li>3.1.1. <i>Unthi varmam</i></li> <li>3.1.2. <i>Ner varmam</i></li> <li>3.1.3. <i>Adappu varmam</i></li> <li>3.1.4. <i>Sarithi varmam</i></li> <li>3.1.5. <i>Puja varmam</i></li> <li>3.1.6. <i>Nenju nadukku varmam</i></li> <li>3.1.7. <i>Ellu komberi varmam</i></li> <li>3.1.8. <i>Urumi varmam</i></li> <li>3.1.9. <i>Mun marbu varmam</i></li> <li>3.1.10. <i>Kuththi varmam</i></li> <li>3.1.11. <i>Thivalai varmam</i></li> <li>3.1.12. <i>Vellerai varmam</i></li> <li>3.1.13. <i>Kaareral varmam</i></li> <li>3.1.14. <i>Chithira varmam</i></li> <li>3.1.15. <i>Ellurukki varmam</i></li> </ol> </li> </ol> </li> </ol>		

3.1.16. *Aththikaanthaari varmam*

3.2. Varma points located in the abdomen

- 3.2.1. *Sadayantha varmam*
- 3.2.2. *Siriya aththisurukki varmam*
- 3.2.3. *Periya aththisurukki varmam*
- 3.2.4. *Mundellu varmam*
- 3.2.5. *Seppu varmam*

3.3. Varma points located in the back

- 3.3.1. *Ilankuruththu varmam*
- 3.3.2. *Komberi maru varmam*
- 3.3.3. *Nenju nadukku varmam*
- 3.3.4. *Urumi maru varmam*
- 3.3.5. *Kulippoottu thallelumbu varmam*
- 3.3.6. *Sippi thoonguthasai varmam* Sippi varmam
- 3.3.7. *Naavaari ellu varmam*
- 3.3.8. *Akaththuvara varmam*
- 3.3.9. *Kaikuli varmam*
- 3.3.10. *Sippi asaivu varmam*
- 3.3.11. *Kaipuja poruththu varmam*

3.4. Varma points of located in pelvis

- 3.4.1. *Kalladai varmam*
- 3.4.2. *Mummoorththi varmam*
- 3.4.3. *Mooththira varmam*
- 3.4.4. *Pathaippu varmam*
- 3.4.5. *Aka urulai visai naranbu varmam*
- 3.4.6. *Viththu varmam*
- 3.4.7. *Ilinga nadukku varmam*
- 3.4.8. *Thumbu varmam*

3.5. Varma points located in the thigh

- 3.5.1. *Thodai maiya varmam*
- 3.5.2. *Mel thodai maiya varmam*
- 3.5.3. *Keel thodai maiya varmam*

3.6. Varma points located in the knee joint

- 3.6.1. *Mootukannu varmam*
- 3.6.2. *Moottusirattai varmam*
- 3.6.3. *Mulankal mootu pathaippu varmam*
- 3.6.4. *Mulankaal moottu moliporutthu varmam*

3.7. Varma points located in the knee

- 3.7.1. *Kuthiraimuka varmam*
- 3.7.2. *Kuthirai nuninaakku varmam*
- 3.7.3. *Vayiruthi varmam*
- 3.7.4. *Thumbikkala varmam*

3.7.5. *Kuthirai adinakku varmam*

3.7.6. *Kanapathi muga varmam*

3.8. Varma points located in the foot

3.8.1. *Karandai kannu varmam*

3.8.2. *Pathasakkara varmam*

3.8.3. *Karandai moli poruthtu varmam*

3.8.4. *Kuthikkal varmam*

3.8.5. *Narambu nadukku mudichchi varmam*

3.8.6. *Kaal nerukku varmam*

3.8.7. *Pruviral manjal varmam*

3.9. Varma points located in the arm

3.9.1. *Puya nadukku varmam*

3.9.2. *Puya mel nadukku varmam*

3.9.3. *Puja keel nadukku varmam*

3.10. Varma points located in the forearm

3.10.1. *Mulangai nadukku varmam*

3.10.2. *Mulankai mel nadukku varmam*

3.10.3. *Mulankai keel nadukku varmam*

3.10.4. *Naadi sooththira varmam*

3.11. Varma points located in the elbow

3.11.1. *Mulangai moottu pathaippu varmam*

3.11.2. *Mulangai mootu puratharai visai narampu varmam*

3.11.3. *Mulangai mootu moliporuththu varmam*

3.11.4. *Mulangai mootu kaimandai varmam*

3.12. Varma points located in the hand

3.12.1. *Kaiperuviral – moliporuththu varmam*

3.12.2. *Kaiperuviral – pathakkai varma*

3.12.3. *Kaiperuviral – akatharai pyuratharai varmam*

3.12.4. *Sorna vetrilai varmam*

3.12.5. *Kai – nerukku varmam*

3.12.6. *Kai kavuli varmam*

3.13. Varma points located in the wrist

3.13.1. *Kolikkaluthu varmam*

3.13.2. *Kolikkaluthu kannu varmam*

3.13.3. *Kolikkaluthu aka puratharai varmam*

## **Part II**

### **Lower limb**

4. Osteology of the lower limbs (Hip bone, femur, ibia, fibula, paella, tarsal bone, meta tarsal and phalenges) and relevant applied anatomy

<p>5. Joints of lower limbs (hip joint, knee joint, tibia - fibular joint, ankle joint, joints in the foot ) and its applied anatomy</p> <p>6. Surface anatomy, Muscles attachment, Nerve supply, blood supply and applied anatomy of Hip, Thigh, Leg and foot and is relevant applied anatomy</p> <p>Dissect and demonstrate the lower limb</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		10
	2. LMS based learning		15
	3. Self-study using study guide		20
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		10
	6. Resource based Learning		35
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03, Practical 01
<b>Recommended Readings:</b>	<ol style="list-style-type: none"> <li>1. Chummy S Sinnatamby. (2006). <i>Last's Anatomy: Regional and Applied</i>. Edinburgh: Churchill Livingstone.</li> <li>2. Kanagasundaram,R. (1980). <i>A new approach to dissection of the human Body</i>. Singapore: PG Publishing</li> <li>3. Anne M R Agur, (2005). <i>Grant's atlas of Anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins,.</li> <li>4. Harold Ellis. (2002). <i>Clinical Anatomy</i>. Oxford: Blackwells,</li> <li>5. Sadler, T W. (2006). <i>Langman's Medical Embryology</i>. Philadelphia: Lippincott Williams &amp; Wilkins,</li> <li>6. Inderber Singh. (2006). <i>Text book of Human Neuro Anatomy</i>. New Delhi: Jaypee,.</li> <li>Keith L Moore, (2005). <i>Clinically oriented anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins</li> </ol>		

	<ol style="list-style-type: none"><li>7. Richard L Drake. (2005). <i>Gray's anatomy for students</i>. Philadelphia: Churchill Livingstone</li><li>8. Green. S.P, Thiyagarajan. R, <i>Udatkooru</i>, Indian Medicine and Homeopathy Chennai</li><li>9. Snell, Richard.S, Clinical Anatomy by regions, Baltimore, MD: wolters Kluwer/ Lippincott willams &amp; wilkins</li></ol>
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<b>Subject Title</b> : <i>Udalkootriyal- III (Anatomy III)</i>		
<b>Subject Code</b> : UDK 2032		
<b>Year &amp; Semester</b> : Professional II Semester III		
<b>Credits</b> : 02		
<b>Status</b> : Basic Stream (BS2)		
<b>Aim:</b> <ol style="list-style-type: none"> <li>1. To study about the Siddha principles of anatomy</li> <li>2. To study about the Thorax, Abdomen and Pelvis</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>Describe the Siddha principles of anatomy</li> <li>Describe the Thorax, Abdomen and Pelvis</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>Dissect and demonstrate the Thorax and Abdomen</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>Perform the dissection</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>Apply the theoretical knowledge with practical</li> </ul>	Mindset	12
<b>Content:</b> <b>Part I - Ankathipatham III</b> <ol style="list-style-type: none"> <li>1. The <i>Koshangal</i></li> <li>2. <i>Kazhivu neekka uruppukal</i> such as Kidney, bladder, urinary pathway, Skin, <i>Malavayasayam</i>.</li> <li>3. <i>Jeerana uruppukal</i> (Digestive system and their accessory organs)</li> </ol> <b>Part II</b> <ol style="list-style-type: none"> <li>4. Thorax <ol style="list-style-type: none"> <li>4.1. Surface landmarks of thorax, Thoracic cavity, Inlet, outlet of thorax</li> <li>4.2. Thoracic wall, Costal cartilages, Sternum, ribs, Thoracic vertebrae Osteology of joints</li> <li>4.3. Mediastinum and its contents.</li> <li>4.4. Pleura, Lungs and Blood supply</li> <li>4.5. Diaphragm</li> </ol> </li> <li>5. Abdomen &amp; Pelvis <ol style="list-style-type: none"> <li>5.1. Osteology of Abdomen &amp; Pelvis</li> <li>5.2. Differentiation of the male &amp; female pelvis</li> <li>5.3. Anterior Abdominal wall and posterior abdominal wall</li> <li>5.4. Abdominal cavity and peritoneum coverings</li> <li>5.5. Abdominal viscera – Abdominal part of esophagus &amp; stomach, Duodenum, Small intestine, large intestine, Abdominal aorta &amp; its branches, Portal vein, extra hepatic biliary apparatus, spleen, Pancreas, Supra renal gland, Kidney, Ureter.</li> <li>5.6. Dissection of the thorax and abdomen</li> </ol> </li> </ol>		
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>
	1. Seminar	10
	2. LMS based learning	20



	3. Self-study using study guide		20
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		15
	6. Resource based Learning		25
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03, Practical - 01
<b>Recommended Readings:</b>	<ol style="list-style-type: none"> <li>1. Chummy S Sinnatamby. (2006). <i>Last's Anatomy: Regional and Applied</i>. Edinburgh: Churchill Livingstone.</li> <li>2. Kanagasundaram,R. (1980). <i>A new approach to dissection of the human Body</i>. Singapore: PG Publishing</li> <li>3. Anne M R Agur, (2005). <i>Grant's atlas of Anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins,.</li> <li>4. Harold Ellis. (2002). <i>Clinical Anatomy</i>. Oxford: Blackwells,</li> <li>5. Sadler, T W. (2006). <i>Langman's Medical Embryology</i>. Philadelphia: Lippincott Williams &amp; Wilkins,</li> <li>6. Inderber Singh. (2006). <i>Text book of Human Neuro Anatomy</i>. New Delhi: Jaypee,.</li> <li>Keith L Moore, (2005). <i>Clinically oriented anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins</li> <li>7. Richard L Drake. (2005). <i>Gray's anatomy for students</i>. Philadelphia: Churchill Livingstone</li> <li>8. Green. S.P, Thiyagarajan. R, <i>Udatkooru</i>, Indian Medicine and Homeopathy Chennai</li> <li>9. Snell, Richard.S, <i>Clinical Anatomy by regions</i>, Baltimore, MD: wolters Kluwer/ Lippincott willams &amp; wilkins</li> </ol>		

<b>Subject Title</b>	: <i>Udalkootriyal- IV (Anatomy IV)</i>	
<b>Subject Code</b>	: UDK 2043	
<b>Year &amp; Semester</b>	: Professional II Semester IV	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS2)	
<b>Aim:</b> 1. To study about the Siddha principles of anatomy 2. To study about the Head and Neck		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Describe the Siddha principles of anatomy Describe the Head and Neck	Knowledge	1, 2
• Dissect and demonstrate the Head and Neck	Skills	3, 4, 5, 8
• Perform the dissection with the interaction of other colleagues	Attitude	9,10,11
• Apply the theoretical knowledge with practical	Mindset	12
<b>Content:</b> <b>Part I - <i>Ankathipatham IV.</i></b> 1. Relationship between <i>Aatharam</i> with the <i>Nadikal</i> . 2. Anatomical locations of <i>Aatharam</i> 3. Locations and Structure of <i>Ayul kalam urrupukal</i> . <b>Part II</b> 4. Scalp, Skull and cranial cavity 4.1. The scalp, cavities and fossa in skull. 4.2. Osteology of skull, facial bones and cervical vertebrae. 4.3. The joints of skull 4.4. Applied anatomy of skull and cervical vertebrae. 4.5. Muscles of facial expression. 4.6. Scalp, Skull and Cranial cavity  5. Head 5.1. The special senses 5.2. The blood vessels and nerves supply of head 5.3. Cranial nerves 5.4. Meninges and its importance. 5.5. Parotid region, styloid region, Intra temporal region and Mouth 5.6. Tongue, Pharynx and Larynx  6. Neck 6.1. Anatomy of neck		

6.2. The Cervical plexus 6.3. Spinal cord and Motor & sensory tracts 6.4. Sympathetic trunk & ganglia.  7. Dissect and demonstrate the head and neck			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		10
	2. LMS based learning		20
	3. Self-study using study guide		15
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		10
	6. Resource based Learning		35
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03, Practical - 01
<b>Recommended Readings:</b>	<ol style="list-style-type: none"> <li>1. Chummy S Sinnatamby. (2006). <i>Last's Anatomy: Regional and Applied</i>. Edinburgh: Churchill Livingstone.</li> <li>2. Kanagasundaram,R. (1980). <i>A new approach to dissection of the human Body</i>. Singapore: PG Publishing</li> <li>3. Anne M R Agur, (2005). <i>Grant's atlas of Anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins,.</li> <li>4. Harold Ellis. (2002). <i>Clinical Anatomy</i>. Oxford: Blackwells,</li> <li>5. Sadler, T W. (2006). <i>Langman's Medical Embryology</i>. Philadelphia: Lippincott Williams &amp; Wilkins,</li> <li>6. Inderber Singh. (2006). <i>Text book of Human Neuro Anatomy</i>. New Delhi: Jaypee,. Keith L Moore, (2005). <i>Clinically oriented anatomy</i>. Philadelphia: Lippincott Williams &amp; Wilkins</li> <li>7. Richard L Drake. (2005). <i>Gray's anatomy for students</i>. Philadelphia: Churchill Livingstone</li> </ol>		

	<ol style="list-style-type: none"><li>8. Green. S.P, Thiagarajan. R, <i>Udatkooru</i>, Indian Medicine and Homeopathy Chennai</li><li>9. Snell, Richard.S, Clinical Anatomy by regions, Baltimore, MD: wolters Kluwer/ Lippincott willams &amp; wilkins</li></ol>
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<b>Subject Title</b>	: <i>Udalathathuvam &amp; Uyirvediyal I</i> - Physiology & Biochemistry I		
<b>Subject Code</b>	: UDT 1012		
<b>Year &amp; Semester</b>	: Professional I Semester I		
<b>Credits</b>	: 02		
<b>Status</b>	: Basic Stream (BS1)		
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Udal thaththuvam</i> in human body.</div><div>2. Understand the Uyirthathukkal and Sapthathaathukal.</div><div>3. Body fluid, Excitable tissue, Blood and Introduction of Biochemistry</div></div>			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>udal</i> and its constituents			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<div><div>• Gain through knowledge in the basic concepts of <i>Udal thaththuvam</i> and Uyirthathukkal and Sapthathaathukal, Body fluid, Excitable tissue, Blood and Introduction of Biochemistry</div></div>	Knowledge	1, 2	
<div><div>• Able to interpret the basic concepts of <i>Udal thaththuvam</i></div></div>	Skills	3, 4, 5, 8	
<div><div>• Practise the intervention to the health problem based on the basic concepts of <i>Udal thaththuvam</i></div></div>	Attitude	9,10,11	
<div><div>• Explore the knowledge in <i>Udal thaththuvam</i> towards Siddha system of medicine</div></div>	Mindset	12	
<b>Content:</b> <b>Part I - <i>Udal thaththuvam</i></b> <div><div>1. <i>Thaththuva vithi</i></div><div>2. Detail studies on 96 <i>Thaththuvangal</i> (formation of body according to 96 philosophy)<div><div>2.1 First <i>thaththuvangal</i> - 30</div><div>2.2 Second <i>thathuvangal</i> -30</div><div>2.3 Third <i>thathuvangal</i> - 36</div><div>2.4 Different school thoughts of 96 <i>ththuvagal</i></div></div></div><div>3. Detail study on <i>Uyir thathukkal</i> – <i>Vatham</i>, <i>Piththam</i> and <i>Kabham</i><div><div>3.1 <i>Vatham</i><div><div>3.1.1 Other names</div><div>3.1.2 Abode of <i>Vatham</i></div><div>3.1.3 Functions of <i>Vatham</i></div><div>3.1.4 Detail study on classification of <i>Vatham</i> (<i>Thasa vayu</i>)</div></div></div><div>3.2 <i>Piththam</i><div><div>3.2.1 Other names</div><div>3.2.2 Abode of <i>Piththam</i></div></div></div></div></div></div>			

- 3.2.3 Functions of *Piththam*
  - 3.2.4 Detail study on classification of *Piththam* (*Pancha piththam*)
- 3.3 *Kabham*
  - 3.3.1 Other names
  - 3.3.2 Abode of *Kabham*
  - 3.3.3 Functions of *Kabham*
  - 3.3.4 Detail study on classification of *Kabham* (*Pancha Kabham*)
- 4. Detail study on *Udal thathukkal* (somatic components of body)
  - 4.1 *Saaram*
  - 4.2 *Senneer*
  - 4.3 *Oon*
  - 4.4 *Kozhuppu*
  - 4.5 *Enbu*
  - 4.6 *Moolai*
  - 4.7 *Vinthu* (*Sukkilam*) / *Naatham* (*Suronitham*)
- 5. Relationship among *Pancha bhoothamkal*, *uyir thathukkal*, and *Udal thathukkal*
- 6. *Suvasam* (Respiration)
- 7. *Udal thee*
  - 7.1 Definition
  - 7.2 Status of *Udal thee* in healthy condition
- 8. Detail study on *Saram* and *Pranayamam*
- 9. *Ayul Kaalam* (*Vayathalavu*) (life span)
  - 9.1 *Ayul Kaalam* of human
  - 9.2 *Ayul Kaalam* related to the *Panchabhootham*
  - 9.3 Different thoughts of school on *Ayul Kaalam*

## Part II - Physiology

- 10. Body fluid
  - 10.1 Composition and functions of body fluid
  - 10.2 Concepts of Homeostasis
  - 10.3 Mechanism of formation of tissue fluid
  - 10.4 Body water balance, its regulation and estimation
  - 10.5 Transport mechanisms across cell membrane
  - 10.6 Pathophysiology of body fluid
- 11. Excitable tissue
  - 11.1 Muscles
    - 11.1.1. Classification of muscular tissue
    - 11.1.2. Structure & properties of muscles tissue
  - 11.2. Nerves
    - 11.2.1. Mechanism of nerve function
    - 11.2.2. Resting membrane potentials
    - 11.2.3. Action potential
    - 11.2.4. Nerves muscular transmission

- 11.3. Neuro muscular function
  - 11.3.1. Synthesis , release , action and metabolism of acetylcholine
  - 11.3.2. Pathophysiology of Neuro muscular joints
12. Blood
  - 12.1. Composition of blood
  - 12.2. Volume of blood
  - 12.3. Red blood cells- RBC
    - 12.3.1. Morphology of red blood cells, red blood count, Hemoglobin concentration, Haematocrit, red cell indices and their diagnostic value
    - 12.3.2. Genesis of RBC and Destruction of RBC
    - 12.3.3. Pathophysiology of RBC
    - 12.3.4. Perform the R.B.C Count
  - 12.4. White blood cells- WBC
    - 12.4.1. Morphology and function of White blood cells
    - 12.4.2. Leukocytosis – Reticulo endothelial system (RES)
    - 12.4.3. Pathophysiology of WBC
    - 12.4.4. Thrombocyte – platelet cells Morphology & function
    - 12.4.5. Clinical important of WBC count
    - 12.4.6. Pathophysiology of Thrombocyte
13. Demonstrate the W.B.C Count examination
14. Demonstrate the procedures of Differential Count
15. Blood groups
16. Perform the Blood grouping examination
17. Principles of blood Transfusion
18. Pathophysiology of following conditions.
  - 18.1. Anaemia
  - 18.2. Jaundice
  - 18.3. Leukaemia
19. Demonstrate the procedures of calculation of Heamoglobin Percentag
20. Perform the procedures of ESR
21. Calculate the Bleeding time & clotting time

### **Part III - Biochemistry**

22. Introduction of biochemistry
23. Biochemical basis of life and it's important in monitoring health.
24. Biochemical tests that assist in diagnosis and monitoring the disease.
25. Biochemical functions of each part of cell.
26. Similarities and dissimilarities between karyotic and eukaryotic cells.
27. Cellular transport- active passive and environment- ECF- ICF.
28. Water balance and unique properties of water.
29. Dissociation of weak acids.
30. Explain how hydrogen ion concentration is expressed as PH.
31. Explain how PH is determined.
32. Significance of buffering capacity and buffering range.
33. Main buffering system in the body.
34. Apply the principles of PH and buffer system in human.
35. Five elements concept.
36. Ancient chemistry / *Rasavatham* (Alchemy).

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		10
	4. Virtual/Real Group Discussion		10
	5. Resource based Learning		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03, Practical - 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Venu gopal, P.M. <i>Udal Thathuvam</i>. Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>2. Anaivaari R. Anandan. A Compendium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>3. Kannan Rajaram, T. &amp; Petrisitral rajaram, M.R. Varma points and stimulations methods on the basis of thread – measurement techniques in Varma Therapy (Practical Hand book for beginners in Varma therapy) Centre for Varma medicine &amp; Research.</li> <li>4. Uththamanarayanan K.S. <i>Siddha Maruthuvanga Churukkam</i>. Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>5. Shanmugavelu, M. (1967). <i>Noi nadal noi mudal nadal thirattu</i> I. Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>6. Yugiamamunivar. (1998). <i>Yugi vaiththiya sinthamani</i>. Department of Indian Medicine &amp; Homoeopathy. Chennai</li> <li>7. Sembulingam, K. and Prema Sembulingam.(2004). <i>Essentials of Medical Physiology</i>. New Delhi: Jaypee Brothers.</li> <li>8. Green, J.H. (1976). <i>An Introduction to Human Physiology</i>. Oxford: Oxford University Press.</li> <li>9. William, F Ganong. (2005). <i>Review of Medical Physiology</i>. Boston: McGraw Hill.</li> </ol>		



	<ol style="list-style-type: none"><li>10. Arthur C Guyton and John E Hall. (2006). <i>Textbook of Medical Physiology</i>. Philadelphia: Saunders.</li><li>11. Green, J.H. (1978). <i>Basic Clinical Physiology</i>. Oxford: Oxford University Press.</li><li>12. Robert K Muray, Daryl K. Granner and Victor W Rodwell. (2009). <i>Harper's Illustrated Biochemistry</i>. Boston: Mc Graw Hill.</li><li>13. T. W Conway, A. A Spector and D Chapell. (1996). <i>Biochemistry-A Case Oriented Approach</i>. Montgomery: Mosby Publishers.</li><li>14. Delvin, T. M. (2010). <i>Text Book of Biochemistry with Clinical Correlations</i>. WileyEliss Publication.</li><li>15. Smith, C., Marks, A. and Lieberman, M. (2008). <i>Mark's Basic Medical Biochemistry: A Clinical Approach</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</li><li>16. Champe, P.C., Harvey, R. A. and Ferrier, D. R. (2007). <i>Lippincott's Illustrated Reviews- Biochemistry</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</li></ol>
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<b>Subject Title</b>	: <i>Udalathathuvam &amp; Uyirvediyal II</i> - Physiology & Biochemistry II	
<b>Subject Code</b>	: UDT 1022	
<b>Year &amp; Semester</b>	: Professional I Semester II	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Udal thaththuvam</i></div><div>2. Get practical knowledge on the basic concepts of <i>Udal thaththuvam</i></div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>udal</i> and its constituents		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div>• Gain through knowledge in the basic concepts of <i>Udal thaththuvam</i></div>	Knowledge	1, 2
<div>• Able to interpret the basic concepts of <i>Udal thaththuvam</i> specially in <i>Thasanaadikal</i>, <i>Atharangal</i>, <i>Yakkaiyin illakkanam</i></div>	Skills	3, 4, 5, 8
<div>• Practise the intervention to the health problem based on the basic concepts of <i>Udal thaththuvam</i></div>	Attitude	9,10,11
<div>• Explore the knowledge in <i>Udal thaththuvam</i> towards Siddha system of medicine</div>	Mindset	12
<b>Content:</b> <b>Part I</b> <div><div>1. Detail study on <i>Thasanaadikal</i><div><div>1.1.<i>Idakalai</i></div><div>1.2. <i>Pikali</i></div><div>1.3. <i>Sulimunai</i></div><div>1.4. <i>Kaanthaari</i></div><div>1.5.<i>Aththi</i></div><div>1.6.<i>Singuvai</i></div><div>1.7.<i>Alampurudan</i></div><div>1.8. <i>Kuku</i></div><div>1.9.<i>Sankini</i></div><div>1.10. <i>Vairavan</i></div><div>1.11. Different thoughts of school on <i>Thasanaadikal</i></div></div></div><div>2. Detail study of <i>Atharangal</i><div><div>2.1.<i>Moolatharam</i></div><div>2.2.<i>Suvathittanam</i></div><div>2.3.<i>Manipooragam</i></div><div>2.4.<i>Anaagatham</i></div></div></div></div>		

- 2.5. *Visuththi*
- 2.6. *Angnai*
- 2.7. *Atharangal* in scientific aspect

3. *Yakkaiyin illakkanam*

- 3.1. *Vatha udal*
- 3.2. *Piththa udal*
- 3.3. *Kabha udal*
- 3.4. *Thontha udal*

**Part II**

4. Respiratory Physiology

- 4.1. Mechanism of Breathing- Inspiration and Expiration
- 4.2. Intra alveolar and intra- pleural pressure changes during respiratory cycle and Complains & its alteration in disease states
- 4.3. Function of surfactant and consequence of its absence  
Alteration in lung volumes and measurement of lung volumes and capacities by spirometer
- 4.4. Alveolar ventilation and its calculation
- 4.5. Mechanism of diffusion of oxygen and carbon dioxide on the respiratory membrane  
Physiological significance of transport of oxygen and carbon dioxide and its pathophysiology.
- 4.6. Regulations of respiration:
- 4.7. Ventilator response in the following conditions
- 4.8. Changes in acid base balance
- 4.9. Oxygen loss
- 4.10. Increase alveolar carbon dioxide tension in breath holding
- 4.11. Respiratory adjustment in health
- 4.12. Mechanisms of artificial respiration
- 4.13. Pathophysiology of respiratory system and common diseases of respiratory system.
- 4.14. Examination of respiratory system

5. Gastrointestinal Physiology

- 5.1. Oral physiology and mechanism Oesophageal motility
- 5.2. Functions, motility and pathophysiology of stomach
- 5.3. Physiological mechanism of gastro intestinal tract.
- 5.4. Functions and pathophysiology of Pancreas and Liver
- 5.5. Functions and pathophysiology of Small intestine and Large intestine
- 5.6. Common disorders of GIT

**Part III - Biochemistry**

6. Bio molecules

- 6.1. Introduction and Biological medical importance of carbohydrates, Disaccharides, Monosaccharide and derivatives.

<p>6.2. Identification of the Carbohydrate, Disaccharides, Homopolysaccharides and heteropolysaccharides.</p> <p>6.3. Introduction of fats and its nature and distribution in body.</p> <p>6.4. Structure of cholesterol and ionization of amino acid</p> <p>6.5. Concept of simple and conjugated proteins.</p> <p>6.6. Importance of electrophoresis in diagnosis.</p> <p>6.7. Phospholipids and biological importance</p> <p>6.8. Structure of cholesterol, its numbering and important product derived from cholesterol.</p> <p>6.9. Biological importance, Chemical structure, ionization properties and amino acid of protein.</p> <p>6.10. Myoglobin, hemoglobin, immunoglobulin and plasma albumin.</p> <p>6.11. Concept of simple and conjugated proteins</p> <p>6.12. Importance of electrophoresis in diagnosis</p> <p><b>Demonstrate the laboratory works</b></p> <p>Isolation and qualitative estimation of free sugar</p> <p>Isolation of chromatography separation of sugar</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		10
	4. Virtual/Real Group Discussion		10
	5. Resource based Learning		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory - 03 Practical - 01
<b>Recommended Readings :</b>	<p>1. Venu gopal, P.M. <i>Udal Thathuvam</i>. Department of Indian Medicine &amp; Homoeopathy, Chennai.</p> <p>2. Anaivaari R. Anandan. A Compendium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>3. Kannan Rajaram, T. &amp; Petrisitral rajaram, M.R. Varma points and stimulations methods on the basis of thread – measurement techniques in Varma Therapy (Practical Hand book for beginners in Varma therapy) Centre for Varma medicine &amp; Research.</p> <p>4. Uththamanarayanan K.S. <i>Siddha Maruthuvanga Churukkam</i>. Department of Indian Medicine and Homoeopathy, Chennai.</p>		

	<ol style="list-style-type: none"> <li>5. Shanmugavelu, M. (1967). <i>Noi nadal noi mudal nadal thirattu</i>. I. Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>6. Yugiamamunivar. (1998). <i>Yugi vaiththiya sinthamani</i>. Department of Indian Medicine &amp; Homoeopathy. Chennai</li> <li>7. Sembulingam, K. and Prema Sembulingam.(2004). <i>Essentials of Medical Physiology</i>. New Delhi: Jaypee Brothers.</li> <li>8. Green, J.H. (1976). <i>An Introduction to Human Physiology</i>. Oxford: Oxford University Press.</li> <li>9. William, F Ganong. (2005). <i>Review of Medical Physiology</i>. Boston: McGraw Hill.</li> <li>10. Arthur C Guyton and John E Hall. (2006). <i>Textbook of Medical Physiology</i>. Philadelphia: Saunders.</li> <li>11. Green, J.H. (1978). <i>Basic Clinical Physiology</i>. Oxford: Oxford University Press.</li> <li>12. Robert K Muray, Daryl K. Granner and Victor W Rodwell. (2009). <i>Harper's Illustrated Biochemistry</i>. Boston: Mc Graw Hill.</li> <li>13. T. W Conway, A. A Spector and D Chapell. (1996). <i>Biochemistry-A Case Oriented Approach</i>. Montgomery: Mosby Publishers.</li> <li>14. Delvin, T. M. (2010). <i>Text Book of Biochemistry with Clinical Correlations</i>. WileyEliss Publication.</li> <li>15. Smith, C., Marks, A. and Lieberman, M. (2008). <i>Mark's Basic Medical Biochemistry: A Clinical Approach</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</li> <li>16. Champe, P.C., Harvey, R. A. and Ferrier, D. R. (2007). <i>Lippincott's Illustrated Reviews- Biochemistry</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</li> </ol>
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<b>Subject Title</b> : <i>Udalthathuvam &amp; Uyirvediyal</i> III Physiology & Biochemistry III		
<b>Subject Code</b> : UDT 2033		
<b>Year &amp; Semester</b> : Professional II Semester III		
<b>Credits</b> : 03		
<b>Status</b> : Basic Stream (BS2)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. Understand the basic concepts of <i>Tattvas</i>, <i>Nadikal</i> and <i>Ayul kaalam vellum urupugal</i></li> <li>2. Understand the functions of Cardio vascular system and Reproductive system</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>udal</i> and its constituents		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>Gain through knowledge in the basic concepts of <i>Udal thaththuvam</i>, <i>Nadikal</i> and <i>Ayul kaalam vellum urupugal</i>, functions of Cardio vascular system and Reproductive system</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>Able to interpret the basic concepts of <i>Udal thaththuvam</i>, functions of Cardio vascular system and Reproductive system</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>Practise the intervention to the health problem based on the basic concepts of <i>physiology</i></li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>Explore the knowledge in <i>physiology</i> towards Siddha system of medicine</li> </ul>	Mindset	12
<b>Content:</b> <b>Part I</b> <ol style="list-style-type: none"> <li>1. <i>Tattvas</i>, <i>Nadikal</i> and <i>Ayul kaalam vellum urupugal</i></li> <li>2. Functions of 96 <i>Tattvas</i></li> <li>3. Siddha concept of food, <i>Nadikal</i> and <i>Ayul kaalam vellum urupugal</i></li> </ol> <b>Part II</b> <ol style="list-style-type: none"> <li>4. Cardiovascular System               <ol style="list-style-type: none"> <li>4.1. Introduction to cardiovascular physiology, Normal Electro Cardiogram, Sinus Arrhythmia, Cardiac cycle, Systole, Diastole and their duration, Heart sounds – Origin &amp; timing</li> <li>4.2. Pressure changes occurring in right atrium, left atrium, right ventricle, left ventricle, aorta &amp; pulmonary artery during cardiac cycle</li> <li>4.3. Dynamics of blood flow Pressure, resistance, velocity and total cross sectional area of aorta, artery, arteriole, capillary, venule, vein &amp; venacava</li> <li>4.4. Laminar &amp; turbulent flow</li> <li>4.5. Pulse presence, diastolic blood pressure &amp; mean pressure</li> </ol> </li> </ol>		

- 4.6. Effects of gravity, age, emotion and exercise on blood pressure, methods of measuring blood pressure
- 4.7. The different pulse locations and reading
- 4.8. Factors affecting heart rate, diastolic volume and stroke volume
- 4.9. Equation of blood pressure – cardiac output & peripheral resistance
- 4.10. Method of measurement of cardiac output
- 4.11. Examination method of Blood pressure
- 4.12. The cardiovascular mechanism
- 4.13. Local mechanism, Auto regulation, Systemic mechanism, Effect of sympathetic nervous system
- 4.14. Val – salve maneuver and the clinical use
- 4.15. Coronary circulation in following aspects
  - 4.15.1. Blood flow changes in right and left coronary arteries during the cardiac cycle
  - 4.15.2. Chemical and neural factors affecting coronary blood flow
  - 4.15.3. Angina – myocardial infarction
  - 4.15.4. Cerebral circulation
  - 4.15.5. Foetal circulation
- 4.16. Cardio vascular homeostasis.
  - 4.16.1. Effects of standing
  - 4.16.2. Postural hypertension
  - 4.16.3. Exercise
  - 4.16.4. Muscle blood flow its changes during exercise
  - 4.16.5. Circulatory changes during isometric and isotonic contraction of muscle
  - 4.16.6. Pathophysiology of cardiovascular homeostasis
  - 4.16.7. Shock
  - 4.16.8. Syncope
  - 4.16.9. Hypertension
  - 4.16.10. Cardiac failure
- 4.17. Examination of cardio vascular System
- 5. Energy metabolism
  - 5.1. Basal metabolic rate
  - 5.2. Energy balance
  - 5.3. Obesity anorexia
  - 5.4. Temperature regulation and variation
- 6. Reproductive physiology
  - 6.1. The influence of fetal hormones on the gender of the foetus and its future behavior
  - 6.2. True hermaphrodite and pseudo hermaphrodite
  - 6.3. Adrenarche, puberty and adolescence
  - 6.4. Ovarian maturation and menstrual circle
  - 6.5. The hormones of the pituitary gland (FSH, LH and Prolactin) and ovary and their effects on changes at puberty endometrium, cervical mucosa and vaginal mucosa
  - 6.6. Delayed and precocious puberty
  - 6.7. Precursors of spermatogenesis and the conditions needed for it
  - 6.8. The synthesis and actions of testosterone
  - 6.9. Human sexuality and sexual intercourse
  - 6.10. Fertilization and pregnancy
  - 6.11. Neonatal physiology

### Part III: Bio chemistry

7. Nucleic acid
  - 7.1. Introduction to nucleic acid, nucleosides, nucleotides and nucleotide derivative.
  - 7.2. Structure and role of DNA in genetic material, Denaturation , Renaturation and hybridization.
  - 7.3. DNA packaging in eukaryote and prokaryotes, Adjustment and DNA packaging during replication and Transcription.
  - 7.4. RNA acts as genetic material, Regulation and gene expression.
  - 7.5. DNA molecular basis of cancer.
  - 7.6. General properties of Enzymes, mechanism of enzymes action, factors affecting the enzyme and the catalyze reactions.
  - 7.7. Enzymes activators, inactivates and Enzymes inhibition.
  - 7.8. Iso- enzymes and protective enzymes.
8. Nutrition
  - 8.1. Nutrition for infant, preschool, school going children, adolescent adult, pregnant, lactating mother and sports men.
  - 8.2. Energy requirement and calculation.
  - 8.3. Malnutrition
  - 8.4. Food of plant and animal origin (Egg, meat, fish), Milk and milk products, Cereals and preservation of cereals, Legumes
  - 8.5. Nutritive factors of Root, tubers and vegetables, Nuts, oil, fibers
  - 8.6. Food and cancer.
  - 8.7. Vitamin A, D, E, and K
  - 8.8. Riboflavin, Nicotinic acid and pyredoxol phosphate, Folic acid and Vitamin B12.
  - 8.9. Biotin pantothenic acid and Vitamin C.
  - 8.10. Oxide reduction steps and mitochondria
  - 8.11. Chemy osmotic hypothesis of oxide reduction and other uses of oxygen in the body.
9. Laboratory works
  - 9.1. Isolation and Qualitative Extraction of soluble protein in plant tissue (seeds)
  - 9.2. Electro phoretic separation of protein
  - 9.3. Perform the Titration of amino acid
  - 9.4. Estimation of serum protein
  - 9.5. Isolation of Quantitative estimation of DNA and RNA
  - 9.6. Extraction of DNA from human blood
  - 9.7. DNA based technique in medical diagnostics
  - 9.8. Gel Electro phoresis- Demonstration
  - 9.9. Southern blotting demonstration

Methods of Teaching and Learning :	Methods	Notional Hours	Learning
	1. LMS based learning	30	
	2. Self-study using study guide	50	
	3. Case Study/Problem Based Learning	15	
	4. Virtual/Real Group Discussion	15	
	5. Resource based Learning	40	
	<b>Total</b>	<b>150</b>	



Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03, Practical - 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Venu gopal, P.M. <i>Udal Thathuvam</i>. Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>2. Anaivaari R. Anandan. A Compendium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>3. Kannan Rajaram, T. &amp; Petrisitral rajaram, M.R. Varma points and stimulations methods on the basis of thread – measurement techniques in Varma Therapy (Practical Hand book for beginners in Varma therapy) Centre for Varma medicine &amp; Research.</li> <li>4. Uththamanarayanan K.S. <i>Siddha Maruthuvanga Churukkam</i>. Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>5. Shanmugavelu, M. (1967). <i>Noi nadal noi mudal nadal thirattu I</i>. Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>6. Yugiamamunivar. (1998). <i>Yugi vaiththiya sinthamani</i>. Department of Indian Medicine &amp; Homoeopathy. Chennai</li> <li>7. Sembulingam, K. and Prema Sembulingam.(2004). <i>Essentials of Medical Physiology</i>. New Delhi: Jaypee Brothers.</li> <li>8. Green, J.H. (1976). <i>An Introduction to Human Physiology</i>. Oxford: Oxford University Press.</li> <li>9. William, F Ganong. (2005). <i>Review of Medical Physiology</i>. Boston: McGraw Hill.</li> <li>10. Arthur C Guyton and John E Hall. (2006). <i>Textbook of Medical Physiology</i>. Philadelphia: Saunders.</li> <li>11. Green, J.H. (1978). <i>Basic Clinical Physiology</i>. Oxford: Oxford University Press.</li> <li>12. Robert K Muray, Daryl K. Granner and Victor W Rodwell. (2009). <i>Harper's Illustrated Biochemistry</i>. Boston: Mc Graw Hill.</li> <li>13. T. W Conway, A. A Spector and D Chapell. (1996). <i>Biochemistry- A Case Oriented Approach</i>. Montgomery: Mosby Publishers.</li> <li>14. Delvin, T. M. (2010). <i>Text Book of Biochemistry with Clinical Correlations</i>. WileyEliss Publication.</li> </ol>		

	<p>15. Smith, C., Marks, A. and Lieberman, M. (2008). <i>Mark's Basic Medical Biochemistry: A Clinical Approach</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</p> <p>16. Champe, P.C., Harvey, R. A. and Ferrier, D. R. (2007). <i>Lippincott's Illustrated Reviews- Biochemistry</i>. Philadelphia: Lippincott Williams &amp; Wilkins.</p>
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<b>Subject Title</b> : <i>Udalthathuvam &amp; Uyirvediyal IV</i> (Physiology & Biochemistry – IV)		
<b>Subject Code</b> : UDT 2043		
<b>Year &amp; Semester</b> : Profession II Semester IV		
<b>Credits</b> : 03		
<b>Status</b> : Basic Stream (BS2)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. Understand the basic concepts of <i>Kosam and fourteen impulses</i></li> <li>2. Stud about the functions of endocrine system, renal system and nervous system</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain the knowledge on <i>udal</i> and its constituents		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>• Gain through knowledge in the basic concepts of <i>Kosam and fourteen</i> impulses and functions of endocrine system, renal system and nervous system</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>• Able to interpret the basic concepts of <i>Kosam and fourteen</i> impulses and functions of endocrine system, renal system and nervous system</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>• Practise the intervention to the health problem based on the basic concepts of <i>Kosam and fourteen</i> impulses and functions of endocrine system, renal system and nervous system</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>• Explore the knowledge in <i>Kosam and fourteen</i> impulses and functions of endocrine system, renal system and nervous system towards Siddha system of medicine</li> </ul>	Mindset	12
<b>Content:</b> <b>Part I</b> <ol style="list-style-type: none"> <li>1. <i>Kosam</i> and fourteen impulses               <ol style="list-style-type: none"> <li>1.1. <i>Kazhivu neekam</i></li> <li>1.2. Fourteen <i>Vaekam</i> (urges)</li> <li>1.3. <i>Kosam</i></li> </ol> </li> </ol> <b>Part II</b> <ol style="list-style-type: none"> <li>2. Principles of dietics, vitamin and minerals</li> <li>3. Endocrine system               <ol style="list-style-type: none"> <li>3.1. Anterior pituitary gland and its hormones</li> <li>3.2. Describe the posterior pituitary gland and its hormones</li> <li>3.3. Action and disordered physiology (Hypo secretion- myxedema, hyper secretion – Thyrotoxicosis) of Thyroid.</li> <li>3.4. Physiology of Adrenal gland and Disordered adrenal function</li> </ol> </li> <li>4. Pancreas and its activity               <ol style="list-style-type: none"> <li>4.1. Factors regulating insulin secretion</li> </ol> </li> </ol>		

- 4.2. Effects of the following endocrine disorders on blood glucose
- 4.3. Diabetes mellitus
- 4.4. Insulinoma
- 4.5. Cushing's syndrome
- 4.6. The use of G.T.T in the study of normal and pathological metabolism
- 4.7. Major sign and symptoms in patients with absolute insulin deficiency regulation of blood glucose
- 4.8. Regulation of blood glucose
- 5. Parathormone
  - 5.1. Hyper parathyroidism
  - 5.2. Rickets and osteomalacia
- 6. Renal Physiology
  - 6.1. Auto regulation of renal blood flow
  - 6.2. Glomerular capillary pressure and the factors affecting it.
  - 6.3. Glomerular filtration
    - 6.3.1. Adaptation of the glomerulus as a filter
    - 6.3.2. The concepts of clearance
    - 6.3.3. Measurement of glomerular filtration rate using insulin clearance
    - 6.3.4. Creatinine clearance, its advantage & disadvantage
    - 6.3.5. Factors affecting the permeability of glomerular membrane
    - 6.3.6. Factors affecting the Glomerular filtration rate
    - 6.3.7. Composition of glomerular filtrate
    - 6.3.8. Filtration function
  - 6.4. Proximal tubular function
  - 6.5. Mechanism of Concentration and dilution of urine
  - 6.6. Distal tubular function
  - 6.7. Regulation of excretion
  - 6.8. Regulation of hydrogen excretion
  - 6.9. Regulation of sodium excretion
  - 6.10. Regulation of potassium excretion
  - 6.11. Regulation of acid base balance with renal tubular acidosis
  - 6.12. Uncompensated and compensated respiratory acidosis and respiratory alkalosis
  - 6.13. Uncompensated and compensated metabolic acidosis and metabolic alkalosis
  - 6.14. Role of kidney in regulation of blood pressure
  - 6.15. Disordered renal function
  - 6.16. Acute renal failure
  - 6.17. Chronic renal failure
- 7. Neurophysiology and special senses
  - 7.1. Special senses
  - 7.2. Chemical transmission in the nervous system
  - 7.3. Functional anatomy synapse and of a convergence and divergence
  - 7.4. Excitatory post synaptic potential and inhibitory post synaptic potential
  - 7.5. Chemical transmitters
  - 7.6. Sensory system - Sensory organs, sensory receptors and sensory modalities
    - Touch proprioception and discrimination

- 7.7. Motor system - Stretch reflex, Withdrawal reflex, Poly synaption reflexes and mass reflex
- 7.8. Pyramidal system
- 7.9. Spinal cord - Ascending and descending tracts of the spinal cord  
Neurological manifestation of spinal cord disorders  
Complete section at various local and spinal shocks
- 7.10. In syringomyelia, Tabes dorsalis, pernicious anemia, Spinal cord compression
- 7.11. Physiological function of the hypothalamus
- 7.12. Reticular activating system & sleep

#### 8. Laboratory work of Renal Physiology & Neurophysiology

- 8.1. Nervous system examination
  - 8.1.1. Examination of motor system
  - 8.1.2. Examination of sensory system
  - 8.1.3. Examination of vision
  - 8.1.4. Examination of hearing
- 8.2. Renal function
  - 8.2.1. Urine full report
  - 8.2.2. Urine culture
  - 8.2.3. Diuresis

### Part III - Bio chemistry

#### 9. Metabolism

- 9.1. Introduction of metabolism.
- 9.2. Glycolysis and its regulation, Gluconeogenesis, alcohol metabolism and lactic acidosis.
- 9.3. Measurement of blood glucose tolerance test and abnormal glucose tolerance curves.
- 9.4. Glycogen storage diseases.
- 9.5. Blood lipids, Metabolism and transport of lipids.
- 9.6. Role of liver and adipose tissue in lipid metabolism
- 9.7. Metabolism and homeostasis of cholesterol
- 9.8. Concept of protein and its Significance.
- 9.9. Metabolism of ammonia, amino acid metabolism
- 9.10. Concept of positive and negative nitrogen balance.
- 9.11. Molecular disease
- 9.12. Biosynthesis of purines and pyrimidine and Purine salvage path
- 9.13. Hyper uricemia and secondary causes
- 9.14. Regulation of denovo synthesis of purines and Purine catabolism
- 9.15. Tools in molecular medicine
- 9.16. Cloning, stem cells and gene therapy
- 9.17. Genetically engineered insulin, blotting technique and DNA finger printing and application.

#### 10. Micro elements and Digestion

- 10.1. Position and human body micro and macro elements
- 10.2. Iron and iron deficiency anemia
- 10.3. Iodine, Thyroid hormone and test for its function

<p>10.4. Calcium, zinc, Copper, Chromium, Fluorine, Selenium, Manganese and Magnesium.</p> <p>10.5. Gastric digestion and control of gastric secretion</p> <p>10.6. Intestine digestion, hormonal control, bile</p> <p>10.7. Carbohydrate, Protein, lipid Digestion and absorption</p> <p>11. Laboratory work</p> <p>11.1. Solubility test, Benedict test, Barfoed's test for</p> <p>11.1.1. Glucose</p> <p>11.1.2. Lactose</p> <p>11.1.3. Fructose</p> <p>11.1.4. Sucrose</p> <p>11.1.5. Starch</p> <p>11.2. Benedicts test for different concentration of glucose</p> <p>11.2.1. 1% concentration</p> <p>11.2.2. ½% concentration</p> <p>11.2.3. ¼% concentration</p> <p>11.2.4. 1/8% concentration</p> <p>11.2.5. 1/16% concentration</p> <p>11.3. Iodine test</p> <p>11.4. Seliwan off's test</p> <p>11.4.1. Fructose</p> <p>11.4.2. Glucose</p> <p>11.5. Quantitative estimation of protein in absolution</p> <p>11.6. Ammonium sulphate test</p> <p>11.7. Sulpho salicylic test</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		50
	3. Case Study/Problem Based Learning		20
	4. Virtual/Real Group Discussion		20
	5. Resource based Learning		30
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory - 03, Practical - 01
<b>Recommended Readings :</b>	<p>1. Venu gopal, P.M. <i>Udal Thathuvam</i>. Department of Indian Medicine &amp; Homoeopathy, Chennai.</p> <p>2. Anaivaari R. Anandan. A Compedium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>3. Kannan Rajaram, T. &amp; Petrisitral rajaram, M.R. Varma points and stimulations methods on the basis of thread – measurement techniques in Varma Therapy</p>		

	<p>(Practical Hand book for beginners in Varma therapy) Centre for Varma medicine &amp; Research.</p> <p>4. Uththamanarayanan K.S. <i>Siddha Maruthuvanga Churukkam</i>. Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>5. Shanmugavelu, M. (1967). <i>Noi nadal noi mudal nadal thirattu I</i>. Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>6. Yugiamamunivar. (1998). <i>Yugi vaiththiya sinthamani</i>. Department of Indian Medicine &amp; Homoeopathy. Chennai.</p> <p>7. Journals related to the above titles</p>
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<b>Subject Title</b>	: Addangayogam – I (Yoga -I)	
<b>Subject Code</b>	: ADY 1012	
<b>Year &amp; Semester</b>	: Professional I Semester I	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> 1. To study about Addanga yogam with respect to the mental and physical health.		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Understand about the principles, benefits and therapeutic applications of AddangaYogam	Knowledge	1, 2
• Perform and practice the Pranayamam	Skills	3, 4, 5, 8
• Understand the benefits of Pranayamam	Attitude	9,10,11
• Realize the importance of AddangaYogam with health	Mindset	12
<b>Content:</b> 1. Yogam and spirituality 1.1. History and Excellence of Thirumoolar 1.2. Thirumoolar Thriumanthram-Thanthiram III 1.3. Introduction to Addanga Yogam 1.4. Introduction to yogam 1.5. History of Yogam 1.6. Different schools of thought of Yogam 1.7. Principles and philosophy of Siddhar Yogam 1.8. Yogam practice in daily life  2. Principles of yogam as Kayakatpam 2.1.Yoga katpam 2.2.Yogam for disease prevention, healing, health promotion and quality of life 2.3.Scientific application Yogakatpam  3. Types of Yogam 3.1. Different Schools of thoughts of Yogam  4. Detail study of Addanga yogam 4.1. Thirumoolar Thirumanthiram 4.1.1. Know about Thirumanthiram 4.1.2. Learn about Thirumanthiram  4.1.2.1. Iyamam (Code of conduct)- 4.1.2.1.1. Principles of Iyamam 4.1.2.1.2. Practice of Iyamam		



<p>4.1.2.1.3. Benefits of Iyamam</p> <p>4.1.2.1.4. Therapeutic application of Iyamam</p> <p>4.1.2.1.5. Physiological and bio- chemical changes while observing Iyamam</p> <p>4.1.2.2. Niyamam (Code of Ethics)</p> <p>4.1.2.2.1. Principles of Niyamam</p> <p>4.1.2.2.2. Practice of Niyamam</p> <p>4.1.2.2.3. Benefits of Niyamam</p> <p>4.1.2.2.4. Therapeutic application of Niyamam</p> <p>4.1.2.2.5. Physiological and bio- chemical changes while observing Niyamam</p> <p>4.1.2.3. Pranayamam ( Aerobic exercise)-</p> <p>4.1.2.3.1. Definition –Types</p> <p>4.1.2.3.2. General rules while observing Pranayamam</p> <p>4.1.2.3.3. Principles of Pranayamam</p> <p>4.1.2.3.4. Practice of Pranayamam</p> <p>4.1.2.3.5. Types of Pranayamam</p> <p>4.1.2.3.6. Therapeutic application of Pranayamam</p> <p>4.1.2.3.7. Physiological and bio- chemical changes while doing Pranayamam</p> <p>4.1.2.3.8. Contraindication of Pranayamam</p> <p>4.1.2.3.9. Dietary regimen</p> <p>5. The Scientific validity of Yogam</p> <p>5.1. A balance between strength, flexibility and relaxation</p> <p>5.2. Nerve tensioning and stimulation of nerve reflexes</p> <p>5.3. Co-activation of opposing muscle groups around joint complex in Yogam</p> <p>5.4. Principle of stretching in Yogam</p> <p>5.5. Principle of strengthening in Yogam</p> <p>5.6. Principle of relaxation in Yogam</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		45
	3. Case Study/Problem Based Learning		15
	4. Resource based Learning		25
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory and practical – 03 and 01
<b>Recommended Readings :</b>	<p>1. Thiyyagarajan, R. Siddha maruththuvam sirappu, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai.</p>		

	<ol style="list-style-type: none"><li>2. Yoki rajah.A, Rajamanikam, <i>Yogakkalai</i>, Palaniyappa brothers, Chennai</li><li>3. Ponmaran, <i>Thinamum Yoga</i>, Adone publishing Group, Tiruvananthapuram.</li><li>4. Prakasan.V.K, <i>Yoga</i>, Vevekanatha kenthira prakashan trust, Chennai.</li><li>5. Prahlada reddy, <i>Yoga for you</i>, Thomson press, India</li></ol>
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<b>Subject Title</b>	: Addangayogam – II (Yoga -II)	
<b>Subject Code</b>	: ADY 1022	
<b>Year &amp; Semester</b>	: Professional I Semester II	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b>		
1. To study about Addanga yogam with respect to the mental and physical health.		
<b>Intended Learning Outcomes:</b>		
At the end of this course students should be able to know pathology in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Understand about the principles, benefits and therapeutic applications of AddangaYogam	Knowledge	1, 2
• Perform and practice the Sooriya Namaskara and other important Asanams	Skills	3, 4, 5, 8
• Understand the benefits of Sooriya Namaskara and other important Asanams	Attitude	9,10,11
• Realize the importance of AddangaYogam with health	Mindset	12

**Content:**

- Asanam ( Posture)
  - Principles and practice of Asanam
  - Therapeutic application of Asanam
  - Contra-indication in Asanam
  - Dietary regimen - Types of Asanam.
- Prathiyakharam (Controll of senses)
  - Principles of Prathiyakharam
  - Practice of Prathiyakharam
  - Therapeutic application of Prathiyakharam
- Dharanai (Practice of concentration of the mind)
  - Principles of Dharanai
  - Practice of Dharanai
  - Therapeutic application of Dharanai
- Dhiyanam (Meditation)
  - Principles of Dhiyanam
  - Practice of Dhiyanam
  - Types of Dhiyanam
  - Therapeutic application of Dhiyanam
  - Physiological and bio- chemical changes while doing Dhiyanam
  - Contraindication of Dhiyanam

5. Samaathi (Rest or super consciousness)
  - 5.1. Principles of Samaathi
  - 5.2. Practice of Samaathi
  - 5.3. Therapeutic application of Samaathi
6. Knowledge & Practical skill on Important Asanams, their techniques/methods and benefits:
  - 6.1 Relaxation techniques
  - 6.2 Sooriya Namaskaram
  - 6.3 Asanams
    - 6.3.1. Padmasanam
    - 6.3.2. Pathirasanam
    - 6.3.3. Pasumugaasanam (Komugasanam)
    - 6.3.4. Mayilasanam (Mayurasanam)
    - 6.3.5. Singasanam
    - 6.3.6. Veerasanam
    - 6.3.7. Sithasanam
    - 6.3.8. Utkattasanam
    - 6.3.9. Padhahasthasanam
    - 6.3.10. Marasanam
    - 6.3.11. Natrajasanam
    - 6.3.12. Veerapathirasanam
    - 6.3.13. Parchuvakonasanam
    - 6.3.14. Thirikonasanam
    - 6.3.15. Patchimothasanam
    - 6.3.16. Sugasanam
    - 6.3.17. Pavanamukthasanam–
    - 6.3.18. Garudasanam –
    - 6.3.19. Vajrasanam –
    - 6.3.20. Chakkarasanam–
    - 6.3.21. Villasanam (dhanurasanam)
    - 6.3.22. Vittilasanam (salabasanam)
    - 6.3.23. Pambu asanam (bujangasanam)
    - 6.3.24. Sarvangasanam
    - 6.3.25. Kukkudasanam
    - 6.3.26. Thandasanam
    - 6.3.27. Parvadhanasanam
    - 6.3.28. Savasanam
    - 6.3.29. Thalai asanam (sirasasanam)
    - 6.3.30. Egapadhasanam
  - 6.4. Santhira Namaskaram
7. Yoga Pedagogy
  - 7.1 Four skill
    - 7.1.1. Information skills,
    - 7.1.2. Learning and innovation skills,
    - 7.1.3. Communication skills,
    - 7.1.4. Life and career skills of all learners in the basic education program.
  - 7.2 Five approaches (2C-2I-1R ).
    - 7.2.1. Constructive
    - 7.2.2. Collaborative

7.2.3. Integrative 7.2.4. Reflective 7.2.5. Inquiry Based Learning			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		40
	3. Case Study/Problem Based Learning		15
	4. Resource based Learning		30
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory and practical – 03 and 01
<b>Recommended Readings :</b>	1. Thiagarajan, R. Siththa maruththuvam sirappu, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai. 2. Yoki rajah.A, Rajamanikam, <i>Yogakkalai</i> , Palaniyappa brothers, Chennai 3. Ponmaran, <i>Thinamum Yoga</i> , Adone publishing Group, Tiruvananthapuram. 4. Prakasan.V.K, <i>Yoga</i> , Vevekanatha kenthira prakashan trust, Chennai. 5. Prahlada reddy, <i>Yoga for you</i> , Thomson press, India		

<b>Subject Title</b>	: Research Methodology		
<b>Subject Code</b>	: RMS 2032		
<b>Year &amp; Semester</b>	: Professional II Semester III		
<b>Credits</b>	: 02		
<b>Status</b>	: Basic Stream (BS 2)		
<b>Aim:</b> To: <div>1. At the end of the sessions, the student should be able to explain research and research strategies and its development</div>			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know Research Methodology in brief			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<div>• Define research, central tendency and Clinical trial</div>	Knowledge	1, 2	
<div>• Describe the theoretical aspect of hypothesis research proposal</div>	Skills	3, 4, 5, 8	
<div>• Explain about the designing questionnaire and Ethics</div>	Attitude	9,10,11	
<div>• Explain about the importance of variable , sampling</div>	Mindset	12	
<b>Content:</b> <div>1. Define and classify the research</div> <div>2. Describe the research strategies</div> <div>3. Differentiate the Quantitative and Qualitative research</div> <div>4. Study about the research problem</div> <div>5. Explain the research process</div> <div>6. Define the term Hypothesis</div> <div>7. List out the important characteristics of hypothesis</div> <div>8. Explain about three forms of hypothesis</div> <div>9. Describe the theoretical aspect of hypothesis</div> <div>10. Formulate hypothesis of operationalizing variables</div> <div>11. Define and study about objectives</div> <div>12. List out and elaborate the methods of data collection</div> <div>13. Explain about the designing questionnaire</div>			

14. Describe about the Literature review
15. Define variable
16. Explain about the importance of variable
17. List out the classification of variables
18. Explain about indicators
19. Measure the central tendency relative positions and dispersion
20. Differentiate and describe the descriptive statistics and inferential statistics
21. Describe the correlation and regression quantitative of qualitative variables and data analysis exercises
22. Explain about Estimation of population parameters
23. Describe and estimate the significance difference between two groups
24. Explain about the sampling in following aspects:
  - 24.1. Study population and study unit
  - 24.2. Sample
  - 24.3. Sampling method
  - 24.4. Basic sampling
  - 24.5. Sampling error
  - 24.6. Sample size
  - 24.7. Validity and reliability
25. Research proposal
  - 25.1. Prepare and write a research proposal
  - 25.2. Formulate the research design
  - 25.3. Write a research report
26. Ethics: Explain about the Ethics in following aspects:
  - 26.1. Doctor and ethics
  - 26.2. Ethics in research
  - 26.3. Basic consideration
  - 26.4. Ethical committee
27. Clinical trial
  - 27.1. Detailed out the process of clinical trial in research
  - 27.2. Ethical issue of the clinical trial for approval of research
  - 27.3. Study and control groups
  - 27.4. Assignment of patient in groups for comparison.
  - 27.5. Intervention

Assessment of the outcome of research

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		10
	2. Self-study using study guide		10
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		10
	5. Presentation		20
	6. Quiz		20
	7. Assignment		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Notional Learning Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 02
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Sundar Rao, P. S. S., Richard J. <i>Introduction to Biostatistics and Research Methods</i></li> <li>2. Antonisamy.B, <i>Biostatistics, Principles and Practices</i>, Tata Mcgrawhiil Education Private Limited, New Delhi, 2010</li> <li>3. Sivagnanasundram. C, <i>Learning Research-A guide to medical students, Junior doctors and related professionals</i>, Boasco Artoa printer Jaffna.</li> </ol>		



<b>Subject Title</b>	: English for communication - I		
<b>Subject Code</b>	: ENG 1012		
<b>Year &amp; Semester</b>	: Professional I Semester I		
<b>Credits</b>	: 02		
<b>Status</b>	: Basic Stream (BS1)		
<b>Aim:</b> To build listening and speaking skills through the pronunciation of phonemes and reading short passages and to develop the ability to comprehend passages and to develop grammatically error free writing through learning grammar. The course addresses the four skills namely Listening, Speaking, Reading and Writing.			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<ul style="list-style-type: none"><li>Read the phonetic transcriptions in dictionaries. read articles and reports on common topics, comprehend passages on various subjects, develop the skills of comprehension and speed reading, and develop a sound knowledge in basic grammar for error free writing.</li></ul>	Knowledge	1, 2	
<ul style="list-style-type: none"><li>Pronounce the 44 phonemes with accuracy and pronounce words with clarity and accuracy</li></ul>	Skills	3, 4, 5, 8	
<ul style="list-style-type: none"><li>Practice the pronunciation with the interaction of their colleague</li></ul>	Attitude	9,10,11	
<ul style="list-style-type: none"><li>Understand the importance of pronunciation</li></ul>	Mindset	12	
<b>Content:</b> <div>1. Listening &amp; Speaking 1.1.The nature of English Pronunciation 1.2.The Speech sounds of English 1.3.Learn English Vowels: monophthongs 1.4.Learn English Vowels: Diphthongs 1.5.Learn English Consonants</div> <div>2. Reading 2.1.Comprehension passages will be given. At first students ought to read them silently. Then the facilitator reads the same passage aloud and each student is to repeat the style and pronunciation of the facilitator in reading it aloud in the class. Facilitator has to correct their pronunciation. The comprehension exercises at the end will help the student to comprehend the passage. Here the facilitator acts only as a monitor, thereby the rest of the passages given in the book have to be read independently by the student which will go into the notional hours. The entire exercises have to be addressed by the student and submitted as a part of their Continuous Assessment.</div> <div>3. Writing 3.1.Parts of Speech 3.2.Parts of Sentence 3.2.1. Subject and Predicate 3.2.2. Complement</div>			

3.2.3. Negative Sentence 3.2.4. Framing Questions 3.2.4.1. Questions with answers ‘yes’ or ‘no’ 3.2.4.2. Information Questions 3.2.4.3. Alternative Questions 3.2.4.4. Question Tags 3.2.5. Phrase 3.2.5.1. Prepositional Phrases 3.2.5.2. Appositives 3.2.5.3. Infinitives and infinitive phrases 3.2.5.4. Participles and Participle phrases 3.2.5.5. Gerund and gerund phrases 3.2.5.6. Absolute phrases 3.2.6. Clauses 3.2.6.1. Main Clause 3.2.6.2. Sub-ordinate Clause 3.2.6.3. Adjective Clause 3.2.6.4. Adverb Clause 3.2.6.5. Noun Clause 3.2.7. Kinds of Sentences 3.2.7.1. Sentence Structures 3.2.7.2. Sentence Purposes 3.2.8. Sentence Pattern			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		20
	4. Resource based Learning		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80%	02
<b>Recommended Readings :</b>	1. The Department will come out with its own text book for Listening, Speaking, Reading and Writing Skills. The book is proposed to be accompanied with a Compact Disc, so as to make this book an ideal Self-Learning Material (SLM). 2. Savarimuttu, J. S. Rohan and G. Petricia Alphine Nirmala. English Grammar & Usage: An Ideal Companion for Advanced Learners. Chennai: New Century Book House, 2016		

	<ol style="list-style-type: none"><li>3. Alderson, J. C. Reading in a Foreign Language. London: Longman, 1984.</li><li>4. Thomson, A. J. and A. V. Martinet. A Practical English Grammar. New Delhi: OUP, 2002</li><li>5. Narayanaswamy, K. R. Success with Grammar and Composition. New Delhi: Orient Longman, 1994.</li><li>6. Nesfield, J. C. English Grammar Composition &amp; Usage. Chennai: Macmillan, 2011 print</li><li>7. Pillai, G. Radhakrishna. Emerald English Grammar &amp; Composition. Chennai: Emerald Publishers, 2008 print.</li><li>8. Krishnamurthy, C. N. and Ashwini Raman. Advanced Grammar and Composition. Chennai: New Century Book House. 2010.</li><li>9. Alderson, J. C. Assessing Reading. Cambridge: Cambridge University Press, 2000.</li><li>10. Dudley-Evans, T. &amp; St John, M. J. Developments in ESP: a Multidisciplinary Approach. Cambridge: Cambridge University Press, 1998.</li><li>11. Urquhart, A. H., &amp; Weir, C. J. Reading in a Second Language: Process, Product, and Practice. London and New York: Longman, 1998.</li></ol>
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<b>Subject Title</b>	: English for communication- II		
<b>Subject Code</b>	: ENG 1022		
<b>Year &amp; Semester</b>	: Professional I Semester II		
<b>Credits</b>	: 02		
<b>Status</b>	: Basic Stream (BS1)		
<b>Aim:</b>			
1. To develop Listening, Speaking, Reading and Writing skills.			
<b>Intended Learning Outcomes:</b>			
At the end of this course students should be able to			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Plural/possessive/third person etc. Word accent, stress change, Read Poetry, Read Short-story, Nuances of grammar with regard to tense forms etc	Knowledge	1, 2	
• Pronounce past tense and Pronounce words syllable-wise	Skills	3, 4, 5, 8	
• Practice the pronunciation and develop Listening, Speaking, Reading and Writing skills with the interaction of their colleague	Attitude	9,10,11	
• Understand the importance of pronunciation	Mindset	12	
<b>Content:</b>			
1. Listening & Speaking			
1.1.The different phonological realizations of plural/possessive/third person singular marker and past tense marker in connected speech.			
1.2. Pronounce words syllable-wise			
1.3.Word Accent			
1.4.Stress change			
2. Reading			
The facilitator ought to facilitate the reading of poetry/short story aloud followed by students imitating the facilitator, mistakes have to be corrected. Each poem and short story has to be explained so that the target audience understand and enjoy it.			
2.1.Poetry			
2.2. Daffodils - William Wordsworth			
2.3.When We Two Parted – George Gordon Byron			
2.4.The Road Not Taken – Robert Frost			
2.5.Break, Break, Break – Alfred Tennyson			
2.6.Stopping by the Woods on a Snowy Evening – Robert Frost			
2.7.Short Story			
2.8.The Selfish Giant – Oscar Wild			
2.9.An Astrologer’s Day – R. K. Narayan			
2.10. How much land does a man need? – Leo Tolstoy			
2.11. The Ant and the Grasshopper – W. Somerset Maugham			
2.12. The Dying Detective – Sir Arthur Conan Doyle			

<p>3. Writing</p> <p>3.1. Verb</p> <p>3.1.1. Auxiliary Verbs or Auxiliaries</p> <p>3.1.2. Modals or Modal Auxiliaries</p> <p>3.1.3. Participle</p> <p>3.1.4. Use of the Participle</p> <p>3.1.5. Gerund</p> <p>3.1.6. Phrasal Verbs</p> <p>3.1.7. Tense</p> <p>3.1.8. Tense in conditional sentences</p> <p>3.2. Preposition</p> <p>3.3. Conjunction</p> <p>3.3.1. Coordinating Conjunctions</p> <p>3.3.2. Correlative Conjunctions</p> <p>3.3.3. Subordinating Conjunctions</p> <p>3.4. Concord</p> <p>3.5. Active and Passive Voices</p> <p>3.6. Direct and Indirect Narration</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		20
	4. Resource based Learning		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80%	02
<b>Recommended Readings :</b>	<p>1. The Department will come out with its own text book for Listening, Speaking, Reading and Writing Skills. The book is proposed to be accompanied with a Compact Disc, so as to make this book an ideal Self-Learning Material (SLM).</p> <p>2. Savarimuttu, J. S. Rohan and G. Petricia Alphine Nirmala. English Grammar &amp; Usage: An Ideal Companion for Advanced Learners. Chennai: New Century Book House, 2016</p> <p>3. Alderson, J. C. Reading in a Foreign Language. London: Longman, 1984.</p> <p>4. Thomson, A. J. and A. V. Martinet. A Practical English Grammar. New Delhi: OUP, 2002</p>		

	<ol style="list-style-type: none"><li>5. Narayanaswamy, K. R. Success with Grammar and Composition. New Delhi: Orient Longman, 1994.</li><li>6. Nesfield, J. C. English Grammar Composition &amp; Usage. Chennai: Macmillan, 2011 print</li><li>7. Pillai, G. Radhakrishna. Emerald English Grammar &amp; Composition. Chennai: Emerald Publishers, 2008 print.</li><li>8. Krishnamurthy, C. N. and Ashwini Raman. Advanced Grammar and Composition. Chennai: New Century Book House. 2010.</li><li>9. Alderson, J. C. Assessing Reading. Cambridge: Cambridge University Press, 2000.</li><li>10. Dudley-Evans, T. &amp; St John, M. J. Developments in ESP: a Multidisciplinary Approach. Cambridge: Cambridge University Press, 1998.</li><li>11. Urquhart, A. H., &amp; Weir, C. J. Reading in a Second Language: Process, Product, and Practice. London and New York: Longman, 1998.</li></ol>
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<b>Subject Title</b> : Tamil – I			
<b>Subject Code</b> : TAM 1011			
<b>Year &amp; Semester</b> : Professional I Semester I			
<b>Credits</b> : 01			
<b>Status</b> : Basic Stream (BS1)			
<b>Aim:</b> 1. To introduce Tamil alphabets and words 2. To study simple sentence structure in Tamil			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to			
ILOs		Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Recognizing Tamil alphabets  • Constructing simple words in Tamil		Knowledge	1, 2
• Pronounce the Tamil alphabets and read the simple words in Tamil		Skills	3, 4, 5, 8
• Practice the pronunciation with the interaction of their colleague		Attitude	9,10,11
• Understand the pronunciation and recognize the letters		Mindset	12
<b>Content:</b> 1. The subject contents of this Module have been designed for non-native Tamil speaking undergraduates who are following their BSMS 2. Introducing alphabets (Vowels and consonants inTamil) 3. Constructing simple words (names of things used in home, relationship, etc) 4. Introducing noun and verbs 5. Simple sentence making and sentence pattern in Tamil			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		15
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		10
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80%	01
<b>Recommended Readings :</b>	1. Noohmaan.M.A. 1999, Adippadaith Tamil Ilakkanam, Vasakar Sangam, Kalmunai, Sri Lanka		

	<ol style="list-style-type: none"><li>2. Noohmaan.M.A. 1999, Thodarpadal mozhi Naveenaththathuvamm, Ministry of Hindu Religious and cultural Affairs, COlombo.</li><li>3. Sanmukathas, A, 1982, Tamil Mozhi ilakka iyalbukal, Jaffna: Muththamil veliyeettu kazhakam.</li></ol>
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<b>Subject Title</b>	: Sinhala – I	
<b>Subject Code</b>	: SIN 1011	
<b>Year &amp; Semester</b>	: Professional I Semester I	
<b>Credits</b>	: 01	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> <ol style="list-style-type: none"><li>1. Identify the importance and benefits of learning Sinhala as the Second Language.</li><li>2. Obtain a basic knowledge in the communication aspects of Sinhala language for native Tamil speaker students.</li><li>3. Communicate in Sinhala languages with native speakers who are patients, families, health- care team and society effectively.</li><li>4. Apply vocabulary skills in relevant field.</li><li>5. Apply reading and listening skills in the Second Languages.</li><li>6. Collect necessary vocabulary for their day-to-day professional life.</li><li>7. Recognize the Sinhala Language structure, Cultural aspects and social functions of Language in the human societies and be able to use appropriately.</li></ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Study about the basic Sinhala</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Communicate with the native speakers with mutual understandings in relevant matters.</li><li>• Apply the language skills sufficiently in listening, speaking, reading and writing in their professional context with patients, families, health- care team and society.</li><li>•</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Counsel medical advices safely and effectively to patients who present for the treatment.</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Show a familiarity with various aspects of Sinhala culture, literature, cinema and social functions.</li></ul>	Mindset	12
<b>Content:</b> Subject contents: The subject contents of this Module have been designed for non-native Sinhala speaking undergraduates who are following their BSMS <ol style="list-style-type: none"><li>1. Structure of Sinhala Language as a second Language</li></ol>		

2. Alphabetic letters 3. Phonetics 4. Morphemes 5. Class 6. Gender 7. Countable and Uncountable 8. Person 9. Noun 10. Pronoun 11. Verb 12. Adjective			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		15
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		10
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80%	01
<b>Recommended Readings :</b>	1. Prof. W. S. Karunatilaka, “An Introduction to Spoken Sinhala”, M.D Gunasena & Company, Colombo. 2. Prof. S. J Yogarajah, “Spoken Sinhala”, Department of Official Languages, Colombo. 3. Prof. S. J Yogarajah, “Practice in Sinhala Writing”, Unie Arts (Pvt) Ltd., Colombo. 4. “Basic Sinhala”, Department of Official Languages, Colombo. 5. “Sarala Sinhala (Simple Sinhala)”, Department of Official Languages, Colombo.		

<b>Subject Title</b> : Tamil – II			
<b>Subject Code</b> : TAM 1021			
<b>Year &amp; Semester</b> : Professional I Semester II			
<b>Credits</b> : 01			
<b>Status</b> : Basic Stream (BS1)			
<b>Aim:</b> 1. To improve reading and writing skill in Tamil 2. To practice in oral communication			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Recognizing the Tamil words and Reading small sentences in Tamil	Knowledge	1, 2	
• Pronounce the Tamil alphabets and read the simple words in Tamil • Developing oral communication	Skills	3, 4, 5, 8	
• Communicate in Tamil with the interaction of their colleague	Attitude	9,10,11	
• Understand the meaning of Tamil words and improve their communication	Mindset	12	
<b>Content:</b> The subject contents of this Module have been designed for non-native Tamil speaking undergraduates who are following their BSMS 1. Grammar 2. Reading small passages 3. Listening and comprehension 4. Introducing Tamil words used in Siddha Medicine (technical terms)			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		15
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		10
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment: Stream assessment	20%	01

	Summative Assessment: Professional assessment	80%	01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"><li>1. Noohmaan.M.A. 1999, Adippadaith Tamil Ilakkanam, Vasakar Sangam, Kalmunai, Sri Lanka</li><li>2. Noohmaan.M.A. 1999, Thodarpadal mozhi Naveenaththathuvamm, Ministry of Hindu Religious and cultural Affairs, Colombo.</li><li>3. Sanmukathas. A, 1982, Tamil Mozhi ilakka iyalbukal, Jaffna: Muththamil veliyeettu kazhakam.</li></ol>		

<b>Subject Title</b>	: Sinhala – II	
<b>Subject Code</b>	: SIN 1021	
<b>Year &amp; Semester</b>	: Professional I Semester II	
<b>Credits</b>	: 01	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> <ol style="list-style-type: none"><li>1. Identify the importance and benefits of learning Sinhala as the Second Language.</li><li>2. Obtain a basic knowledge in the communication aspects of Sinhala language for native Tamil speaker students.</li><li>3. Communicate in Sinhala languages with native speakers who are patients, families, health- care team and society effectively.</li><li>4. Apply vocabulary skills in relevant field.</li><li>5. Apply reading and listening skills in the Second Languages.</li><li>6. Collect necessary vocabulary for their day-to-day professional life.</li><li>7. Recognize the Sinhala Language structure, Cultural aspects and social functions of Language in the human societies and be able to use appropriately.</li></ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Study about the basic Sinhala</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Communicate with the native speakers with mutual understandings in relevant matters.</li><li>• Apply the language skills sufficiently in listening, speaking, reading and writing in their professional context with patients, families, health- care team and society.</li><li>•</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Counsel medical advices safely and effectively to patients who present for the treatment.</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Show a familiarity with various aspects of Sinhala culture, literature, cinema and social functions.</li></ul>	Mindset	12
<b>Content:</b> The subject contents of this Module have been designed for non-native Sinhala speaking undergraduates who are following their BSMS		
<ol style="list-style-type: none"><li>1. Adverb</li><li>2. Preposition</li><li>3. Conjunction</li><li>4. Interjection</li></ol>		

5. Question form 6. Negative form 7. Tense 8. Cases 9. Phrase 10. Sentence 11. Terminology 12. Discourse 13. Prescribed texts			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		15
	2. Self-study using study guide		15
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		10
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80%	01
<b>Recommended Readings :</b>	1. Prof. W. S. Karunatilaka, “An Introduction to Spoken Sinhala”, M.D Gunasena & Company, Colombo. 2. Prof. S. J Yogarajah, “Spoken Sinhala”, Department of Official Languages, Colombo. 3. Prof. S. J Yogarajah, “Practice in Sinhala Writing”, Unie Arts (Pvt) Ltd., Colombo. 4. “Basic Sinhala”, Department of Official Languages, Colombo. 5. “Sarala Sinhala (Simple Sinhala)”, Department of Official Languages, Colombo.		

<b>Subject Title</b>	: Information Technology - I	
<b>Subject Code</b>	: INT 2032	
<b>Year &amp; Semester</b>	: Professional II Semester III	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS 2)	
<b>Aim:</b> To: <div><div>1. To provide an introduction to Information Technology (IT)</div><div>2. Facilitate the students to realize the basic technology concepts and trends used in the current and future developments of information technology.</div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know pathology in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div>• Describe the basic concept of computer hardware, software, LMS, networking, Internet, and security</div>	Knowledge	1,2
<div>• Comprehend the capabilities and limitations of computers and technology</div>	Skills	3,4,5,8
<div>• Current updates</div>	Attitude	9,10,11
<div>• Usage of computer software whenever nessasary</div>	Mindset	12
<b>Content:</b> <div><div>1. <b>Basics of Information Technology (IT)</b> Information technology – Definition, Information technology for business, Basic concepts of IT, Technological Trends in IT, Application of IT</div><div>2. <b>Introduction to Computers</b> The computer Defined, Characteristics of a computer, Limitation of Computers, Generation computers, Classification Computers, Application/Uses of Computers in different field, The parts of a computer System, Basic functional units of a system, Memory classification, secondary memory and other storages</div><div>3. <b>Data, Information and Data representation</b> Data, Information and knowledge, Distinguish between data and Information, Meaning of Information, types of information, Attributes of Information, Storage unit and Binary coding scheme Number Systems and gates - Decimal, Binary, Octal, Hexadecimal, Converting Techniques in Number systems, Basic Gates (NOT, AND &amp; OR)</div><div>4. <b>Computer Hardware</b> The system Unit, port, CPU, Computer Memory, input devices, output devices.</div></div>		

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		20
	2. Self-study using study guide		20
	3. Lecture, Class discussion and demonstration by teacher		20
	4. Case Study/Problem Based Learning		10
	5. Resource based Learning		30
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory and practical 01 and 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Introduction To Computers (2017), by Darrell W Hajek and Cesar Herrera, CreateSpace Independent Publishing Platform, ISBN 978-1545236468</li> <li>2. Fundamentals of Computers(6<sup>th</sup> Revised edition, 2014) by Rajaraman V., and Adabala N., Prentice Hall India Learning Private Limited, ISBN 978-8120350670</li> <li>3. Introduction to Information Technology (2<sup>nd</sup> Edition, 2013) by V. Rajaraman, PHI Learning Pvt. Ltd., ISBN 978-81-203-4731-1</li> <li>4. Introduction to Computers (7<sup>th</sup> Edition, 2010) by Peter Norton, Tata McGraw-Hill Edition, ISBN 9780070671201</li> </ol>		



<b>Subject Title</b> : Information Technology - II			
<b>Subject Code</b> : INT 2042			
<b>Year &amp; Semester</b> : Professional II Semester IV			
<b>Credits</b> : 02			
<b>Status</b> : Basic Stream (BS 2)			
<b>Aim:</b> To: <div><div>1. To provide an introduction and application of Computer Software (IT)</div><div>2. Facilitate the students Learning Management Systems.</div></div>			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know pathology in brief			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<div>• Describe the basic concept of computer hardware, software, LMS, networking, Internet, and security</div>	Knowledge	1,2	
<div>• Access the network and internet</div>	Skills	3,4,5,8	
<div>• Current updates</div>	Attitude	9,10,11	
<div>• Learn via LMS</div>	Mindset	12	
<b>Content:</b> <div><div>1. <b>Computer Software</b> System software, Application software, Firmware</div><div>2. <b>Computer networks, Internet and Its Uses</b> Evolution of Networks, the uses of a network, Types of networks, Advantages of Networks, Components of Networks, The Internet, Intranet and Extranet, Transmission media, History of Internet, Uses of Internet, Advantages of Internet, what is web?, Web browsers, Web servers, Hypertext Transfer Protocol, Computer Virus, Antivirus, Cloud System, E-mail, Search engine, Searching internet.</div><div>3. <b>Introduction to Learning Management Systems (LMS)</b> Definition of LMS, The Evolution of the LMS, Platforms for learning, Basic components of an LMS, The advantages of an LMS</div></div>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>	
	1. LMS based learning	20	
	2. Self-study using study guide	20	
	3. Lecture, Class discussion and demonstration by teacher	20	
	4. Case Study/Problem Based Learning	10	
	5. Resource based Learning	30	
	<b>Total</b>	<b>100</b>	
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01

	Summative Assessment:	80 %	Theory and practical – 01 and 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"><li>1. Introduction To Computers (2017), by Darrell W Hajek and Cesar Herrera, CreateSpace Independent Publishing Platform, ISBN 978-1545236468</li><li>2. Fundamentals of Computers(6<sup>th</sup> Revised edition, 2014) by Rajaraman V., and Adabala N., Prentice Hall India Learning Private Limited, ISBN 978-8120350670</li><li>3. Introduction to Information Technology (2<sup>nd</sup> Edition, 2013) by V. Rajaraman, PHI Learning Pvt. Ltd., ISBN 978-81-203-4731-1</li><li>4. Introduction to Computers (7<sup>th</sup> Edition, 2010) by Peter Norton, Tata McGraw-Hill Edition, ISBN 9780070671201</li></ol>		

<b>Subject Title</b>	: Gunapadam- I <i>Moolikaieyal</i> (Siddha Pharmacology – I Herbs)	
<b>Subject Code</b>	: GNA 1013	
<b>Year &amp; Semester</b>	: Professional I Semester I	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: <div><div>1. Providing the student with fundamental knowledge of <i>Gunapadam</i> along with Panchabootha concept.</div><div>2. Knowing Medicinal plants based on Siddha and scientific basis.</div><div>3. Development of Skill for identification of Medicinal plants.</div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div><div>• Describe the fundamental of <i>Gunapadam</i> along with Panchabootha concept.</div></div>	Knowledge	1, 2
<div><div>• Classify the plant sample according to the taxonomical characters.</div></div>	Skills	3, 4, 5, 8
<div><div>• Prepare the stipulated standard herbarium sheets</div></div>	Attitude	9,10,11
<div><div>• Realize the fundamental concept of <i>Gunapadam</i> with scientific knowledge</div></div>	Mindset	12
<b>Content:</b> <b>Part I</b> <div><div>1. Concept of Porutpanpiyal and its important</div><div>2. Panchabootha theory</div><div>3. Saptha padhartham</div><div>4. Gunam and its classification</div><div>5. Concept of organoleptic characters and its division</div><div>6. Medicinal plants in <i>Gunapadam aspect and medicinal botany aspect</i> (A to L family)<div>6.1. Gunapadam aspect:<div><div>• Tamil name</div><div>• Other name</div><div>• Vernacular name</div><div>• Gunam (general character)</div><div>• Payanpadumpakam (Part use)</div><div>• Organoleptic character</div><div>• Pharmacological action</div><div>• Simple remedies (vazhakku)</div><div>• Prepared medicine.</div></div></div></div></div>		

## Part II

### 6.2 Medicinal botany aspect:

- Natural order
- Botanical name
- Botanical description
- Habit
- Habitat
- Chemical composition
- Pharmacological action
- Medicinal uses.

### 7. Pharmacognosy

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. Seminar		15
	2. LMS based learning		30
	3. Self-study using study guide		50
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		20
	6. Resource based Learning		10
	7. Projects/ Field Reports		15
	<b>Total</b>		<b>150</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment	20%	01
	Summative Assessment	80%	Theory 03, Practical 01
Recommended Readings :	<ol style="list-style-type: none"> <li>1. Murukesamuthaliyar, K.(2006), Materia medica(porut panpu nool)- part-01. Chennai:Indian Medicine and Homeopathy</li> <li>2. Subramaniya Pandit,Shri.(2009), Pathartha guna cintamani,Chennai: Indian Medicine and Homeopathy</li> <li>3. Jayaweera,M.A (2006),Medicinal plants used in Ceylon,Colombo: National science foundation, SL.</li> <li>4. Nadkarani, K.M. (2010), Indian Materia Medica. Chennai:Indian Medicine and Homeopathy</li> <li>5. Arya vaidya sala, (2007), Indian Medicinal plants,Chennai: A compendium of 500 species.</li> </ol>		

<b>Subject Title</b>	: <i>Gunapadam - II Moolikaieyal</i> (Siddha Pharmacology - II - Herbs)	
<b>Subject Code</b>	: GNA:1023	
<b>Year &amp; Semester</b>	: Professional I Semester II	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS1)	
<b>Aim:</b> To: <div><div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></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<ul style="list-style-type: none"> <li>• Organoleptic character</li> <li>• Pharmacological action</li> <li>• Simple remedies (vazhakku)</li> <li>• Prepared medicine.</li> </ul>			
<b>Part II</b> 7.2 Medicinal botany aspect: <ul style="list-style-type: none"> <li>• Natural order</li> <li>• Botanical name</li> <li>• Botanical description</li> <li>• Habit</li> <li>• Habitat</li> <li>• Chemical composition</li> <li>• Pharmacological action</li> <li>• Medicinal uses.</li> </ul>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		15
	2. LMS based learning		30
	3. Self-study using study guide		50
	4. Case Study/Problem Based Learning		10
	5. Virtual/Real Group Discussion		20
	6. Resource based Learning		10
	7. Projects/ Field Reports		15
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20%	01
	Summative Assessment	80%	Theory 03, Practical 01
<b>Recommended Readings :</b>	1. Murukesamuthaliyar, K.(2006), Materia medica(porut panpu nool)- part-01. Chennai:Indian Medicine and Homeopathy 2. Subramaniya Pandit,Shri.(2009), Pathartha guna cintamani,Chennai: Indian Medicine and Homeopathy 3. Jayaweera,M.A (2006),Medicinal plants used in Ceylon,Colombo: National science foundation, SL. 4. Nadkarani, K.M. (2010), Indian Materia Medica. Chennai:Indian Medicine and Homeopathy. 5. Arya vaidya sala, (2007), Indian Medicinal plants,Chennai: A compendium of 500 species.		

<b>Subject Title</b>	: <i>Gunapadam-III – Thathu Jeeva Vakuppu</i> (Siddha Pharmacology- III - Metal, Minerals, and Animal kingdom)	
<b>Subject Code</b>	: GNA 2033	
<b>Year &amp; Semester</b>	: Profession II Semester III	
<b>Credits</b>	: 03	
<b>Status</b>	: Basic Stream (BS2)	
<b>Aim:</b> To: <div><div>1. Obtain the knowledge on definition and classification of <i>thathujeevavarkkam</i></div><div>2. Detail description of Metals, <i>Panchasootham</i> and <i>Pasanam</i></div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div>• Gain through knowledge in the basic concepts of <i>Siddha Adippadai Thaththuvamum</i> and <i>maruthuvavaralaru</i></div>	Knowledge	1, 2
<div>• Able to interpret the <i>Siddha Adippadai Thaththuvamum</i></div>	Skills	3, 4, 5, 8
<div>• Establish the basic concepts of <i>Siddha Adippadai Thaththuvamum</i></div>	Attitude	9,10,11
<div>• Explore the knowledge in <i>Adippadai Thaththuvamum</i> towards Siddha system of medicine</div>	Mindset	12
<b>Content:</b> <b>Part I - Siddha Pharmacology</b> <div><div>1. Metal<div><div>1.1. Definition and classification</div><div>1.2. Detail description of <i>Ayavangam, Ehu, Karuvangam, Kantham, Chembu, Nagam, Thangam, Velli, Mandooram, Velvangam, Pithalai, Venkalam, Thara</i></div></div></div><div>2. <i>Panchasootham</i><div><div>2.1. Definition and classification and its detail description</div></div></div><div>3. <i>Pashanam</i><div><div>3.1. Definition and classification</div></div></div></div>		

<p>3.2. Detail description of <i>Sootham</i>, <i>Saveeram</i>, <i>Sathilingam</i>, <i>Miruththarsingi</i>, <i>anthagam</i>, <i>Thazhagam</i>, <i>Thutham</i>, <i>Anjanakkal</i>, <i>Vellaipashanam</i>, <i>SanguPashanam</i>, <i>GowriPashanam</i>, <i>Manosilai</i>, <i>Apiragam</i>, <i>Eli Pashanam</i></p> <p>3.3. Special classification of <i>Pashanam</i></p> <p>4. The above Metals, <i>Panchasootham</i> and <i>Phasanamgal</i> should be taught under the following headings</p> <p>4.1. Introduction</p> <p>4.2. Science name</p> <p>4.3. Other name</p> <p>4.4. General Character</p> <p>4.5. Action</p> <p>4.6. Medicinal Uses</p> <p>4.7. Important drug formulas from the relevant crude drugs</p> <p>4.8. Purification of crude drugs</p> <p><b>Part II - Pharmacology</b></p> <p>5. General Pharmacology</p> <p>5.1. Introduction</p> <p>5.2. Absorption of drugs</p> <p>5.3. Routes of drug administration</p> <p>5.4. Distribution of drugs</p> <p>5.5. Biotransformation of drugs</p> <p>5.6. Excretion of drugs</p> <p>5.7. Mechanisms of drug action</p> <p>5.8. Factors modifying drug effects</p> <p>5.9. Drug toxicity</p> <p>5.10. Methods of prolonging drug action</p> <p>5.11. Drug assays</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		15
	2. LMS based learning		30
	3. Self-study using study guide		50
	4. Virtual/Real Group Discussion		20
	5. Resource based Learning		35
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03, Practical 01
<b>Recommended Readings:</b>	<p>1. Murukesamuthaliyar, K.(2006), <i>Materia medica (Thaathujeevavahuppu)</i>- part-01. Chennai:Indian Medicine and Homeopathy</p>		



	<ol style="list-style-type: none"><li>2. Subramaniya Pandit,Shri.(2009), <i>Patharthagunacintamani</i>, Chennai: Indian Medicine and Homeopathy</li><li>3. Kannusamipillai,S.(1941), <i>Patharththagunavizhakkam</i> (<i>Thathujeevavarkkam</i>). Chennai: B.Iraththinanayakar&amp; Sons</li><li>4. B.N Bennett, and M.J.Brown. (2008). <i>Clinical</i> <i>Pharmacology</i>. Edinburgh: Churchill Livingstone.</li><li>5. B.G.Katzung, M. J. (2011). <i>Basic and Clinical</i> <i>Pharmacology</i>. London: Churchil Livingstone.</li></ol>
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<b>Subject Title</b>	: <i>Gunapadam-IV – Thathu Jeeva Vakuppu</i> (Siddha Pharmacology- IV - Metal, Minerals, and Animal kingdom)	
<b>Subject Code</b>	: GNA 2044	
<b>Year &amp; Semester</b>	: Profession II Semester IV	
<b>Credits</b>	: 04	
<b>Status</b>	: Basic Stream (BS2)	
<b>Aim:</b> To: <div>1. To obtain the knowledge on <i>Karasaram</i> (Salts), <i>Uparasam</i> (Minerals - Natural Substances), Medicinal raw materials from the animal products and <i>Navamanikal</i> (Gems)</div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>Classify and describe the <i>Thathujeevavarkkam</i> i.e: Salts (<i>Karasaram</i>), Gems (<i>Navamanigal</i>), Minerals (Natural Substances) – <i>Uparasam</i> and Medicinal raw materials from the animal products</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>Identify the samples of Salts (<i>Karasaram</i>), Gems (<i>Navamanigal</i>), Minerals (Natural Substances) – <i>Uparasam</i> and Medicinal raw materials from the animal products based on their morphology and physicochemical properties</li><li>Identify &amp; Perform the Purification of the <i>Kaarasharam</i> and <i>Uparasam</i> with different Methods</li><li>Perform the purification of medicinal raw materials from animal products and <i>Navamanikal</i></li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>Develop the skill in purifying metals &amp; minerals</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>Understand the differentiation among Salts (<i>Karasaram</i>), Gems (<i>Navamanigal</i>) and Minerals (Natural Substances) – <i>Uparasam</i></li><li></li></ul>	Mindset	12

**Content:**  
**Part I - Siddha Pharmacology**  

1. *Karasaram*  

1.1.Definition, classification,

<p>1.2. Detail study of –<i>Soodan, Kalluppu, Kariuppu, Sakthisharam, Inthuppu, Seenakaram, Navauppumezhugu, Navachcharam, Pachchikarpooram, Pooneeru, Vazhayalluppu, Amber, Venkaram, Vedyuppu</i></p> <p>2. <i>Uparasam</i></p> <p>2.1. Definition, classification,</p> <p>2.2. Detail study of <i>Annapethy, Apragam, Karpoorasilasathu, Kalnar, Katsunnam, Kadikaram, Kavikkal, Koumoothirasilasathu, Thurusu, Nandukal, Nimilai, Palthutham</i></p> <p>3. Medicinal raw material from the animal products</p> <p>3.1. Detail study of <i>Uparasangal, Kasthuri, Kandamiruga kombu, Kizhlingal, Kombarakku, Korosanai, Sirungi, Naththai, Honey, Palakarai, Muthuchippi, Mezhugu, Punugu, Nandukkal, Amaiyoodu</i></p> <p>4. <i>Navamanikal</i>- Nine gems</p> <p>4.1. Classification, grouping,</p> <p>4.2. Detail study of <i>Muththu, Pavazham, Vairam, Mannikam, Neelamani, Putpardagam, Maragatham, Vaidoriyam, Kometthakam</i></p> <p>5. Identification &amp; Perform the Purification of the following</p> <p>5.1. <i>Kaarasharam</i> and <i>Uparasam</i> with different Methods</p> <p>5.2. Perform the purification of medicinal raw materials from animal products and <i>Navamanikal</i></p> <p><b>Part II - Pharmacology</b></p> <p>6. Systemic Pharmacology</p> <p>7. Drugs acting on,</p> <p>7.1. CNS</p> <p>7.2. Kidney</p> <p>7.3. GIT</p> <p>7.4. Uterus</p> <p>7.5. Eye</p> <p>7.6. Respiratory system</p> <p>7.7. CVS</p> <p>7.8. Blood and blood forming organs</p>		
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>
	1. Seminar	25
	2. LMS based learning	30

	3. Self-study using study guide		70
	4. Virtual/Real Group Discussion		30
	5. Resource based Learning		45
	<b>Total</b>		<b>200</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03, Practical 01
<b>Recommended Readings:</b>	<ol style="list-style-type: none"> <li>1. Murukesamuthaliyar, K.(2006), <i>Materia medica (Thaathujeevavahuppu)</i>- part-01. Chennai:Indian Medicine and Homeopathy</li> <li>2. Subramaniya Pandit,Shri.(2009), <i>Patharthagunacintamani</i>, Chennai: Indian Medicine and Homeopathy</li> <li>3. Kannusamipillai,S.(1941), <i>Patharththagunavizhakkam (Thathujeevavarkkam)</i>. Chennai: B.Iraththinanayakar&amp; Sons</li> <li>4. B.N Bennett, and M.J.Brown. (2008). <i>Clinical Pharmacology</i>. Edinburgh: Churchill Livingstone.</li> <li>5. B.G.Katzung, M. J. (2011). <i>Basic and Clinical Pharmacology</i>. London: Churchil Livingstone.</li> </ol>		

<b>Subject Title</b> : <i>Gunapadam -V Marunthu seymuraieyal</i> ( Siddha Pharmacology – V Pharmaceutical sciences )		
<b>Subject Code</b> : GNA 3054		
<b>Year &amp; Semester</b> : Profession III Semester V		
<b>Credits</b> : 04		
<b>Status</b> : Applied Stream (AS)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. Obtain the knowledge on Pharmaceutical procedures / operations, <i>Aka Marunthu</i> (Internal Medicines), Pharmaceutical appliances and Drug preparation.</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>• Describe about the Pharmaceutical procedures / operations and pharmacy management</li> <li>• List out and describe the <i>Aka Marunthu</i> (Internal Medicines)</li> <li>• Explain about the Pharmaceutical appliances and Drug preparation</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>• Handle the Pharmaceutical appliances properly</li> <li>• Prepare the Siddha drugs properly</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>• Prepare the Siddha drugs correctly with the interest and interaction of other colleagues</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>• Understand the correct techniques of the drug preparation methods and handling of Pharmaceutical appliances.</li> </ul>	Mindset	12
<b>Content:</b> <b>Part I - Siddha Pharmacology</b> <ol style="list-style-type: none"> <li>1. <i>Karuvikal</i> (Appliances)               <ol style="list-style-type: none"> <li>1.1. <i>Avi Yanthiram, Thola Yanthiram, Thuba Yanthiram, Mezhugu thailakaruvi, Kuzhi Thailakaruvi, Kupi puda Thailakaruvi, Valuka Yanthiram, Pukai Aduppu, Uoothu Yanthiram, Thiravaga Yanthiram, Madakku valai Yanthiram, Valai Yanthiram, Sudar Thailakaruvi, Senthuram edukum Karuvi and Pathanka Karuvi</i></li> </ol> </li> <li>2. List out the duties &amp; responsibilities of               <ol style="list-style-type: none"> <li>2.1. Medical officer</li> <li>2.2. Pharmacy in charge,</li> <li>2.3. Pharmacist</li> <li>2.4. Supporting staff</li> <li>2.5. Detailed out the Register and records used in pharmacy management, Identify the Utensils used in pharmacy.</li> </ol> </li> </ol>		

### 3. Aka Marunthu

- 3.1. Define “Marunthu” (Drug),
- 3.2. Classify of *Marunthu* according to Siddha concept , List out the Shelf life of *Aka marunthu*,
- 3.3. Classify of drug according to consistency, Solid preparation, Semi solid, Liquid preparation,
- 3.4. Elaborate the Storage of drugs and pharmaceuticals,
- 3.5. Explain the Weight and measures – imperial & metric system.
- 3.6. Outline the *Anupanam* and *paththiyapathiyam*,
- 3.7. Compare the interaction of drug with *Anupanam* and *paththiyapathiyam*.

### 4. Internal medicines (*Akamarunthu*)

*Surasam* (Boiled juice), *Chaar* (juice), *Kudineer* (Decoction), *Katkam* (Herbal paste), *Utkazhi* (Pan cake), *Adai* ( Toast), *Chooranam* (Powder), *Pittu* (Baked powder), *Vadakam* ( Tablet), *Vennai* (Medicated butter), *Manappahu* (Syrup), *Ney* (Medicated ghee), *Rasayanam* (Medicated confectionary), *Lekeyam* (Electuary), *Thylum* (Medicated oil), *Mathirai* (Pills).

*Kaduku*- (Deep fried granules), *Pakkuvam* (Maceration), *Thenooral*( Preserve), *Theeneer* (Distillate), *Mezhugu*(Waxy paste), *Kuzhamp*(Viscous liquid), *Pathankam*(Sublimates), *Chendooram*(Red inorganic), *Neeru/Parpam*(Ash/ calx), *Kaddu* (Bonded inorganic), *Urukku*, *Kazhanku*, *Chunnam*, *Katpam*(Elixir), *Chaththum*, and *Gurukuliga*.

- 4.1. The above drugs should be described under the following headings:
  - 4.1.1. Formula and method of preparation, Shelf life of medicine, Action, Dose and indication, Toxicity and contraindication (If any)

### 5. Preparation of drugs (Minimum 20 drugs should be done in practical demonstration)

## Part II - Pharmacology

### Experimental Pharmacology

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. Class Room Lectures		40
	2. Seminar		25
	3. Self-study using study guide		60
	4. Virtual/Real Group Discussion		30
	5. Resource based Learning		45
	<b>Total</b>		<b>200</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Practical 01
Recommended Readings :	<ol style="list-style-type: none"> <li>1. Kuppusamy Mudaliar, K.N, Uttamarayan, C.S., <i>Siddha Vaidya Thirattu</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> </ol>		

	<ol style="list-style-type: none"><li>2. Uttamarayan, C.S, <i>Pharmacopoeia of Hospital of Indian Medicine</i>, Tamil Nadu Siddha medical Board.</li><li>3. Anaivaari R. Anandan, <i>ruf;F Rj;jp nra;Kiwfs</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li><li>4. Deva Asorvathem Swamikal. <i>Marunthu Sei Iyalum Kalayum</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li></ol>
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<b>Subject Title</b> : <i>Gunapadam -VI Marunthu seymuraieyal</i> (Siddha Pharmacology – VI Pharmaceutical sciences)		
<b>Subject Code</b> : GNA 3064		
<b>Year &amp; Semester</b> : Profession III Semester VI		
<b>Credits</b> : 04		
<b>Status</b> : Applied Stream (AS)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>Obtain the knowledge on pharmacy, quality control and <i>pura marunthukal</i> (External Medicines)</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>Describe about the acts on establishment of Pharmacy and structure of Pharmacy</li> <li>Describe the quality control and its important</li> <li>List out and explain about the <i>Pura marunthukal</i> (External Medicines)</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>Handle the Pharmaceutical appliances properly</li> <li>Prepare the Siddha drugs properly</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>Prepare the Siddha drugs correctly with the interest</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>Understand the correct techniques of the drug preparation methods and handling of Pharmaceutical appliances.</li> </ul>	Mindset	12
<b>Content:</b> <b>Part I - Siddha Pharmacology</b> <ol style="list-style-type: none"> <li>Pharmacy Acts on the establishment, structure and division of pharmacy, management of pharmacy, modern Pharmaceutical equipment's and instruments</li> <li>Quality control Method of quality control, sale of quality drug, analyze the poisonous drugs, modern drug formulation of indigenous medicines with their trade names</li> <li><i>Pura Marunthukal</i> -External Medicines <i>Kattu, Pattu, Ottradam, Poochchu, Vethu, Pottanam, Thokkanam, Pukai, Mai, Podithimirththam, Kalikkam, Nasiyam, Oothal, Naasikaparanam, Kazhimpu, Seelai,</i></li> </ol>		



*Neer, Varththi, Suttikai, Salaakai, Pasai, Kazhi, Podi, Murichchal, Keeral, Kaaram, Addaividal, Aruvai, Kompukaddal, Urinchal, Kuruthi vaankal, PeechchuThailakaruvi, Senthuram edukum Karuvi and Pathanka Karuvi*

4. Preparation of drugs (Minimum 15 drugs should be done in one phase practical class)

## Part II - Pharmacology

### Experimental Pharmacology

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. Class Room Lectures		40
	2. Seminar		25
	3. Self-study using study guide		60
	4. Virtual/Real Group Discussion		30
	5. Resource based Learning		45
	<b>Total</b>		<b>200</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Practical 01
Recommended Readings :	<ol style="list-style-type: none"> <li>1. Kuppusamy Mudaliar, K.N, Uttamarayan, C.S., <i>Siddha Vaidya Thirattu</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>2. Uttamarayan, C.S, <i>Pharmacopoeia of Hospital of Indian Medicine</i>, Tamil Nadu Siddha medical Board.</li> <li>3. Anaivaari R. Anandan, <i>ruf;F Rj;jp nra;Kiwfs</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>4. Deva Asorvathem Swamikal. <i>Marunthu Sei Iyalum Kalayum</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> </ol>		

<b>Subject Title</b> : <i>Siddhar Elakkiyam-I</i> (Siddha Literature - I)			
<b>Subject Code</b> : SEK 2031			
<b>Year &amp; Semester</b> : Professional II Semester III			
<b>Credits</b> : 01			
<b>Status</b> : Basic Stream(BS2)			
<b>Aim:</b> To: 1. Learn about Siddhas in Literatures 2. Analysis the correlation wet beet Siddha Medicine and Tamil Literature			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know pathology in brief			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Able to describe Siddhas in Literatures	Knowledge	1,2	
• Apply the Siddhas in Literatures current situation	Skills	3,4,5,8	
• Correlate Siddha Medicine with litrature	Attitude	9,10,11	
• Promote the Siddha	Mindset	12	
<b>Content:</b> 1. Define the Terms of Siddha 2. Discuss about the Importance of Siddhas in Literatures 3. List out the Tamil Literature which relevant with Siddha Medicine. 4. List out and briefly know about the Siddhars whom to contribute to Siddha Medicine 5. Explain about the Tamil Literature and Siddha Philosophy 6. Analysis the correlation wet beet Siddha Medicine and Tamil Literature such as Thirukural, Thirumanthiram, Silapathikaram, Tholkapiyam, Aasarak kovai, Siru pancha moolam, Enathy, Thirikadukam and Parathiyar Books. 7. Discuss about the relations between Siddha Medicine and Traditional believes. 8. Discuss about the evolution of Human body till the death and finally attained salvation according to Siddhar Ilakiyam			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>	
	1. LMS based learning	05	
	2. Self-study using study guide	20	
	3. Case Study/Problem Based Learning	10	
	4. Resource based Learning	15	
	<b>Total</b>	<b>50</b>	
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01

	Summative Assessment:	80 %	03
<b>Recommended Readings :</b>	<b>Text books/ References:</b> <ol style="list-style-type: none"> <li>1. Pirammathandi.M.S, Apr 2015 <i>Siththarkalin Naalthorum Nanmaitharum Nalla nerangal</i>, Katpakam Publication</li> <li>2. Thiruvalluvar. 1991. <i>Thirukural</i>, Madras: Saiva Sithantha Nootpathipuk Kalakam</li> <li>3. Pulliyur Kesigan, 1993, <i>Tholkappiyam</i>, Madras Bhari Nilaiyam publication</li> <li>4. Barathiyar,2009, <i>Barathiyar kavithaigal</i>, Chennai, Swamimalai Pathippagam</li> <li>5. Rishapananthar, Jan 2014,Siththarkal Kanda Manuda Rakasiyam,Shanker Publication 21,Teachers Killed Colleny, Villivakkam, Chennai.</li> <li>6. Murukeshan .C.S, 2012, Siddharkal kanda Iraimai, Shanker Publication 21,Teachers Killed Colleny, Villivakkam, Chennai..</li> <li>7. Murukeshan .C.S, 2011, Siddharkalin perulakam, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li> <li>8. Murukeshan .C.S, 2011, Siddharkalin Sakak kalai, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li> <li>9. Murukeshan .C.S, 2011,Paarathi Kanda Siththarkal, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li> <li>10. Varatharasan.M, 1964, Pazhanthamil ilakiyathil Eyatkai, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li> </ol>		

<b>Subject Title</b> : <i>Siddhar Elakkiyam-II (Siddha Literature - II)</i>			
<b>Subject Code</b> : SEK 2041			
<b>Year &amp; Semester</b> : Professional II Semester IV			
<b>Credits</b> : 01			
<b>Status</b> : Basic Stream (BS2)			
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. Learn about Astrology in Siddha Medicine</li> <li>2. Analysis the correlation between religious believes and Siddha Practices</li> </ol>			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know pathology in brief			
ILOs		Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Able to describe Siddhas in Literatures		Knowledge	1,2
• Apply the Siddhas in Literatures current situation		Skills	3,4,5,8
• Correlate Siddha Medicine with literature		Attitude	9,10,11
• Promote the Siddha		Mindset	12
<b>Content:</b> The following will be approach based on ancient literature <ol style="list-style-type: none"> <li>1. Elaborate about the Astrology in Siddha Medicine</li> <li>2. Discuss about the Importance of Time (Kalam) In Siddha Medical Practice.</li> <li>3. Explain the Category of Animals and birds in Siddha practice</li> <li>4. Discuss about the different kind of religious believes and Siddha Practices</li> <li>5. Discuss the differentiation between sorcery/ witchcraft and Siddha Medicine</li> <li>6. Explain about the importance of Siddha Medicine in Sri Lankan Tamil literature.</li> <li>7. Discuss about the philosophers who gave the importance for Siddha Medicine.</li> <li>8. Discuss about the medical ethics mentioned in Siddha Medicine.</li> </ol>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		05
	2. Self-study using study guide		20
	3. Case Study/Problem Based Learning		10
	4. Resource based Learning		15
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	03

<b>Recommended Readings :</b>	<b>Text books/ References:</b> <ol style="list-style-type: none"><li>1. Pirammathandi.M.S, Apr 2015 <i>Siththarkalin Naalthorum Nanmaitharum Nalla nerangal</i>, Katpakam Publication</li><li>2. Thiruvalluvar. 1991. <i>Thirukural</i>, Madras: Saiva Sithantha Nootpathipuk Kalakam</li><li>3. Pulliyur Kesigan, 1993, <i>Tholkappiyam</i>, Madras Bhari Nilaiyam publication</li><li>4. Barathiyar,2009, <i>Barathiyar kavithaigal</i>, Chennai, Swamimalai Pathippagam</li><li>5. Rishapananthar, Jan 2014,Siththarkal Kanda Manuda Rakasiyam,Shanker Publication 21,Teachers Killed Colleny, Villivakkam, Chennai.</li><li>6. Murukeshan .C.S, 2012, Siddharkal kanda Iramai, Shanker Publication 21,Teachers Killed Colleny, Villivakkam, Chennai..</li><li>7. Murukeshan .C.S, 2011, Siddharkalin perulakam, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li><li>8. Murukeshan .C.S, 2011, Siddharkalin Sakak kalai, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li><li>9. Murukeshan .C.S, 2011,Paarathi Kanda Siththarkal, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li><li>10. Varatharasan.M, 1964, Pazhanthamil ilakiyathil Eyatkai, Shanker Publication, 21,Teachers Killed Colleny, Villivakkam, Chennai..</li></ol>
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<b>Subject Title</b>	: Medical Ethics and Professionalism - I	
<b>Subject Code</b>	: MEP 2032	
<b>Year &amp; Semester</b>	: Professional II Semester III	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS2)	
<b>Aim:</b> 1. Develop personal attributes, skills and professionalism required of a medical officer 2. Develop skills and techniques for communicating effectively as a health professional 3. Recognize and the able to evaluate common ethical issues in health care		
<b>Intended Learning Outcomes:</b> At the end of this course expected competencies to be achieved by the students are;		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>Contribute to the creation, dissemination, application and translation of new health care knowledge and practices.</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>Perform a consultative role to other health professionals.</li><li>Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.</li><li>Take informed consent and address patients/attendants queries effectively.</li><li>Communicate effectively with patients, families, colleagues and other health care professionals.</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>Recognize ethics and professionalism as an integral part of doctor-patient relationship.</li><li>Demonstrate responsiveness to patients needs respecting their privacy and autonomy</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>Develop respect for the individuality and values of others-(including having respect for oneself) patients, caretakers, colleagues and other health professionals</li></ul>	Mindset	12

<b>Content:</b> 1. Personal Development 1.1. Effective listening and note taking 1.2. Improving physical wellbeing 1.3. Improving mental and spiritual wellbeing 1.4. Formal learning 1.5. Getting the best out of SGDs 1.6. Introduction to BSS and Personal Development Module 1.7. Stress and stress management
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- 1.8. Attitudes and their influence on medical training
- 1.9. Time management
- 1.10. Positive thinking
- 1.11. Learning the art of making an effective oral presentation
- 1.12. Introduction to Information Literacy and searching for medical information

## 2. Basic Behavioural Science

- 2.1. Understanding personality and human behaviour
- 2.2. Intelligence
- 2.3. Memory and enhancement
- 2.4. Social behaviour
- 2.5. Illness & behaviour
- 2.6. Medically unexplained symptoms
- 2.7. Illness from the perspective of humanities
- 2.8. Spirituality and health
- 2.9. PBLs for effective learning
- 2.10. Gender specific issues
- 2.11. Learning in the clinical setting
- 2.12. Stereotypes and prejudice
- 2.13. Good medical practice
- 2.14. Group dynamics
- 2.15. Issues of attitude, conduct and relationships with hospital staff
- 2.16. Physiological factors learning to physical illness

## 3. Communication Skills

- 3.1. Effective communication skills
- 3.2. Doctor-Patient communication
- 3.3. SPIKES model for breaking bad news
- 3.4. Communication with children & adolescents
- 3.5. People with difficulties in communication
- 3.6. Communicating end-of-life decisions
- 3.7. Coping with loss & defense mechanisms

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. LMS based learning		30
	2. Self-study using study guide		35
	3. Case Study/Problem Based Learning		15
	4. Resource based Learning		20
	<b>Total</b>		<b>100</b>
Methods of Assessments :	Methods	Marks	Notional Learning Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03

<b>Recommended Readings :</b>	<ol style="list-style-type: none"><li>1. Christopher. Dowrick, <i>Medicine in Society: Behavioral Sciences for Medical Students</i>, 1<sup>st</sup> edition, Hodder Education Publishers</li><li>2. Barbara Fadel, <i>Behavioral Sciences In Medicine</i>, 2<sup>nd</sup> Edition,</li><li>3. Manju Mehta,(2008) <i>Behavioral Sciences in Medical Practice</i>, 2<sup>nd</sup> Edition, Jp Medical Ltd</li><li>4. Mowadat. H. Rana, Roop z Rana, Mansoor Mustafa and, <i>Handbook of Behavioral Sciences</i>, 3<sup>rd</sup> Edition,</li><li>5. Sierles, Frederick, <i>Behavioral Sciences for Medical Students</i>, Williams &amp; Wilkins</li></ol>
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<b>Subject Title</b>	: Medical Ethics and Professionalism - II	
<b>Subject Code</b>	: MEP 2042	
<b>Year &amp; Semester</b>	: Professional II Semester IV	
<b>Credits</b>	: 02	
<b>Status</b>	: Basic Stream (BS2)	
<b>Aim:</b>		
1. To understand the interaction between human behaviour and health		
2. To develop the ability to analyze ethical issues commonly encountered in medical practice and formulate a framework within which such issues could be evaluated and addressed		
3. To develop towards becoming a caring, compassionate and competent health professional		
<b>Intended Learning Outcomes:</b>		
At the end of this course expected competencies to be achieved by the students are		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Contribute to the creation, dissemination, application and translation of new health care knowledge and practices.</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Perform a consultative role to other health professionals.</li><li>• Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.</li><li>• Take informed consent and address patients/attendants queries effectively.</li><li>• Communicate effectively with patients, families, colleagues and other health care professionals.</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Recognize ethics and professionalism as an integral part of doctor-patient relationship.</li><li>• Demonstrate responsiveness to patients needs respecting their privacy and autonomy</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Develop respect for the individuality and values of others-(including having respect for oneself) patients, caretakers, colleagues and other health professionals</li></ul>	Mindset	12
<b>Content:</b>		
1. Health and Behaviour		
1.1. Understanding personality and human behaviour		
1.2. Intelligence		
1.3. Memory and enhancement		

- 1.4. Social behaviour
- 1.5. Illness & behaviour
- 1.6. Medically unexplained symptoms
- 1.7. Illness from the perspective of humanities
- 1.8. Spirituality and health
- 1.9. PBLs for effective learning
- 1.10. Gender specific issues
- 1.11. Learning in the clinical setting
- 1.12. Stereotypes and prejudice
- 1.13. Good medical practice
- 1.14. Group dynamics
- 1.15. Issues of attitude, conduct and relationships with hospital staff
- 1.16. Physiological factors learning to physical illness
2. Ethics
  - 2.1. Concept of ethics and Med Ethics
    - 2.1.1. Medical ethics - Concept, history, development, definition, principles
  - 2.2. Professional Ethics
    - 2.2.1. Negligence and Misconduct - Concept, definitions, regulatory authorities, laws
    - 2.2.2. Ethical practice as a student - Identify ethical practice of an adult learner
    - 2.2.3. Identify issues in plagiarism
  - 2.3. Clinical Ethics
    - 2.3.1. Ethical practice in patient encounters - Illustration of ethical principles
    - 2.3.2. End of life - Issues at end of life
  - 2.4. Research ethics
    - 2.4.1. Current concepts - Principles of research ethics/ Ethics, Review/ clinical trials, Registry/ practicalities
    - 2.4.2. Authorship and publication - Principles of publication ethics/ plagiarism/ rights of authors
  - 2.5. Resource allocation
    - 2.5.1. Public - Ethical aspects of micro and macro allocation
  - 2.6. Other topics
    - 2.6.1. Private practice, social media, TU, patient safety - Ethical aspects of private practice, trade unions
3. Professionalism
  - 3.1. Define Professionalism and the expectations of the society from a healthcare professionals / doctor
  - 3.2. Appraise traits of a professionals
    - 3.2.1. Time management / Punctuality
    - 3.2.2. Self regulation and meeting accepted social standards (Social etiquette, physical appearance, language, honesty, accountability)
    - 3.2.3. Respect the rules of governing bodies

<p>3.2.4. Appreciate the difference between regulatory authorities, professional bodies and trade union</p> <p>3.2.5. Appropriate communication skills (with patient, peers, society and other professionals)</p> <p>3.2.6. Leadership and conflict resolution</p> <p>3.2.7. Being a team player</p> <p>3.2.8. Exercising social responsibilities (response at time of national disasters, media communication, serving in judicial capacity)</p> <p>3.2.9. Process of professionalization</p> <p>3.2.10. Introduction to Department of Ayurveda regulations (E-code)</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		35
	3. Case Study/Problem Based Learning		15
	4. Resource based Learning		20
	<b>Total</b>		<b>100</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory – 03
<b>Recommended Readings :</b>	<p>1. Christopher. Dowrick, Medicine in Society: <i>Behavioral Sciences for Medical Students</i>, 1<sup>st</sup> edition, Hodder Education Publishers</p> <p>2. Barbara Fadel, <i>Behavioral Sciences In Medicine</i>, 2<sup>nd</sup> Edition,</p> <p>3. Manju Mehta,(2008) <i>Behavioral Sciences in Medical Practice</i>, 2<sup>nd</sup> Edition, Jp Medical Ltd</p> <p>4. Mowadat. H. Rana, Roop z Rana, Mansoor Mustafa and, <i>Handbook of Behavioral Sciences</i>, 3<sup>rd</sup> Edition,</p> <p>5. Sierles, Frederick, <i>Behavioral Sciences for Medical Students</i>, Williams &amp; Wilkins</p>		

<b>Subject Title</b>	: <i>Noi Naadal</i> I (Pathology I)	
<b>Subject Code</b>	: NNL 3054	
<b>Year &amp; Semester</b>	: Profession III Semester V	
<b>Credits</b>	: 04	
<b>Status</b>	: Applied Stream (AS)	
<b>Aim:</b> To: <ol style="list-style-type: none"><li>1. Understand the basic concepts of Siddha diagnostic methods</li><li>2. Get practical knowledge in Siddha diagnostic methods</li><li>3. Identify the root causes and the <i>mukkuṭṭravīyal</i> (pathogenesis) of the diseases</li><li>4. Get experience to diagnosis the disease</li><li>5. Understand the basic nature of the disease process</li><li>6. Recognise, understand and describe the pathogenesis of microorganism related to diseases</li><li>7. Recognise, understand and describe the pathogenesis of parasites related to diseases</li><li>8. Apply the knowledge of pathology in diagnosis</li><li>9. Comparative appraisal of the disease in Siddha system of medicine</li></ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know the applied aspect of <i>Noi Naadal</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Understand the basic nature of the disease process</li><li>• Gain through knowledge in the basic concepts of Siddha diagnostic methods, root causes and <i>mukkuṭṭravīyal</i> (pathogenesis) of the diseases</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Able to understand the etiopathogenesis towards identification of the disease and interpret the investigational findings towards the diagnosis the disease</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Understand the disease process in general based on contemporary medical knowledge</li><li>• Practise the intervention to the health problem based on the Siddha system medicine</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Explore the knowledge in <i>Noi Naadal</i> towards Siddha system of medicine and comparative skill of disease</li></ul>	MINDSET	12
<b>Content:</b> <b>Part I</b> <b>1. <i>Noi Naadal</i> (pathology) - based on Siddha system of medicine</b> 1.1.Introduction to <i>Noi Naadal</i> <ol style="list-style-type: none"><li>1.1.1. Study of <i>Arokiyam</i> and <i>Noi</i></li><li>1.1.2. <i>Noikkana muthat karanankal</i></li><li>1.1.3. Basic knowledge on diagnostic methods</li></ol> 1.2. Applied aspect of Five element theory ( <i>Iympootha kolkai</i> ) <ol style="list-style-type: none"><li>1.2.1. Combination and relations among five elements, disease and medicine</li></ol>		

- 1.2.2. Combination and relations between *Impori* and *Impulungal* in disease condition
- 1.3. Normal and abnormal conditions of *Muththathukkal* (tri humors) and their interactions
  - 1.3.1. Study of normal and abnormal conditions of *muththathukkal*- *Vatham*, *Pitham* and *Kapham*
  - 1.3.2. *Mukkutrangal* in healthy and disease conditions
  - 1.3.3. Interaction among *Mukkutrangal*, *Pancha bhootham* and *Suwaikal*
  - 1.3.4. Taste that neutralize and vitiate *Mukkutrangal*
- 1.4. *Udal kattukal* (somatic components) and its abnormalities
  - 1.4.1. Study of abnormalities of *Udal kattukal* – *Saaram*, *Senneer*, *Oon*, *Kozhuppu*, *Enbu*, *Moolai* and *Vinthu (Sukkilam) / Naatham (Suronitham)*
  - 1.4.2. Interactions among *Muththathukkal*, *Pancha bhootham* and *Udal kattukal* in disease condition
- 1.5. *Udal thee*
  - 1.5.1. Definition
  - 1.5.2. States of *Udal thee* in healthy and disease conditions
- 1.6. Pathological aspect of *Saram*
  - 1.6.1. Definition - *Saram* and *Pranayamam*
  - 1.6.2. Abnormalities of *Saram*
  - 1.6.3. Interaction between *Saram* and *Pranayamam*
- 1.7. Applied aspect of *Yaakkaiyin ilakkanam*
  - 1.7.1. *Vatha* body
  - 1.7.2. *Piththa* body
  - 1.7.3. *Kapha* body
  - 1.7.4. *Thontha* body – 7
- 1.8. Applied aspect of 14 *Vegangal* (natural urges)
  - 1.8.1. Importance of 14 *Vegangal* to maintain health
  - 1.8.2. Diseases due to suppression of 14 *Vegangal* (natural urges)
- 1.9. Influence of environmental condition for disease
  - 1.9.1. *Ivagai nilam* and diseases
  - 1.9.2. *Paruvakkalangal* and diseases
- 1.10. Detail study on *Envagai thervu* (eight folds of diagnostic methods)
  - 1.10.1. *Naadi*
  - 1.10.2. *Sparisam*
  - 1.10.3. *Naa*
  - 1.10.4. *Niram*
  - 1.10.5. *Mozhi*
  - 1.10.6. *Vizhi*
  - 1.10.7. *Malam*
  - 1.10.8. *Siruneer* - *neerkuri*, *neikuri*, other diagnostic methods

1.10.9. Different school thoughts of *Envagai thervu*

1.11. Detail study of - *Neerkuri* and *neikuri*

1.11.1. *Neerkuri*

- 1.11.1.1. Collection of urine
- 1.11.1.2. *Niram* (colour)
- 1.11.1.3. *Manam* (smell)
- 1.11.1.4. *Norai* (froth)
- 1.11.1.5. *Edai* (volume)
- 1.11.1.6. *Enchal* (sedimentation)

1.11.2. *Neikuri*

- 1.11.2.1. Collection of urine
- 1.11.2.2. Method to test the *neikuri*
- 1.11.2.3. Determination of diagnosis and prediction of prognosis of disease based on *neikuri*

1.12. Detail study on other diagnostic methods 1(investigation) - *Agasthiyar Soodamani Kagiru Soothiram (Manikkadai)*

- 1.12.1. Method to test the *Agasthiyar Soodamani Kagiru Soothiram (Manikkadai)*
- 1.12.2. Determination of diagnosis and prediction of prognosis of disease based on *Agasthiyar Soodamani Kagiru Soothiram (Manikkadai)*

1.13. Detail study on other diagnostic methods 2 (investigation) -

- 1.13.1. *Mookku* (nose)
- 1.13.2. *Kathu* (ear)
- 1.13.3. *Uthadu* (lip)
- 1.13.4. *Pal* (teeth)
- 1.13.5. *Nettri* (fore head)
- 1.13.6. *Puruvam* (eye brow)
- 1.13.7. *Annam* (palate)
- 1.13.8. *Nagam* (nail)
- 1.13.9. *Mayir* (hair)
- 1.13.10. *Echchil* (saliva)
- 1.13.11. *Sali* (sputum)
- 1.13.12. *Viyarvai* (sweat)
- 1.13.13. *Kanneer* (tear)
- 1.13.14. *Vaanthi*
- 1.13.15. *Sukkilam*

1.14. Brief knowledge on *Panchapatchi sasthanam*

- 1.14.1. Relationship between *panchapatchi sasthanam* and human body
- 1.14.2. Determination of diagnosis of disease based on *panchapatchi sasthanam*

15.1. Brief knowledge on medical astrology

- 15.1.1. Relationship between astrology and human body
- 15.1.2. Determination of diagnosis of disease based on medical astrology

16.1. *Thoothuvan ilakkanam*

16.1.1. Determination of diagnosis and prognosis of disease based on *thoothuvan ilakkanam*

17.1. *Asaaththiya kuri kunangalum marana kurikunankalum*

17.1.1. *Asaaththiya kuri kunangalum marana kurikunankalum* based on *mukkuatrangal, suvai and envagai thervugal*

**Part II**

**2. *Noi Naadal* (pathology) - based on Conventional medicine**

2.1. General pathology

2.1.1. Introduction to pathology

2.1.1.1. Health and disease

2.1.1.2. Common terms in pathology

2.1.2. Cellular injury, cell adaptation and cellular aging

2.1.2.1. Normal cell and functions

2.1.2.2. Cellular injury

2.1.2.2.1. Etiology of cell injury

2.1.2.2.2. Pathogenesis of cell injury

2.1.2.2.3. Morphology of reversible and irreversible of cell injury

2.1.2.2.4. Intra cellular accumulation

2.1.2.2.5. Changes after cell death

2.1.2.3. Adaptive disorders

2.1.2.3.1. Atrophy

2.1.2.3.2. Hypertrophy

2.1.2.3.3. Hyperplasia

2.1.2.3.4. Metaplasia

2.1.2.3.5. Dysplasia

2.1.3. Derangements of homeostasis and hemodynamics

2.1.3.1. Disturbance of body water

2.1.3.1.1. Oedema

2.1.3.1.2. Dehydration

2.1.3.1.3. Over hydration

2.1.3.2. Hemodynamic derangements

2.1.3.2.1. Disturbance in volume of circulating blood - hemorrhage and shock

2.1.3.2.2. Circulating disturbance of obstructive nature -thrombosis, embolism, ischemia

2.1.4. Inflammation and healing

2.1.4.1. Acute inflammation

2.1.4.2. Chronic inflammation

2.1.4.3. Healing

2.1.4.3.1. Regeneration and repair

2.1.4.3.2. Healing of skin wound

2.1.4.3.3. Fracture

- 2.1.5. Neoplasia
  - 2.1.5.1. Nomenclature and classification
  - 2.1.5.2. Characteristic of tumors
  - 2.1.5.3. Carcinogens and carcinogenesis
  - 2.1.5.4. Clinical aspect of neoplasia
- 2.1.6. Hematological disorders
  - 2.1.6.1. Disorders of erythroid series – Anemia
  - 2.1.6.2. Disorders of platelets and bleeding disorders
  - 2.1.6.3. Disorders of leucocytes – Leukaemia
- 2.2. Microbiology
  - 2.2.1. Introduction to microbiology
    - 2.2.1.1. Introduction of microorganisms and their important in brief
  - 2.2.2. Prokaryotic and eukaryotic cell
    - 2.2.2.1. Structure and function of prokaryotic cell with examples
    - 2.2.2.2. Structure and function of eukaryotic cell with examples
    - 2.2.2.3. Comparison of prokaryotic and eukaryotic cells
  - 2.2.3. Bacteria
    - 2.2.3.1. Size, shape and arrangements of bacteria and classifications
      - 2.2.3.1.1. Naming and classifying microorganisms
      - 2.2.3.1.2. Binomial system of nomenclature
    - 2.2.3.2. Gram-positive and Gram-negative common pathogenic bacteria-morphological characters and identification
      - 2.2.3.2.1. *Mycobacterium tuberculosis*
      - 2.2.3.2.2. Gram-positive bacteria
        - a) Gram-positive cocci - *Staphylococcus aureus* (MSSA, MRSA), *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Enterococcus faecalis* and *Enterococcus faecium*
        - b) Gram-positive bacilli - *Corynebacterium diphtheria*, *Bacillus* spp. and *Listeria* spp.
    - 2.2.3.2.3. Gram-negative bacteria
      - a) Gram-negative cocci - *Moraxella* spp., *Neisseria meningitides* and *Neisseria gonorrhoeae*
      - b) Gram-negative bacilli - *Escherichia coli*, *Shigella flexneri*, *Shigella sonnei*, *Shigella dysenteriae*, *Salmonella Typhi*, *Vibrio cholerae*, *Pseudomonas aeruginosa*, *Acinetobacter* spp. and *Klebsiella pneumoniae*
    - 2.2.3.2.4. Anaerobic bacteria - *Clostridium tetani*
  - 2.2.4. Brief knowledge regarding classification, morphological characters, habitat, toxigenicity (exotoxins and endotoxins), transmission, pathogenesis and diagnosis of diseases causing by common pathogenic fungi
    - 2.2.4.1. Fungi - *Candida* spp., *Aspergillus* spp. *Pneumocystis* spp.
    - 2.2.4.2. Algae - *Anabaena* spp., *Oscillatoria* spp., *Aphanizomenon* spp., *Cylindrospermum* spp.



2.2.5. Viruses

2.2.5.1. RNA viruses

2.2.5.2. DNA viruses

2.2.6. Brief study of antimicrobial agents, classification of antibiotics and the mechanism of actions

2.2.7. Immunology

2.2.7.1. Immunity

2.2.7.2. Antigen (immune globulin) and antibody

2.2.7.3. Antigen antibody reactions

2.2.7.4. Hypersensitivity

2.2.7.5. Auto immunity

2.2.7.6. Immunodeficiency diseases (HIV)

2.3. Parasitology

General introduction of parasitology - parasites host, zoonosis, host parasite relationships, lifecycle of parasites, causes of infections, modes of infections, pathogenesis, immunity in parasitic infestation and laboratory diagnosis

2.3.1. Amoeba - *Entamoeba histolytica*

2.3.1.1. Pathogenesis and clinical features

2.3.1.2. Extra intestinal amoebiasis

2.3.1.3. Laboratory diagnosis

2.3.2. Intestinal, oral, genital flagellates and hemoflagellates (1)

2.3.2.1. *Giardia lamblia*

2.3.2.1.2. Pathogenesis and clinical features

2.3.2.1.3. Laboratory diagnosis

2.3.2.2. *Trichomonas vaginalis*

2.3.2.2.1. Pathogenesis and clinical features

2.3.2.2.2. Laboratory diagnosis

2.3.3. Malaria - vectors, types of malaria, pathogenesis, clinical features and laboratory diagnosis

2.3.4. Dengue - vectors, pathogenesis, clinical features and laboratory diagnosis

2.3.5. Helminths - general characteristics, habit, mode of infestation, pathogenesis and clinical features, laboratory diagnosis

2.3.5.1. Cestodes - Tape worm (*Taenia saginata* and *Taenia solium*)

2.3.5.2. Nematodes

2.3.5.3. Hook worm (*Ancylostoma duodenale* and *Necator americanus*)

2.3.5.4. *Enterobius vermicularis*

2.3.5.5. *Ascaris lumbricoides*

2.3.5.6. Filarial worm (*Wuchereria bancrofti*)

**Practical**

1. Diagnose the disease based on Siddha system of medicine (OPD and IPD training) Laboratory safety and aseptic technique (personal safety)
2. Aseptic techniques - disinfection and sterilization methods
3. Analysis of blood laboratory investigations towards diagnosis
  - 3.1. Full blood count
4. Analysis of urine laboratory investigations towards diagnosis

<p>4.1. Collecting techniques of urine</p> <p>4.2. UFR</p> <p>5. Microscopy - principle and structure of light microscope, resolving power magnification</p> <p>6. Bacterial cultures- media preparation and cultivation of bacteria; pure culture - concept of pure culture - methods of pure culture of microorganisms - streak plate</p> <p>7. Morphological features of bacterial colonies</p> <p>8. Staining - slide preparation - preparation of bacterial smears for light microscopy – fixation and staining; simple staining and acid-fast staining</p> <p>9. Screening of antimicrobial activity and evaluation of minimum inhibitory concentration (MIC) of natural products against human pathogens</p> <p>10. Study the morphological characters and identification of common pathogenic fungi, algae and virus with permanent slides or specimen pictures</p> <p>11. Study the morphological characters and identification of parasites and worms</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		05
	2. LMS based learning		30
	3. Self-study using study guide		50
	4. Case Study/Problem Based Learning		25
	5. Virtual/Real Group Discussion		10
	6. Resource based Learning		30
	7. Practical		50
	<b>Total</b>		<b>200</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Notional Learning Hours</b>
	<i>Formative Assessment:</i>	20 %	01
	<i>Summative assessment</i>	80 %	Theory -03 Practical- 01
<b>Recommended Readings :</b>	<p>1. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu</i> I. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>2. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu</i> II. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>3. Textbook of Pathology. Harsh Mohan, The health sciences publishers (Jaypee).</p> <p>4. Textbook of Microbiology. C.P. Baveja, Arya publication Robbins &amp; Cotran Pathology Basis of Disease. Vinay Kumar, Abdul K. Abbas. John. C. Aster, Relax India (Pvt.) Ltd.</p>		

	<ol style="list-style-type: none"> <li>5. Paniker's Textbook of Medical Parasitology. CK. Jayaram Paniker. Revised and Edited by Sougata Ghosh, Jaypee brothers medical publishers (P) Ltd.</li> <li>6. Venu gopal, P.M. <i>Udal Thathuvam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>7. Kuppusamy Mudaliar, K.N. <i>Siddha Maruthuvam Pothu</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>8. Uthamarayan, C.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>9. Yugiamamunivar. <i>Yugi vaiththiya sinthamani</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>10. Kalaththur kanthasami Muthaliyar. <i>Pathinen Siddhar arulichcheitha Nadi saasthiram</i>. Chennai: B. Raththina nayakar and sons.</li> <li>11. Uthamarayan, C.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>12. Pulipani Suntharavarathachariyar. <i>Panchapatchi saththiram</i>. Thanjavoor: Saraswathy Mahal Library.</li> <li>13. Concepts in Pathology. Devesh Mishra, Pulse publication.</li> <li>14. Robbins &amp; Cotran Pathology Basis of Disease. Vinay Kumar, Abdul K. Abbas. John. C. Aster, Relax India (Pvt.) Ltd.</li> <li>15. Ananthanarayan &amp; Paniker's text book of Microbiology. Edited by Arthi Kapil, Universities press India (Pvt.) Ltd.</li> <li>16. Reputed journals related to the above titles</li> </ol>
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<b>Subject Title</b>	: <i>Noi Naadal</i> II (Pathology II)	
<b>Subject Code</b>	: NNL 3064	
<b>Year &amp; Semester</b>	: Profession III Semester VI	
<b>Credits</b>	: 04	
<b>Status</b>	: Applied Stream (AS)	
<b>Aim:</b> To: <ol style="list-style-type: none"><li>1. Understand the disease based on the Siddha system of medicine</li><li>2. Identify the root causes (etiology) and the <i>mukuttraviyal</i> (pathogenesis) of the disease (Siddha and conventional medicine)</li><li>3. Recognise, understand and describe the disease</li><li>4. Familiar with the Siddha diagnostic methods towards the disease</li><li>5. Able to interpret the investigational findings</li><li>6. Apply the knowledge of pathology (conventional medicine) in diagnosis</li><li>7. Get experience to diagnosis the disease based on the Siddha system of medicine</li><li>8. Comparative appraise of the disease in Siddha system of medicine</li></ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know the applied aspect of <i>Noi Naadal</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Gain through knowledge in disease in the basis of root causes, <i>mukuttraviyal</i> (pathogenesis) of the diseases and Siddha diagnostic methods</li><li>• Understand the basic nature of the disease process in conventional medicine</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Able to interpret the etiopathogenesis and investigational findings towards the diagnosis the disease based on Siddha system medicine</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Understand the disease process in general based on contemporary medical knowledge</li><li>• Practise the intervention to the disease based on the Siddha system medicine</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Explore the knowledge of the Siddha system of medicine towards the disease</li><li>• Comparative skill of disease</li></ul>	Mindset	12
<b>Content:</b> <b>Part I</b> <ol style="list-style-type: none"><li>1. <i>Noi Naadal</i> (pathology) - based on Siddha system of medicine</li></ol> Diagnosis of disease according to <i>Noi Naadal</i> (pathology) aspect in Siddha system of medicine; <ul style="list-style-type: none"><li>• <i>Veru peyar</i> (other names), <i>Iyalbu</i> (character)</li><li>• Brief study on <i>Noi varum vazhikal</i> (causes), <i>Mukkuri kunankal</i> (premonitory signs), <i>Noi en</i> (types),and <i>Kurikunankal</i> (signs and symptom)</li><li>• Detail study on <i>Mukutra muthaliya verupaadukal</i> (etiopathogenesis), <i>Nadi nadaikal</i> (pulse diagnosis) and diagnosis of the following diseases</li></ul>		

- 1.1. *Suram*
- 1.2. *Mukkuttra noi (sanni)*
- 1.3. *Ammai noi*
- 1.4. *Velluppu noi*
- 1.5. *Uthal noi*
- 1.6. Heart and respiratory diseases
  - 1.6.1. *Thamaraga noikal*
  - 1.6.2. *Kuratkammal*
  - 1.6.3. *Mookkadaippu*
  - 1.6.4. *Irumal*
  - 1.6.5. *Eraippu*
  - 1.6.6. *Elaippu*
- 1.7. Gastrointestinal diseases
  - 1.7.1. *Suwai inmai*
  - 1.7.2. *Seriyaamai*
  - 1.7.3. *Vikkal*
  - 1.7.4. *Vanthi*
  - 1.7.5. *Kunmam*
  - 1.7.6. *Soolai noi*
  - 1.7.7. *Manjal noi*
  - 1.7.8. *Peru vayiru*
  - 1.7.9. *Perung kazhichal*
  - 1.7.10. *Ninak kazhichal*
  - 1.7.11. *Kaduppu kazhichal*
  - 1.7.12. *Eruvai mulai noi*
- 1.8. Urinary diseases and sexual transmitted diseases
  - 1.8.1. *Neerarukal noi*
    - 1.8.1.1. *Kalladaippu*
    - 1.8.1.2. *Neer surukku*
    - 1.8.1.3. *Vellai*
  - 1.8.2. *Neerinai perukkal noikal*
    - 1.8.2.1. *Meha neer*
    - 1.8.2.2. *Neerizhivu*
- 1.9. Neurological diseases (*Vali*)
  - 1.9.1. *Valippu noi*
- 1.10. Joints diseases (*Vayu*)
  - 1.10.1. *Keel vayu*

1.11. Diseases/disorders - *Vali, Azhal and Iyam*

1.11.1. *Vali / Vatha noi*

1.11.2. *Azhal noi*

1.11.3. *Iya noi*

1.12. Skin diseases

1.12.1. *Peru noi*

1.12.2. *Karappan*

1.13. Helminths (*pulu*)

**Part II**

**2. Systemic Pathology**

2.1. The Blood Vessels

2.1.1. Arteriosclerosis

2.1.2. Aneurysms

2.2. The Heart – brief study on definition, etiopathogenesis, predisposing factors, classification, complication

2.2.1. Ischemic Heart disease

2.2.2. Rheumatic fever and rheumatic heart disease

2.2.3. Infective endocarditis

2.2.4. Heart failure

2.2.5. Valvular diseases and deformities

2.3. The Respiratory System – brief study on definition, etiopathogenesis, predisposing factors, classification, complication

2.3.1. Pulmonary infections

2.3.1.1. Pneumonia

2.3.1.2. Lung abscess

2.3.1.3. Pulmonary tuberculosis

2.3.2. Chronic obstructive pulmonary disease

2.3.2.1. Chronic bronchitis

2.3.2.2. Emphysema

2.3.2.3. Bronchial asthma

2.3.2.4. Bronchiectasis

2.4. The Gastrointestinal Tract - brief study on definition, etiopathogenesis, predisposing factors, classification, complication

2.4.1. Stomach

2.4.1.1. Inflammatory conditions

2.4.1.2. Haematemesis and melaena of gastric origin

2.4.2. Small intestine

2.4.2.1. Intestinal obstruction

2.4.2.2. Inflammatory bowel disease

2.4.2.3. Infective and other enterocolitis

2.4.2.4. Malabsorption syndrome

2.5. The Liver, biliary tract and pancreas- brief study on definition, etiopathogenesis, predisposing factors, classification, complication

2.5.1. Liver

2.5.1.1. Viral Hepatitis

- 2.5.1.2. Cirrhosis
- 2.5.2. Biliary tract
  - 2.5.2.1. Cholelithiasis
  - 2.5.2.2. Cholecystitis
- 2.5.3. Pancreas
  - 2.5.3.1. Pancreatitis
  - 2.5.3.2. Diabetic mellitus
- 2.6. The Kidney and lower urinary tract - brief study on definition, etiopathogenesis, predisposing factors, classification, complication
  - 2.6.1. Kidney
    - 2.6.1.1. Renal failure
    - 2.6.1.2. Glomerular diseases
    - 2.6.1.3. Tubular and tubulointerstitial diseases
    - 2.6.1.4. Obstructive uropathy
  - 2.6.2. Lower urinary tract inflammation
- 2.7. Joints - brief study on definition, etiopathogenesis, predisposing factors, classification, complication
  - 2.7.1. Degenerative joint disease – Osteoarthritis
  - 2.7.2. Inflammatory joint diseases - Rheumatoid arthritis

**Practical :**

1. Diagnose the disease based on Siddha system of medicine (OPD and IPD training)
2. Analysis of blood laboratory investigations towards diagnosis
  - 2.1. Full blood count
  - 2.2. Lipid profile
  - 2.3. Liver function test (LFT)
  - 2.4. Thyroid function test
3. Analysis of urine laboratory investigations towards diagnosis
  - 3.1. UFR
4. Reading of laboratory investigations guided by the clinical findings towards diagnosis
  - 4.1. Cerebrospinal fluid analysis (CSF analysis)
  - 4.2. X – ray readings
    - 4.2.1. Tuberculosis
    - 4.2.2. Pneumonia
    - 4.2.3. Cardiomyopathy
    - 4.2.4. Chronic bronchitis
    - 4.2.5. Fractures
  - 4.3. Endoscopic reports
    - 4.3.1. Esophageal varices
    - 4.3.2. Peptic ulcer
    - 4.3.3. Irritable bowel syndrome (IBS)
    - 4.3.4. Proctitis
    - 4.3.5. Hemorrhoids
  - 4.4. Abdominal scan reports

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		10
	2. LMS based learning		30
	3. Self-study using study guide		50
	4. Case Study/Problem Based Learning		30
	5. Virtual/Real Group Discussion		10
	6. Resource based Learning		20
	7. Practical		50
	<b>Total</b>		<b>200</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Notional Learning Hours</b>
	<i>Formative Assessment</i>	20 %	01
	<i>Summative Assessment:</i>	80 %	Theory- 03 Practical- 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu</i> I. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>2. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu</i> II. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>3. Text book of Pathology. Harsh Mohan, The health sciences publishers (Jaypee).</li> <li>4. Venu gopal, P.M. <i>Udal Thathuvam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>5. Kuppusamy Mudaliar, K.N. <i>Siddha Maruthuvam Pothu</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>6. Uthamarayan, C.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>7. Yugiamamunivar. <i>Yugi vaiththiya sinthamani</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>8. Kalaththur kanthasami Muthaliyar. <i>Pathinen Siddhar arulichcheitha Nadi saasthiram</i>. Chennai: B. Raththina nayakar and sons.</li> <li>9. Uthamarayan, C.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> </ol>		



	<p>10. Pulipani Suntharavarathachariyar. <i>Panchapatchi saththiram</i>. Thanjavoor: Saraswathy Mahal Library.</p> <p>11. Concepts in Pathology. Devesh Mishra, Pulse publication.</p> <p>12. Robbins &amp; Cotran Pathology Basis of Disease. Vinay Kumar, Abdul K. Abbas. John. C. Aster, Relax India (Pvt.) Ltd.</p> <p>13. Reputed journals related to the above titles</p>
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<b>Subject Title</b>	: <i>Chikitsai Adippadaithaththuvam - I</i> (Fundamentals of Therapeutics in Siddha - I)	
<b>Subject Code</b>	: CHA 3051	
<b>Year &amp; Semester</b>	: Profession III Semester V	
<b>Credits</b>	: 01	
<b>Status</b>	: Applied Stream (AS)	
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Chikitsai</i></div><div>2. Understanding the applied aspect of <i>Chikitsai</i></div></div>		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to know the <i>Chikitsai Adippadai Thaththuvam</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div><div>• Gain thorough knowledge in the basic concepts of <i>Chikitsai</i> (treatment) and its significance</div></div>	Knowledge	1, 2
<div><div>• Able to interpret the basic concepts of <i>Chikitsai</i> with disease based on Siddha system medicine</div></div>	Skills	3, 4, 5, 8
<div><div>• Practise the intervention for the health problem based on the Siddha system medicine</div></div>	Attitude	9,10,11
<div><div>• Explore the knowledge in basic concept of <i>Chikitsai</i> towards Siddha system of medicine</div></div>	Mindset	12
<b>Content:</b> <div><div>1. Introduction to <i>Chikitsai adippadai thaththuvam</i></div><div>2. Doctor patient relationship<div><div>2.1. Duties of a doctor</div><div>2.2. Duties of a patient</div><div>2.3. The person not eligible to practice as a physician</div><div>2.4. Remuneration</div></div></div><div>3. Diseases<div><div>3.1. Definition of disease</div><div>3.2. Types of diseases</div><div>3.3. Numbers of diseases based on anatomical location</div><div>3.4. Causes of disease</div><div>3.5. Characters of disease based on <i>mukkuttram</i></div><div>3.6. <i>Uruppu sooththiram</i></div></div></div><div>4. Basic concepts of treatment in Siddha medicine<div><div>4.1. Significance of <i>kaappu</i> and <i>neekkam</i></div><div>4.2. <i>Mani</i>, <i>manthiram</i>, and <i>oudatham</i></div></div></div><div>5. <i>Marunthuraiyul</i></div></div>		

6. Treatment in Siddha medicine
  - 6.1. Restoration of balance
  - 6.2. Methods of treatment
  - 6.3. General balancing methods of *vatham*, *pitham*, and *kabham*
  - 6.4. General balancing methods of *Agni*
  - 6.5. Days for intake of medicine (*Marunthunum naal*)
  - 6.6. *Naat palan* and *thithippalan*
7. Vitiating of tri energy (*muththathukkal*) and its management based on seasonal variation (*paruvakkaalangal*)
8. Free form *karma* (*Karma nivarthithi*)

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. Seminar		02
	2. LMS based learning		03
	3. Self-study using study guide		25
	4. Case Study/Problem Based Learning		02
	5. Virtual/Real Group Discussion		03
	6. Resource based Learning		15
	<b>Total</b>		<b>50</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 02
Recommended Readings :	<ol style="list-style-type: none"> <li>1. Uthamarayan, K.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>2. Anaivaari R. Anandan. A Compendium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>3. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu I</i>. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>4. Venu gopal, P.M. <i>Udal Thathuvam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>5. Ganapathy, G. <i>Siddha Maruththuvam, thoguthi 2 (adippadaikal)</i>. Chennai: Tamil Valarchchi Kazhagam.</li> <li>6. Uththamanarayanan K.S. Thortrakirama arayichchiyum Siddha maruththuva varalaarum,</li> </ol>		

	<p>Department of Indian Medicine and Homoeopathy, Chennai.</p> <p>7. Kuppusamy Mudaliar, K.N. <i>Siddha Maruthuvam Pothu</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</p> <p>8. Kalaththur kanthasami Muthaliyar. <i>Pathinen Siddhar arulichcheitha Nadi saasthiram</i>. Chennai: B. raththina nayakar and sons.</p> <p>9. Reputed journals related to the above titles</p>
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<b>Subject title</b> : <i>Chikitsai Adippadaithaththuvam - II</i> (Fundamentals of therapeutics in Siddha –II)		
<b>Subject code</b> : CHA 3061		
<b>Year &amp; Semester</b> : Profession III Semester VI		
<b>Credits</b> : 01		
<b>Status</b> : Applied Stream (AS)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. Understand the basic concepts of <i>chikitsai</i> based on the Siddha system of medicine</li> <li>2. Identify the <i>chikitsai</i> procedures or intervention based on root causes and the <i>mukuttraviyal</i> (pathogenesis) of the disease</li> <li>3. Practice the Siddha <i>chikitsai</i> methods towards the disease</li> <li>4. Getting applied knowledge of basic concepts of <i>chikitsai</i> based on the Siddha system of medicine</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to know the applied aspect of <i>Chikitsai Adippadai Thaththuvam</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>• Gain through knowledge in the basic concepts of <i>Chikitsai</i> (treatment) and its significance</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>• Able to interpret the basic concepts of <i>Chikitsai</i> with disease based on Siddha system medicine</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>• Practise the intervention to the health problem based on the Siddha system medicine</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>• Explore the knowledge in basic concept of <i>Chikitsai</i> towards Siddha system of medicine</li> </ul>	Mindset	12
<b>Content:</b> <ol style="list-style-type: none"> <li>1. <i>Chikitsai</i> <ol style="list-style-type: none"> <li>1.1. <i>Devamaruththuvam</i></li> <li>1.2. <i>Manuda maruththuvam</i></li> <li>1.3. <i>Asura maruththuvam</i></li> </ol> </li> <li>2. Cleansing therapies in Siddha system – basic concepts and significance of cleansing therapy               <ol style="list-style-type: none"> <li>2.1. <i>Langanam</i> – fasting therapy</li> <li>2.2. Elimination by breathing exercise – <i>Vaasi yogam</i></li> <li>2.3. Physical therapy</li> <li>2.4. <i>Veppuchikitsai</i> – heat therapy</li> <li>2.5. <i>Aavi pidiththal</i> – fomentation</li> <li>2.6. <i>Naalvagaiththolikal</i> <ol style="list-style-type: none"> <li>2.6.1. Definition</li> <li>2.6.2. Procedures</li> </ol> </li> </ol> </li> </ol>		

<p>2.6.3. Suitable days / starts to conduct <i>Panchavat kiriyai</i></p> <p>2.6.4. Drugs, dietary regimens, and life style</p> <p>2.7. Basic concept of <i>Panchavat kiriyai</i> (<i>Panchakarma</i>)</p> <p>2.7.1. Definition</p> <p>2.7.2. Basic concept of <i>Panchavat kiriyai</i> based <i>mukkuttram</i></p> <p>2.7.3. Procedures</p> <p>2.7.4. Suitable days / starts to conduct <i>Panchavat kiriyai</i></p> <p>2.7.5. Drugs, dietary regimens, and life style</p> <p>3. <i>Ennai kuzhiyal</i> (Oil bath)</p> <p>3.1. Definition</p> <p>3.2. Basic concept of oil bath</p> <p>3.3. Procedures</p> <p>3.4. Suitable oil for the specific diseases and <i>araippu</i> (substance used remove the oil)</p> <p>4. Role of dietary and life style pattern</p> <p>4.1. Based on <i>Yakkaiyin ilakkanam</i></p> <p>4.2. Management of disease (imbalance of <i>muththathu</i>)</p> <p>4.3. <i>Paththiyabaththiyam</i></p> <p>4.4. <i>Noyanuka vithi</i></p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. Seminar		02
	2. LMS based learning		03
	3. Self-study using study guide		25
	4. Case Study/Problem Based Learning		02
	5. Virtual/Real Group Discussion		03
	6. Resource based Learning		15
	<b>Total</b>		<b>50</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20%	01
	Summative Assessment:	80 %	Theory – 02
<b>Recommended Readings :</b>	<p>1. Sivashanmugarah. S. <i>Pararasasekara vaiththiyam moolamum uraiyum</i> part I, II and III. Siddha maruththuvalarchchikalakam, Jaffna, Sri Lanka.</p> <p>2. Uththamanarayanan K.S. Siddhar aruvai maruththuvam. Department of Indian medicine and Homeopathy. Chennai.</p> <p>3. Guidelines on basic training and safety in panchakarma. Department of AYUSH, Ministry of Health and family welfare. New Delhi,</p> <p>4. A practical handbook of Panchakarma procedures. Central Council for Research in Ayurveda and Siddha. New Delhi.</p>		

	<ol style="list-style-type: none"> <li>5. Uthamarayan, K.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>6. Anaivaari R. Anandan. A Compendium of Siddha Doctrine, Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>7. Shanmugavelu, M. <i>Noi nadal noi mudal nadal thirattu I</i>. Chennai: Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>8. Venu gopal, P.M. <i>Udal Thathuvam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy, Chennai.</li> <li>9. Ganapathy, G. <i>Siddha Maruththuvam, thoguthi 2 (adippadaikal)</i>. Chennai: Tamil Valarchchi Kazhagam.</li> <li>10. Uththamanarayanan K.S. <i>Thortrakirama arayichchiyum Siddha maruththuva varalaarum</i>, Department of Indian Medicine and Homoeopathy, Chennai.</li> <li>11. Kuppusamy Mudaliar, K.N. <i>Siddha Maruthuvam Pothu</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>12. Uthamarayan, K.S. <i>Siddha Maruthuvanga Churukkam</i>. Chennai: Department of Indian Medicine &amp; Homoeopathy.</li> <li>13. Kalaththur kanthasami Muthaliyar. <i>Pathinen Siddhar arulichcheitha Nadi saasthiram</i>. Chennai: B. raththina nayakar and sons.</li> <li>14. Reputed journals related to the above titles</li> </ol>
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<b>Subject Title</b>	: <i>Samooga Nala Maruththuvam – I (Community Medicine - I)</i>		
<b>Subject Code</b>	: SNM 3053		
<b>Year &amp; Semester</b>	: Professional III Semester V		
<b>Credits</b>	: 03		
<b>Status</b>	: Applied Stream (AS)		
<b>Aim:</b> To:	1. At the end of the sessions, the student should be able to explain Primary health care, Nutrition, Epidemiology		
<b>Intended Learning Outcomes:</b>	At the end of this course students should be able to know <i>Samooga Nala Maruththuvam</i> in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Definition of <i>Aarogyam</i>	Knowledge	1, 2	
• Elaborate the usage of statistics	Skills	3, 4, 5, 8	
• Explain about Nutrition, Hygiene	Attitude	9,10,11	
• Study about Epidemiology	Mindset	12	
<b>Content:</b> <b>Part I</b> 1. Outline the Definition of <i>Aarogyam</i> 2. Describe the physical, mental and environmental health 3. Explain the importance of personal hygiene and its implications on community health. 4. Describe the <i>Thinasariyai</i> Daily regimen 4.1. Getting up from the bed at early morning Offering prayer, cleaning the face, evacuation, cleaning teeth, tongue scraping, use of nasal drops, chewing, gargles, application of oil on head, oil drops in ears, oil massage. 4.2. Exercise, good effects of exercise, bad effect of excessive exercise, features of correct exercise contraindication of exercise 4.3. Bathing, dress, use of perfumes, use of ornaments, care of hair and nails, use of foot wear, smoking 4.4. Sleep, different types of sleep, Causes of insomnia, measures to induce well sleep 4.5. Sexual act and its contra indications 4.6. Code of general ethics 4.6.1. General conduct 4.6.2. Suitable friends and Unsuitable persons for friendship 5. Explain the <i>Paruva kaalangal</i> -Seasonal regiment 5.1. <i>Uththaraayana</i> ( <i>Aadaanakaal</i> or the period of dehydration) 5.2. <i>Dakshinaayana</i> ( <i>Visaragakaal</i> or the period of hydration) 5.3. Conduct during different season's effect of seasons on body dietetics and regiment for different seasons.			



- 5.4. Diseases prevailing during summer and rainy season's measures which should be adapted to prevent disease spread.

## **Part II**

6. Discuss Registration of births and deaths
7. Outline Population census
8. Explain Population dynamics-fertility, mortality and migration
9. Analysis the Vital statistics (fertility and mortality rates)
10. Demonstrate the Demographic trends and their implications
11. Explain the health services
  - 11.1. History of public health
  - 11.2. Organizational structure of preventive services.
  - 11.3. Role of –MOH/CMO/DDHS.
  - 11.4. S/PHI
  - 11.5. PHNS, PHI and PHM
  - 11.6. Function of health team at clinic and field work.
  - 11.7. The role of village level volunteers and their usefulness to the health team.
12. Nutrition
  - 12.1. Define the Nutrition in health and disease
  - 12.2. Explain nutritional requirements with reference to target groups-pregnant/ lactation mothers. Infants/children and elderly persons.
  - 12.3. Assess the nutritional status of individual/ community.
    - 12.3.1. Clinical assessment.
    - 12.3.2. Dietary survey.
    - 12.3.3. Growth monitoring.
13. Discuss the Nutritional problem in Sri Lanka.
  - 13.1. Protein energy malnutrition.
  - 13.2. Nutritional anaemia.
  - 13.3. Vitamin A deficiency.
  - 13.4. Iodine deficiency disorder.
  - 13.5. Nutrition education.
14. Describe the food beliefs and practices in Sri Lanka.
15. Epidemiology
  - 15.1. Explain the Basic Epidemiology
    - 15.1.1. Introductions to epidemiology.
    - 15.1.2. Descriptive epidemiology.
    - 15.1.3. Rates.
    - 15.1.4. Measure of diseases frequency.
16. Analysis the measures of risk and association.

- 16.1. Study designs.
- 16.2. Screening tests.
- 16.3. Surveillance.
17. Explain the applied Epidemiology
18. Discuss the epidemiology and control of communicable diseases of public health importance in Sri Lanka and their prevention.
  - 18.1. Respiratory infections.
  - 18.2. Pertussis
  - 18.3. Diphtheria
  - 18.4. Tuberculosis
19. Explain the food and water related diseases
  - 19.1. Shigella infection
  - 19.2. Salmonella (Non- typhoid) infection
  - 19.3. Typhoid
  - 19.4. Cholera
  - 19.5. Amoebic infection
  - 19.6. Viral hepatitis Type A
  - 19.7. Helminthiasis
  - 19.8. Scabies
  - 19.9. Food poisoning
20. Discuss other common Infectious diseases
  - 20.1. Leprosy
  - 20.2. Malaria
  - 20.3. Filariasis
21. Describe the Influenza and other viral fever
  - 21.1. Dengue
  - 21.2. Mumps
  - 21.3. Measles
  - 21.4. Rubella
  - 21.5. Chicken pox
  - 21.6. Polio
  - 21.7. Japanese encephalitis
22. Explain about the following institutions regarding community medicine aspect (Field work)
  - 22.1. Water resources board
  - 22.2. Port health (china bay)
  - 22.3. National institute of health sciences
  - 22.4. Slaughter house, waste disposal sites

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>			<b>Notional Learning Hours</b>
	1. LMS based learning			30
	2. Self-study using study guide			20
	3. Case Study/Problem Based Learning			20
	4. Resource based Learning			20
	5. Presentation			10
	6. Assignment			20
	7. Quiz			10
	8. Field visit			20
	<b>Total</b>			<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>	
	Formative Assessment	20 %	01	
	Summative Assessment	80 %	Theory and Field work report –03 and 01	
<b>Recommended Readings :</b>	1. Thurairasan. K, <i>Noaiyilla neri</i> , Department of Indian Medicine and Homoeopathy, Chennai – 600 106			
	2. Thirunarayanan .T, <i>Introduction to Siddha Medicine</i> , Department of Indian Medicine and Homoeopathy, Chennai – 600 106			
	3. Anaivaari R. Anandan, <i>A compendium of Doctrine</i> , Department of Indian Medicine and Homoeopathy, Chennai – 600 106			
	4. Anaivaari R. Anandan, <i>Siddha Principles of Social and Preventive Medicine</i> , Department of Indian Medicine and Homoeopathy, Chennai – 600 106			
	5. Sirumanavoor Munisaami Muthaliyar, <i>Nehapy;yh tho</i> ;T, B.Rathinayaka & Sons			
	6. Park, <i>Social and preventive medicine</i> , Elsevier churchill Livingstone			

<b>Subject Title</b>	: <i>Samooga Nala Maruththuvam</i> – II (Community Medicine – II)	
<b>Subject Code</b>	: SNM 3063	
<b>Year &amp; Semester</b>	: Professional III semester VI	
<b>Credits</b>	: 03	
<b>Status</b>	: Applied Stream (AS)	
<b>Aim:</b> To: 1. At the end of the sessions, the student should be able to explain Primary health care, Nutrition, Epidemiology		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know <i>Samooga Nala Maruththuvam</i> in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Definition of Communicable disease, Immunization</li><li>• Learn the nutritional values of traditional foods</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Elaborate Occupational health, Hazards of substance</li><li>• Develop the skill of <i>Yogasanam</i></li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Explain about Health education, Family planning</li></ul>	Attitude	9,10,11
<ul style="list-style-type: none"><li>• Community care of the disabled</li></ul>	Mindset	12
<b>Content:</b> <b>Part I</b> 1. <i>Yogasanam</i> 1.1. Outline the types of Yoga 1.2. Explain the Clinical implication of Yoga 1.3. Apply the meditation in health and disease  2. Nutritional value of traditional foods 2.1. Outline the Nutritive value of natural foods 2.1.1. Green leaves 2.1.2. Fruits 2.1.3. Vegetables 2.1.4. Animal fat  3. Explain the Siddha Medical preventive care and simple herbal remedies for postpartum period		

## **Part II**

4. Explain the Communicable disease, process of notification and Disease control programs
  - 4.1. Filariasis
  - 4.2. Malaria
  - 4.3. Leprosy
  - 4.4. T.B
  - 4.5. STD and AIDS
  - 4.6. Dengue
  - 4.7. Diarrheal diseases
  - 4.8. Japanese encephalitis
  - 4.9. Rabies
5. Discuss the Immunization
  - 5.1. Expanded programme of immunization
6. Analyse the control and prevention of dental diseases
7. Explain the epidemiology of non – communicable diseases / conditions commonly prevalent in Sri Lanka and strategies for prevention
  - 7.1. Cardiovascular disease
  - 7.2. Hypertension,
  - 7.3. CVA
  - 7.4. Rheumatic heart disease
  - 7.5. Diabetes mellitus
  - 7.6. Obesity
8. Discus Emerging and reemerging diseases
9. Elaborate the Environmental, Residential health and Safe water
10. Analyze the Pollution of environment and methods of control
11. Explain the food hygiene and law governing it
12. Discuss the disposal of sewerage/ garbage/ the dead: maintaining sanitation including festival sanitation
13. Explain the hazards from environment to human health and their prevention.
14. Occupational health
  - 14.1. Outline the Occupational hazards
  - 14.2. Explain the Health problems of workers (occupational and work related disease)
  - 14.3. Outline the Preventive measures
15. Hazards of substance

- 15.1. Discuss the Hazards of substance use and methods of prevention and rehabilitation
- 15.2. Smoking
- 15.3. Abuse of alcohol
- 15.4. Other substance abuse
16. Explain the Care of the elders
17. Health education
  - 17.1. Analyze the concept and principles of health education
  - 17.2. List out the factors influencing human behavior
  - 17.3. Explain the communication in health education
  - 17.4. Discuss the Organization of health education by the department of health services
18. Maintaining health of target groups
  - 18.1. Explain the Care of pregnant and lactating mothers
  - 18.2. Elaborate the Mother Child care
  - 18.3. Discuss the Management of pre -natal problems
  - 18.4. Analyze the Care of infants and pre -school children
  - 18.5. Explain the care of school children
  - 18.6. Define the role of the family health bureau
19. Family planning
  - 19.1. Explain the Population dynamics and Sri Lanka policy on population control
  - 19.2. Discuss the effects of family size and spacing on health of family
  - 19.3. Analyze the methods of contraception used in Sri Lanka availability and cost / effectiveness
  - 19.4. Discuss the management of sub -fertility
20. Community care of the disabled
  - 20.1. Categories of disability and disabled persons
  - 20.2. List out the Social care services available in Sri Lanka (State / N.G.Os)
21. Identify the Mental health problems in the community
22. Manage the community in disaster (Natural and man-made) with relevance to Sri Lanka
23. Explain about the following institutions regarding community medicine aspect and field work
  - 23.1. Quarantine camps
  - 23.2. Maternal, child care and family health centers
  - 23.3. Health department of Eastern province and Northern province comparative survey
  - 23.4. NGO's relevant to have community projects

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		20
	3. Case Study/Problem Based Learning		20
	4. Resource based Learning		20
	5. Presentation		10
	6. Assignment		20
	7. Quiz		10
	8. Field visit		20
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory and Field work report –03 and 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Thurairasan. K, <i>Noaiyilla neri</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>2. Thirunarayanan .T, <i>Introduction to Siddha Medicine</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>3. Anaivaari R. Anandan, <i>A compendium of Doctrine</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>4. Anaivaari R. Anandan, <i>Siddha Principles of Social and Preventive Medicine</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>5. Sirumanavoor Munisaami Muthaliyar, <i>Nehapy;yh tho</i>;T, B.Rathinayaka &amp; Sons</li> <li>6. Park, <i>Social and preventive medicine</i>, Elsevier churchill Livingstone</li> </ol>		

<b>Subject Title</b>	: <i>Nanchiyalum Sadda Maruthuvamum</i> – I (Forensic Medicine & Toxicology) - I		
<b>Subject Code</b>	: NSM 3053		
<b>Year &amp; Semester</b>	: Profession III Semester V		
<b>Credits</b>	: 03		
<b>Status</b>	: Applied Stream (AS)		
<b>Aim:</b> At the end of the sessions, the student should be able to			
<div><div>1. Obtain the knowledge on <i>Nanju</i> and <i>Visham</i> , classification of poisons, Clinical features, diagnosis, prognosis and treatment of the poisons plants and Thathu nanjukal,. metals, corrosive poisons and irritant poisons</div><div>2. Describe about the different types of Medico –Legal reports, Hurt, Medical education and Forensic psychiatric.</div></div>			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know <i>Nanchiyalum Sadda Maruthuvamum</i>			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<div><div>• Explain about Classification of Poisons, Medical report</div></div>	Knowledge	1, 2, 5,10,13	
<div><div>• Disuss the Medico legal identification of data</div></div>	Skills	7, 8,11	
<div><div>• Elaborate medico legal aspect of laboratory findings and forensic psychiatric aspect</div></div>	Attitude	5,10,13	
<div><div>• List out the Duties of doctor in a case of suspected poisoning</div></div>	Mindset	1, 2, 3, 5,7, 9,11,13	
<b>Content:</b> <b>Part I</b> <div><div>1. Define the <i>Nanju</i> and <i>Visham</i> and Classification of poisons<div><div>1.1. <i>Thavara nanju</i></div><div>1.2. <i>Thathu nanju</i></div><div>1.3. <i>Jangama visham</i></div></div></div><div>2. Explain the Clinical features, diagnosis, prognosis and treatment of the following poisons plants<div><div>2.1. Abrus precatorius</div><div>2.2. <i>Ricinus communis</i></div><div>2.3. <u>Papavera somniferae</u></div><div>2.4. <u>Cannabis sativa</u></div><div>2.5. <u>Datura metal</u></div><div>2.6. <u>Croton tiglium</u></div><div>2.7. <u>Stychnus Nux –Vomica</u></div><div>2.8. <u>Aconitum ferux</u></div><div>2.9. <u>Semicarpus anacardium</u></div><div>2.10. <u>Nerium oliender</u></div><div>2.11. <u>Nicotiana tobaccum</u></div></div><div><div>- (<i>Kuntrimani</i>)</div><div>- (<i>Aamanaku</i>)</div><div>- (<i>Abin</i>)</div><div>-(<i>Kanja</i>)</div><div>-(<i>Omaththai</i>)</div><div>-(<i>Neervalam</i>)</div><div>-(<i>Eddi</i>)</div><div>-(<i>Naabi</i>)</div><div>-(<i>Serankottai</i>)</div><div>-(<i>Alari</i>)</div><div>-(<i>Pukaiyilai</i>)</div></div></div></div>			



- |                                   |                      |
|-----------------------------------|----------------------|
| 2.12. <u>Capsicum annum</u>       | - (Milakai)          |
| 2.13. <u>Calotropis gigantea</u>  | - (Erukku)           |
| 2.14. <u>Euphorbia antiquorum</u> | - (Kalli)            |
| 2.15. <u>Gloriosa superba</u>     | - (Kalapai kizhangu) |
| 2.16. <u>Plumbago zeylanica</u>   | - (Venkodiveli)      |
| 2.17. <u>Argemone Mexicana</u>    | -(Piramathandu)      |

3. Describe Clinical features, Diagnosis, prognosis and treatment of the following-  
Thathu nanjukal (Metal and Mineral)

- |                           |                               |
|---------------------------|-------------------------------|
| 3.1. <i>Rasam</i>         | -(Mercury)                    |
| 3.2. <i>Paashanum</i>     | -(Arsenic)                    |
| 3.3. <i>Eyam</i>          | -(Lead)                       |
| 3.4. <i>Thaamparam</i>    | -(Copper)                     |
| 3.5. <i>Nagam</i>         | -(zinc)                       |
| 3.6. <i>Thurushu</i>      | -(Coppersulphate)             |
| 3.7. <i>Lingam</i>        | -(Red sulphide of Mercury)    |
| 3.8. <i>Pooram</i>        | -(Hydragyrumperchloride)      |
| 3.9. <i>Veeram</i>        | -(Hydragyrumsubchloride)      |
| 3.10. <i>Gowripadanum</i> | -(Arseneicpentasulphide)      |
| 3.11. <i>Thalakam</i>     | -(Yellow arsenic trisulphide) |
| 3.12. <i>Vellaipadana</i> | -(Arsenic trioxide)           |
| 3.13. <i>Amber</i>        | -(Amber grasea)               |
| 3.14. <i>Kadikkaram</i>   | -(Silver nitrate)             |
| 3.15. <i>Pitalai</i>      | -(Bronze)                     |
| 3.16. <i>Erumbu</i>       | -(Iron)                       |
| 3.17. <i>Iodine</i>       |                               |
| 3.18. <i>Appirakam</i>    | -(Mica)                       |

4. Explain the Corrosive poison

- 4.1. Sulphuric acid
- 4.2. Nitric acid
- 4.3. Hydrochloric acid
- 4.4. Carboic acid
- 4.5. Pottasium Cyanide

5. Explain irritant poisons

- 5.1. Phosphorous
- 5.2. Antimony
- 5.3. ergot
- 5.4. Formalin
- 5.5. Powdered glasses (Mechanical irritant)

6. CNS depressants

- 6.1 Alcohol
- 6.2 Hydro carbones

The above topics 1-6 should be taught under the following headings

- I. Rout of administration and elimination, action, diagnosis, principals of management, specimen collection for analysis and circumstances of poisoning in poisons commonly encountered in Sri Lanka.
- II. The national poisons center, legislation relevant to drugs and poison in Sri Lanka
- III. Sources, circumstances of poisoning actions, clinical and pathological stages and post- mortem appearances, managements and antidotes

7. Study about following topics according to *Nandeesar Agaala marana nool*, Toxicity due to plants, metals and minerals

## Part II

8. Medical report
  - 8.1. Principals of examination and reporting of an injured person
  - 8.2. The medico- legal Examination form(MLEF), and the Medico –Legal Report(MLR)
  - 8.3. Medical certificate of cause of death,
  - 8.4. Medico- Legal autopsy
    - 8.4.1. Routine procedure
    - 8.4.2. obtaining specimens for special examination,
    - 8.4.3. recording and reporting of findings,
9. Medico legal aspect
  - 9.1. Inquirers into deaths and inquest procedure, Doctors role in inquests
  - 9.2. Identify the data which was used for medico legal aspect, Starvation, medical negligence
  - 9.3. Medical education and medical practice
  - 9.4. Duties of doctor in a case of suspected poisoning
  - 9.5. Dying declaration and refusal for treatment
  - 9.6. Medico legal aspect of laboratory findings
  - 9.7. Forensic psychiatric aspect,
  - 9.8. Consent

10. Purification of poisonous substance and antidote Preparations(Practical)

Methods of Teaching and Learning :	Methods	Notional Learning Hours
	1. Class Room Lecture (CRL)	30
	2. Practical	30
	3. Self-learning	30
	4. Self-directed learning	10
	5. Small group discussion Tutorials (SGDT)	10
	6. Presentation	10
	7. Assignment/ Projects/ Field Reports	05
	8. Case Study/Problem Based Learning(PBL)	20
	9. Quiz	05
Total		150

Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Practical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Murugesamuthaliyar, K.S..Nanchumurivunool.Department of Indian Medicine and Homoeopathy, Chennai – 600 106\</li> <li>2. Mohamathuigbal,P.A.Sattamsarnthamaruththuvamumnanjumar uththuvamum, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>3. HemamalJayawardena, Forensic Medicine &amp; Medical Law. 2nd edition, Author 542, Duplication Road, Colombo 3 Sri Lanka</li> <li>4. Jayaraj. P. Siddha Toxicology, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>5. Narayan Reddy.K.S. The essential of Forensic Medicine and Toxicology, Jaypee Brothers Medical Publishers</li> <li>6. Text book of clinical forensic medicine and forensic pathology. NiriellageChandrasiri, Galle: publishe, 1998.</li> <li>7. Forensic medicine: a guide to principles. Gordon, H.A.Shapiro and S.D.Berson, 3rd edition, Edinburg: Churchill Livingstone, 1988.</li> <li>8. Medico Legal aspects of injuries. L.B.L.DeAlwis, Colombo: L.B.L.DeAlwis, 2007</li> <li>9. Mohan. R. C, Nandeesar Agaala marana nool, Thamarai Printers, &amp;, NGO Colony, Vadapalani, Chennai</li> </ol>		

<b>Subject Title</b>	: <i>Nanchiyalum Sadda Maruthuvamum</i> – II (Forensic Medicine & Toxicology) - II	
<b>Subject Code</b>	: NSM 3063	
<b>Year &amp; Semester</b>	: Profession III Semester VI	
<b>Credits</b>	: 03	
<b>Status</b>	: Applied Stream (AS)	
<b>Aim:</b> At the end of the sessions, the student should be able to		
1. Obtain the knowledge on Food poison, Animal poison		
2. Study about Injuries, Sexual offence, Death of infants		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know <i>Nanchiyalum Sadda Maruthuvamum</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Explain about Food poisoning	Knowledge	1, 2, 5,10,13
• Disuss agro chemical poison	Skills	7, 8,11
• Elaborate Snake, Bees, wasp, scorpion and spider	Attitude	5,10,13
• Explain Injuries, Sexual offence, Death of infants, Asphyxia, Inquiry of death and report writing	Mindset	1, 2, 3, 5,7, 9,11,13
<b>Content:</b>		
<b>Part I</b>		
1. Study about following topics according to <i>Nandeesar Agaala marana nool</i> , Toxicity due to food, animal and mechanical injuries and offences		
2. Describe the Food poisoning on the following topics		
2.1. Meaning of terms of food poisoning		
2.2. Details of bacterial food poisoning		
2.3. Postmortem appearance and medico legal aspect of food poisoning		
3. Identify the agro chemical poisonin		
3.1. Classification of agent, properties, mechanism of action, clinical features, diagnosis and management of organophosphate poisoning		
3.2. Medico legal aspect of organo chlorine compounds like DDT, Endrin		
4. Household poisoning		
4.1. Cinnamomum camphora (Katpooram)		
4.2. Pyrethrines		
4.3. Naphthalene(Mothballs)		
4.4. Phenol		
5. Demonstrate the different types of Snake in following heading		
5.1. Epidemiology		

- 5.2. Identification
- 5.3. Classification
- 5.4. Clinical features of its poison
- 5.5. Management of snake bite poisoning
- 5.6. Postmortem appearance and medico legal aspect of poisoning

6. Explain about the Bees, wasp, scorpion and spider

## Part II

7. Injuries
  - 7.1. Explain the head injuries
  - 7.2. Describe thoracic , abdominal, pelvic and spinal injuries
  - 7.3. Differentiate the Injuries of the neck and face
  - 7.4. Explain transportation injuries
8. Sexual offence
  - 8.1. Discuss about sexual offence
  - 8.2. Explain abortion
9. Death of infants
  - 9.1. Discuss the infanticide
  - 9.2. Explain Sudden infant death
10. Asphyxia
  - 10.1. Hanging
  - 10.2. Strangulation
  - 10.3. Throttling
  - 10.4. Choking
  - 10.5. Gagging
  - 10.6. Drowning
  - 10.7. Asphyxial stigmata
  - 10.8. Anesthetic and operative death
11. Inquiry of death and report writing
  - 11.1. Scene of crime.
  - 11.2. Inquirers into deaths and inquest procedure, Doctors role in inquests
12. Adverse drug reaction
13. Hypothermia and hyperthermia
14. Burns
15. Preparation of antidote forensic Medicine Records (Practical)

Methods of Teaching and Learning :	Methods	Notional Learning Hours
	1. Class Room Lecture (CRL)	30
	2. Practical	30
	3. Self-learning	30
	4. Self-directed learning	10

	5. Small group discussion Tutorials (SGDT)		10
	6. Presentation		10
	7. Assignment/ Projects/ Field Reports		05
	8. Case Study/Problem Based Learning(PBL)		20
	9. Quiz		05
	<b>Total</b>		<b>150</b>
	<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>
Formative Assessment:		20 %	01
Summative Assessment:		80%	Theory 03 Practical 01
<b>Recommended Readings :</b>	1. Murugesamuthaliyar, K.S..Nanchumurivunool.Department of Indian Medicine and Homoeopathy, Chennai – 600 106\		
	2. Mohamathuigbal,P.A.Sattamsarnthamaruththuvamumnanjumar uththuvamum, Department of Indian Medicine and Homoeopathy, Chennai – 600 106		
	3. HemamalJayawardena, Forensic Medicine & Medical Law. 2nd edition, Author 542, Duplication Road, Colombo 3 Sri Lanka		
	4. Jayaraj. P. Siddha Toxicology, Department of Indian Medicine and Homoeopathy, Chennai – 600 106		
	5. Narayan Reddy.K.S. The essential of Forensic Medicine and Toxicology, Jaypee Brothers Medical Publishers		
	6. Textbook of clinical forensic medicine and forensic pathology. NiriellageChandrasiri, Galle: publishe, 1998.		
	7. Forensic medicine: a guide to principles. Gordon, H.A.Shapiro and S.D.Berson, 3rd edition, Edinburg: Churchill Livingstone, 1988.		
	8. Medico Legal aspects of injuries. L.B.L.DeAlwis, Colombo: L.B.L.DeAlwis, 2007		
	9. Mohan. R. C, Nandeesar Agaala marana nool, Thamarai Printers, &, NGO Colony, Vadapalani, Chennai		

<b>Subject Title</b>	: <i>Siddha Maruthuvam- Pothu - I</i> (Medicine-General - I)	
<b>Subject Code</b>	: SMP 4073	
<b>Year &amp; Semester</b>	: Final Professional Semester VII	
<b>Credits</b>	: 03	
<b>Status</b>	: Clinical Stream (CS)	
<b>Aim:</b> At the end of the sessions, the student should be able to describe of following disease with clinical demonstration, their various names, definition, causes, premonitory signs, signs & symptoms, description about the humoural disorders, pulse reading, complications, Associated disease, fatal signs, Line of treatment, prognosis, specific or special medicines, regimen and diet. Necessary modern scientific correlations shall also be incorporated as and when required.		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Critical thinking for the fundamental importance Siddha Medical knowledge and professional practice</li><li>• Understanding the Siddha basic principle and appreciation of current challenges through siddha knowledge</li><li>• Competent in management of medical problems and medical emergencies</li><li>• Obtain a relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Communicate with patients and family members and obtain a good history</li><li>• Do a complete physical examination</li><li>• Interpret the signs and symptoms and come to diagnosis or differential diagnosis.</li><li>• Perform simple investigations in the side laboratory.</li><li>• Perform basic therapeutic procedures in the ward.</li><li>• Request relevant investigations and interpret the results.</li><li>• Prescribe necessary treatment and manage patients or refer for specialized care.</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Recognize the medical emergencies, manage and refer them to superiors / for specialized treatment.</li><li>• Provide appropriate advice to patients during the stay in ward and on discharge and follow up the patients.</li><li>• Notify the relevant diseases to appropriate authorities.</li></ul>	Attitude	9,10,11

<ul style="list-style-type: none"><li>Communicate to the patient and relatives about the condition of the patient including breaking bad news.</li><li>Respect the rights and values of patients, different individuals and groups</li><li>Ability to respond to the cultural and social context</li></ul>			
<ul style="list-style-type: none"><li>Demonstrate the qualities required to sustain lifelong learning</li><li>Able to predict efficacy and adverse effects associated with use of drug</li><li>Understanding of the roles and functions of indigenous health care institutions</li></ul>	MINDSET	12	
<b>Content:</b>			
<b>Part I</b>			
<ol style="list-style-type: none"><li><i>Vatha noi</i> – Vatha diseases</li><li><i>Pakka vayu</i> – Hemiplegia</li><li><i>Keel vayu</i> – arthritis</li><li><i>Neerina Arukkal noi</i></li><li><i>Neerina Perukkla Noi</i></li><li><i>Neerizhivu</i></li><li><i>Mega neer</i></li></ol>			
<b>Part II</b>			
<ol style="list-style-type: none"><li>Diseases of Nervous System</li><li>Endocrinology and Diabetes Mellitus</li><li>Diseases of Immune system, Connective Tissue and Joints</li><li>Diseases of Kidney and Urinary Tract</li></ol>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>	
	<b>Theory</b>		
	1. Class room lectures	20	
	2. Seminar	10	
	3. LMS based learning	10	
	4. Virtual/Real Group Discussion	10	
	5. Self-directed learning	10	
	6. Self-learning	10	
	<b>Clinical Appointments</b>		
	7. Case scenario discussion	04	
	8. Case presentation	04	
	9. Patient oriented lecture (POL)	12	
	10. History taking and examination in patients	20	
	11. Self-directed learning	20	
	12. Self-Learning	20	
<b>Total</b>	<b>150</b>		
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01



	Summative Assessment:	80%	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<p>Kuppusamy Mudaliar, C.N. <i>Siddha Maruthuvam, (Tamil)</i>, Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</p> <p>2. Mohan, R.C. <i>Yugimuni Vaidhya Chitamani, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</p> <p>3. Shunmugavelu, <i>Noikalukku Siddha Parikaram Part I &amp; II, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</p> <p>4. Shunmugavelu, <i>Siddha Maruthuva Noi Nadal, Noi Mudal Nadal Part -II, (Tamil)</i>. Chennai: The Directorate of Indian Medicine and Homeopathy.</p> <p>5. Sivashanmugarajah, S. <i>Pararasa sekara vaithiyam, (Tamil)</i>, Jaffna, Siddha Maruthuva Vazharchi Kazhagam, Sri Lanka.</p> <p>6. Colledge, N.R, Walker, B.R, Ralston, S.H. Davidson's Principles &amp; Practice of Medicine.</p> <p>7. Edinburgh: Elsevier; 2010. 2. Price, F.W, Scott, R.B. Price's Textbook of the Practice of Medicine.</p> <p>8. London: Oxford University Press; 1966.</p> <p>9. Houghton, A.R, Gray, D. Chamberlain's Symptoms and Signs in Clinical Medicine. (13 ed.). London: Hodder Arnold Publication; 2010.</p> <p>10. Kumar, P, Clark, M.L. Kumar &amp; Clark's Clinical Medicine. Edinburgh: Elsevier; 2009.</p>		

<b>Subject Title</b>	: <i>Siddha Maruthuvam -Pothu- II</i> (Medicine -General - II)	
<b>Subject Code</b>	: SMP 4083	
<b>Year &amp; Semester</b>	: Final Professional Semester VIII	
<b>Credits</b>	: 03	
<b>Status</b>	: Clinical Stream (CS)	
<b>Aim:</b> At the end of the sessions, the student should be able to describe of following disease with clinical demonstration, their various names, definition, causes, premonitory signs, signs & symptoms, description about the humoural disorders, pulse reading, complications, Associated disease, fatal signs, Line of treatment, prognosis, specific or special medicines, regimen and diet. Necessary modern scientific correlations shall also be incorporated as and when required.		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Critical thinking for the fundamental importance Siddha Medical knowledge and professional practice</li><li>• Understanding the Siddha basic principle and appreciation of current challenges through siddha knowledge</li><li>• Competent in management of medical problems and medical emergencies</li><li>• Obtain a relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Communicate with patients and family members and obtain a good history</li><li>• Do a complete physical examination</li><li>• Interpret the signs and symptoms and come to diagnosis or differential diagnosis.</li><li>• Perform simple investigations in the side laboratory.</li><li>• Perform basic therapeutic procedures in the ward.</li><li>• Request relevant investigations and interpret the results.</li><li>• Prescribe necessary treatment and manage patients or refer for specialized care.</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Recognize the medical emergencies, manage and refer them to superiors / for specialized treatment.</li><li>• Provide appropriate advice to patients during the stay in ward and on discharge and follow up the patients.</li><li>• Notify the relevant diseases to appropriate authorities.</li></ul>	Attitude	9,10,11

<ul style="list-style-type: none"> <li>• Communicate to the patient and relatives about the condition of the patient including breaking bad news.</li> <li>• Respect the rights and values of patients, different individuals and groups</li> <li>• Ability to respond to the cultural and social context</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate the qualities required to sustain lifelong learning</li> <li>• Able to predict efficacy and adverse effects associated with use of drug</li> <li>• Understanding of the roles and functions of indigenous health care institutions</li> </ul>	MINDSET	12

**Content:**

**Part I**

8. *Pitha Noi*/ Pitha diseases - Detail study of 40 types of Pitha Noi
9. *Sura Noi vagai* – Different types of fever
10. *Sanni noi* – Delirium
11. *Ammal Noi* – Viral infectious fever
12. *Suvai inmai* – Tastelessness
13. *Seriyamai* (Indigestion)
14. *Neervatkai*-polydipsia
15. *Gunmam* – Abdominal pain
16. *Soolai* – Pain
17. *Vanthi noi* – Emesis
18. *Perunkazhichal noi* – Diarrhea
19. *Ninakazhichal noi* –Bacillary dysentery
20. *Kaduppu kazhichal* - Amoebic dysentery
21. *Oozhi noi* – Cholera
22. *Ulaimaanthai* – acute / chronic enteritis
23. *Kurithi azhal noi* – Bleeding disorders
24. *Veluppu noi* – Anemia
25. *Kaamalai* – Jaundice
26. *Sobai* – Dropsy
27. *Kudiveri noi* – Alcoholism
28. *Mayakkam* – syncope
29. *Thamaraga noi* – cardiac diseases

## Part II

1. Febrile Conditions and blood - Clinical importance of hyper pyrexia, malaria, dengue, filarial, chikungunya, Anemias, bleeding disorders, leukemia, thalassemia.
2. Alimentary Tract, Biliary System - diarrhea, dysentery, vomiting, anorexia, gastritis, gastric and duodenal ulcers, pancreatitis, typhoid, colitis, Gastro esophageal Diseases, Mal absorption syndrome, Inflammatory bowel diseases, Ulcerative colitis, Crohn's disease, enteritis, Irritable bowel syndrome, Jaundice, Hepatitis, Alcoholic and non-alcoholic fatty liver disease, Cirrhosis of Liver, Portal hypertension, Ascites, Hepatomegaly
3. Cardiac diseases – IHD, CCF, fatty heart, hypertension, diseases of arteries and vein

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	Theory		
	1. Class room lectures		20
	2. Seminar		10
	3. LMS based learning		10
	4. Virtual/Real Group Discussion		10
	5. Self-directed learning		10
	6. Self-learning		10
	Clinical Appointments		
	7. Case scenario discussion		04
	8. Case presentation		04
	9. Patient oriented lecture (POL)		12
	10. History taking and examination in patients		20
	11. Self-directed learning		20
	12. Self-Learning		20
	Total		150
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Clinical 01
Recommended Readings :	1. Kuppusamy Mudaliar, C.N. <i>Siddha Maruthuvam, (Tamil)</i> , Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.		
	2. Mohan, R.C. <i>Yugimuni Vaidhya Chitamani, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.		
	3. Shunmugavelu, <i>Noikalukku Siddha Parikaram Part I &amp; II, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.		

	<ol style="list-style-type: none"><li>4. Shunmugavelu, <i>Siddha Maruthuva Noi Nadal, Noi Mudal Nadal Part -II, (Tamil)</i>. Chennai: The Directorate of Indian Medicine and Homeopathy.</li><li>5. Sivashanmugarajah, S. <i>Pararasa sekara vaithiyam, (Tamil)</i>, Jaffna, Siddha Maruthuva Vazharchi Kazhagam, Sri Lanka.</li><li>6. Colledge, N.R, Walker, B.R, Ralston, S.H. Davidson's Principles &amp; Practice of Medicine.</li><li>7. Edinburgh: Elsevier; 2010. 2. Price, F.W, Scott, R.B. Price's Textbook of the Practice of Medicine.</li><li>8. London: Oxford University Press; 1966.</li><li>9. Houghton, A.R, Gray, D. Chamberlain's Symptoms and Signs in Clinical Medicine. (13 ed.). London: Hodder Arnold Publication; 2010.</li><li>10. Kumar, P, Clark, M.L. Kumar &amp; Clark's Clinical Medicine. Edinburgh: Elsevier; 2009.</li></ol>
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<b>Subject Title</b>	: <i>Siddha Maruthuvam- Pothu - III (Medicine–General - III)</i>	
<b>Subject Code</b>	: SMP 4094	
<b>Year &amp; Semester</b>	: Final Professional Semester IX	
<b>Credits</b>	: 04	
<b>Status</b>	: Clinical Stream (CS)	
<b>Aim:</b> To understand and learn about the following disease with clinical demonstration, their various names, Definition, causes, premonitory signs, signs & symptoms, description about the humoral disorders, pulse reading, complications, Associated disease, fatal signs, Line of treatment, prognosis, specific or special medicines, regimen and diet. Necessary modern scientific correlations shall also be incorporated as and when required.		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to:		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"><li>• Critical thinking for the fundamental importance Siddha Medical knowledge and professional practice</li><li>• Understanding the Siddha basic principle and appreciation of current challenges through siddha knowledge</li><li>• Competent in management of medical problems and medical emergencies</li><li>• Obtain a relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li></ul>	Knowledge	1, 2
<ul style="list-style-type: none"><li>• Communicate with patients and family members and obtain a good history</li><li>• Do a complete physical examination</li><li>• Interpret the signs and symptoms and come to diagnosis or differential diagnosis.</li><li>• Perform simple investigations in the side laboratory.</li><li>• Perform basic therapeutic procedures in the ward.</li><li>• Request relevant investigations and interpret the results.</li><li>• Prescribe necessary treatment and manage patients or refer for specialized care.</li></ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"><li>• Recognize the medical emergencies, manage and refer them to superiors / for specialized treatment.</li><li>• Provide appropriate advice to patients during the stay in ward and on discharge and follow up the patients.</li><li>• Notify the relevant diseases to appropriate authorities.</li></ul>	Attitude	9,10,11

<ul style="list-style-type: none"><li>Communicate to the patient and relatives about the condition of the patient including breaking bad news.</li><li>Respect the rights and values of patients, different individuals and groups</li><li>Ability to respond to the cultural and social context</li></ul>		
<ul style="list-style-type: none"><li>Demonstrate the qualities required to sustain lifelong learning</li><li>Able to predict efficacy and adverse effects associated with use of drug</li><li>Understanding of the roles and functions of indigenous health care institutions</li></ul>	MINDSET	12

**Content:**

**Part I**

- Kapha noi*
- Mookkadaippu noi* -Sinusitis and Nasal Block
- Kurat kammal* -Hoarseness of Voice
- Irumal noi* -Cough
- Eraippu noi* -Bronchial Asthma
- Elaippu noi* – Pulmonary Tuberculosis and extra pulmonary diseases

**Part II**

Respiratory tract disease

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	<b>Theory</b>		
	1. Class room lectures		30
	2. Seminar		15
	3. LMS based learning		15
	4. Virtual/Real Group Discussion		10
	5. Self-directed learning		10
	6. Self-learning		20
	<b>Clinical Appointments</b>		
	7. Case scenario discussion		04
	8. Case presentation		04
	9. Patient oriented lecture (POL)		12
	10. History taking and examination in patients		20
	11. Self-directed learning		20
	12. Self-Learning		40
<b>Total</b>		<b>200</b>	
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Clinical 01

<b>Recommended Readings :</b>	<ol style="list-style-type: none"><li>1. Kuppusamy Mudaliar, C.N. <i>Siddha Maruthuvam, (Tamil)</i>, Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</li><li>2. Mohan, R.C. <i>Yugimuni Vaidhya Chitamani, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</li><li>3. Shunmugavelu, <i>Noikalukku Siddha Parikaram Part I &amp; II, (Tamil)</i> Chennai: The Directorate of Indian Medicine and Homoeopathy, Govt. Of Tamil Nadu.</li><li>4. Shunmugavelu, <i>Siddha Maruthuva Noi Nadal, Noi Mudal Nadal Part -II, (Tamil)</i>. Chennai: The Directorate of Indian Medicine and Homeopathy.</li><li>5. Sivashanmugarajah, S. <i>Pararasa sekara vaithiyam, (Tamil)</i>, Jaffna, Siddha Maruthuva Vazharchi Kazhagam, Sri Lanka.</li><li>6. Colledge, N.R, Walker, B.R, Ralston, S.H. Davidson's Principles &amp; Practice of Medicine.</li><li>7. Edinburgh: Elsevier; 2010. 2. Price, F.W, Scott, R.B. Price's Textbook of the Practice of Medicine.</li><li>8. London: Oxford University Press; 1966.</li><li>9. Houghton, A.R, Gray, D. Chamberlain's Symptoms and Signs in Clinical Medicine. (13 ed.). London: Hodder Arnold Publication; 2010.</li></ol>
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<b>Subject Title</b>	: <i>Siddha Maruthuvam- Pothu - IV (Medicine-General - IV)</i>
<b>Subject Code</b>	: SMP 4104
<b>Year &amp; Semester</b>	: Final Professional Semester X
<b>Credits</b>	: 04
<b>Status</b>	: Clinical Stream (CS)
<b>Indented Learning Outcomes :</b>	
<p>At the end of the Siddha Medicine appointment student should be able to,</p> <ul style="list-style-type: none"> <li>• Obtain the knowledge about relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li> <li>• Demonstrate the skills of a physician in Siddha medicine along with the knowledge of contemporary advances in the field of Siddha.</li> <li>• Apply individualized medicine practice based on Siddha fundamental principles such as Imbootham (five elements), Mukkutram (three humors), Yaakkai ilakkanam (body temperament/constitution), Ninety-six thatwas, and so on.</li> <li>• Demonstrate diagnosis through “Envagaithervu including Naadi, Neerkkuri and Neikkuri” and treat Noi (disease) and Noi Mudhal (root cause of the disease) simultaneously.</li> <li>• Prescribe lifestyle modifications and preventive medicine and measures as a part of holistic treatment.</li> <li>• Communicate effectively with patient’s families, colleagues and others.</li> <li>• Demonstrate a commitment to research and adopt evidence based practice for solving problems</li> <li>• Recognize the need for multidisciplinary involvement when necessary</li> <li>• Demonstrate the qualities required to sustain lifelong learning</li> <li>• Carry out professional responsibilities with adherence to ethical principles and an understanding of the legal implications of practice</li> <li>• Function as a team member and a leader in an inter professional team to provide safe and effective patient care</li> <li>• Competent in management of medical problems and medical emergencies</li> </ul> <ol style="list-style-type: none"> <li>1. To demonstrate ability in comprehensive history taking, examination, interpretation and planning of the management of basic medical problems of diseases. <ol style="list-style-type: none"> <li>1.1 Procedures</li> <li>1.2 Line of treatment <ol style="list-style-type: none"> <li>1.2.1 Cleansing procedures to normalize affected doshas</li> <li>1.2.2 Treatment <ol style="list-style-type: none"> <li>1.2.2.1 Internal medicine</li> <li>1.2.2.2 External therapy (if necessary)</li> <li>1.2.2.3 Varma therapy (if necessary)</li> <li>1.2.2.4 Yoga therapy (if necessary)</li> </ol> </li> <li>1.2.3 Diet modifications</li> <li>1.2.4 Rehabilitation</li> </ol> </li> </ol> </li> <li>2. Investigations <ol style="list-style-type: none"> <li>2.1 Envagai thervu</li> <li>2.2 Manikkadai nool</li> </ol> </li> </ol>	

3. Relevant modern diagnostic techniques – Blood Profiles, ECG, X-ray, CT scan, and Ultrasound scan

**Teaching /Learning Methods:**

- Hospital-based clinical training -clinical training in OPD and IPD, bedside clinical training, 15 case records

	Time Allocation		
	Teaching/Learning Activity	Time allocation	
	Clinical Rotation		
	1st appointment	5 weeks (Peripheral hospital)	
	2nd appointment	5 weeks (S.T. H.)	
	3rd appointment	5 weeks (S.T. H.)	
	Ward classes , seminars , case presentations, small group discussion, workshops, assignments		
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Clinical 01

<b>Subject Title</b> : <i>Siddha Maruthuvam-Sirappu (Kayakarpam, Yoga &amp; Psychiatric) - I (Medicine – Special - I)</i>		
<b>Subject Code</b> : SMS 4073		
<b>Year &amp; Semester</b> : Final Professional Semester VII		
<b>Credits</b> : 03		
<b>Status</b> : Clinical Stream (CS)		
<b>Aim:</b> To: 1. To provide the knowledge to describe <i>Katpam, Veri Noikal</i> with clinical demonstration, their various names, definition, causes, premonitory signs, signs & symptoms. 2. To elaborate different types of mental disorders in modern clinical views.		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>To diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li> <li>To gain Knowledge about the different types of <i>Siddha Maruthuvam</i> diseases</li> <li>To outline the different subtypes of <i>Siddha Maruththuva</i> diseases</li> <li>To recognize the emergency health situations &amp; take preventive measure</li> <li>To elaborate the <i>siddha aspect of Siddha Maruthuva</i> diseases.</li> <li>To Analyze the Diseases under Definition, Etiology, sign and symptom and treatment / Management</li> <li>To carry out research studies in patient care / public health and disseminate the findings</li> <li>To counsel and educate patients and their families with empathy</li> <li>To apply the knowledge to diagnose and manage <i>Katpam, Veri Noikal</i> and mental disorders.</li> <li>To demonstrate self-learning in education &amp; practice in Siddha Medical view</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>Perform the general examination and the systemic examination properly</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>Interact with their colleague during the clinical practice</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>Understand and apply the theoretical knowledge in clinical</li> </ul>	Mindset	12

**Content:**
**Part I**

5. *Katpam*: Description of different types, prevention, aetiology, signs and symptoms, clinical features, and treatment and management in Siddha view.

- 1.1. *Katpam*,
- 1.2. *Kayakatpam*,
- 1.3. *Vaayutharanai*,
- 1.4. *Yogasanam*,
- 1.5. *Muppu*
- 1.6. *Kirikai Noikal*,
- 1.7. *Biramai*,
- 1.8. *Unmaatham*
- 1.9. *Veri Noi*,
- 1.10. *Matha azhivu*,
- 1.11. *Kudiveri Noi*,
- 1.12. *Maatha Serukku Noikal*,
- 1.13. *Vallippu Noikal*,
- 1.14. *Moorchai Noikal*,
- 1.15. *Apasmaram*,
- 1.16. *Soothigavaatha Noikal*,
- 1.17. *Kakkaivalippu Noi*

2. *Veri Noikal*: Description, different types, prevention, aetiology, signs and symptoms, clinical features, and treatment and management of *Veri Noikal* in Siddha view.

**Part II**

3. **Mental Disorders**: Description, different types, prevention, aetiology, signs and symptoms, clinical features, and treatment and management of Mental Disorders in Modern aspect.

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	1. LMS based learning		30
	2. Self-study using study guide		40
	3. Case Study/Problem Based Learning		30
	4. Resource based Learning		50
	<b>Total</b>		<b>150</b>
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01
Recommended Readings :	1. Thiagarajan, R. Siththa maruththuvam sirappu, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai.		

	<ol style="list-style-type: none"> <li>2. Ramachchandran. S.P, <i>Pokamunivar varmasooththiram</i>, Thamarai noolakam, vadapalani, Chennai, 600026.1998</li> <li>3. Kannan rajaram. T.,<i>Varma odivu murivu maruththuvam</i>, Vol- 01, A.T.S.V.S. Siththamaruththuvak kalluri, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>4. Kannan rajaram. T.,<i>A text book of Varmam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>5. Kannan rajaram. T.,<i>Varmamruththuvam (pothu)</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2008</li> <li>6. Kannan rajaram. T.,<i>Varmapullikalin eruppidam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2007</li> <li>7. Jeyavenkadesh. J, (2014),<i>Akam puram 64</i>, Sanlaksh publication, Madurai.</li> <li>8. Pudparasu. K.P, (2014), <i>Thamil maruththuvam-Avasarakala puramaruththuva muraikal part I, Part II</i>, Ravanan pathippakam, Kumari mavaddam, Tamilnadu.</li> <li>9. Sanmukam. N, (2016), <i>Varma maruththuvam adippadai kalvi</i>,Thirumoolar varmalogy institute, Coimbatore.</li> <li>6. Kanapathy ramakrishnan, (2007), <i>Yoga kattukollungal</i>, Nalam, Chennai.</li> <li>7. SriSri yoki sivandha paramahamsha, (2012), <i>Sooriya namaskaram Chandra Namaskaram</i>,Kanesha maruthi printers, Bangalore.</li> <li>8. Pon maran, (2016), <i>Thinamum yoga</i>, Addone publishing group, Thiruvandha Puram.</li> </ol>
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	9. Kuppusami muthaliyar. K.N, (2006) <i>Siddha vaithiya thiraddu</i> , Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.
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<b>Subject Title</b>	Faculty of Siddha Medical Health Sciences, 2022-2023 Batch <i>Siddha Maruthuvam -Sirappu</i> (External therapy, & Varmam) -II (Medicine-Special - II)	
<b>Subject Code</b>	: SMS 4083	
<b>Year &amp; Semester</b>	: Final Professional Semester VIII	
<b>Credits</b>	: 03	
<b>Status</b>	: Clinical Stream	
<b>Aim:</b> To:	<div><div>1. To provide the knowledge to describe <i>Varma Maruththuvam</i> with clinical demonstration, their various names, definition, causes, premonitory signs, signs &amp; symptoms.</div><div>2. To elaborate types and subtypes of <i>Varma Maruththuvam</i></div></div>	
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<div><div>• To diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</div><div>• To gain Knowledge about the different types of <i>Siddha Maruthuvam</i> diseases</div><div>• To outline the different subtypes of <i>Siddha Maruththuva</i> diseases</div><div>• To recognize the emergency health situations &amp; take preventive measure</div><div>• To elaborate the <i>siddha aspect of Siddha Maruthuva</i> diseases.</div><div>• To Analyze the Diseases under Definition, Etiology, sign and symptom and treatment / Management</div><div>• To carry out research studies in patient care / public health and disseminate the findings</div><div>• To counsel and educate patients and their families with empathy</div><div>• To apply the knowledge to diagnose and manage <i>Varma Maruththuvam</i></div><div>• To demonstrate self-learning in education &amp; practice in Siddha Medical view</div></div>	Knowledge	1, 2
<div><div>• Perform the general examination and the systemic examination properly</div></div>	Skills	3, 4, 5, 8
<div><div>• Interact with their colleague during the clinical practice</div></div>	Attitude	9,10,11
<div><div>• Understand and apply the theoretica knowledge in clinical</div></div>	MINDSET	12

**Content:**

1. *Varma Maruththuvam*
  - 1.1. Description of *Varma Maruththuva Noikal*,
  - 1.2. Different types
  - 1.3. Prevention
  - 1.4. Aetiology
  - 1.5. Signs and symptoms
  - 1.6. Clinical features
  - 1.7. Treatment
  - 1.8. Management in Siddha view and Modern aspect.

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1.LMS based learning		30
	2.Self-study using study guide		40
	3.Case Study/Problem Based Learning		30
	4.Resource based Learning		50
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Notional Learning Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Thiagarajan, R. <i>Siththa maruththuvam sirappu</i>, Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.</li> <li>2. Ramachchandran. S.P, <i>Pokamunivar varmasooththiram</i>, Thamarai noolakam, vadapalani, Chennai, 600026.1998</li> <li>3. Kannan rajaram. T.,<i>Varma odivu murivu maruththuvam</i>, Vol- 01, A.T.S.V.S. Siththamaruththuvak kalluri, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>4. Kannan rajaram. T.,<i>A text book of Varmam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>5. Kannan rajaram. T.,<i>Varmamruththuvam (pothu)</i>. Siddha maruththuva nool veliyeddalar, munsirai,</li> </ol>		



	<p>puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2008</p> <p>6. Kannan rajaram. T.,<i>Varmapullikalin eruppidam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2007</p> <p>7. Jeyavenkadesh. J, (2014),<i>Akam puram 64</i>, Sanlaksh publication, Madurai.</p> <p>8. Pudparasu. K.P, (2014), <i>Thamil maruththuvam-Avasarakala puramaruththuva muraikal part I, Part II</i>, Ravanan pathippakam, Kumari mavaddam, Tamilnadu.</p> <p>9. Sanmukam. N, (2016), <i>Varma maruththuvam adippadai kalvi</i>,Thirumoolar varmalogy institute, Coimbatore.</p> <p>10. Kanapathy ramakrishnan, (2007), <i>Yoga kattukollungal</i>, Nalam, Chennai.</p> <p>11. SriSri yoki sivandha paramahamsha, (2012), <i>Sooriya namaskaram Chandra Namaskaram</i>,Kanesha maruthi printers, Bangalore.</p> <p>12. Pon maran, (2016), <i>Thinamum yoga</i>, Addone publishing group, Thiruvandha Puram.</p> <p>13. Kuppusami muthaliyar. K.N, (2006) <i>Siddha vaithiya thiraddu</i>, Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.</p>
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<b>Subject Title</b> <i>Faculty of Siddha Medical Sciences - Sirappu (Thol Noikal) -III</i> <i>Batch</i> (Medicine-Special - III)		
<b>Subject Code</b> : SMS 4093		
<b>Year &amp; Semester</b> : Final Professional Semester VIII		
<b>Credits</b> : 03		
<b>Status</b> : Clinical Stream		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. To provide the knowledge to describe <i>Thol Noikal</i> with clinical demonstration, their various names, definition, causes, premonitory signs, signs &amp; symptoms.</li> <li>2. To elaborate types and subtypes of <i>Thol Noikal</i></li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>• To diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li> <li>• To gain Knowledge about the different types of <i>Siddha Maruthuvam</i> diseases</li> <li>• To outline the different subtypes of <i>Siddha Maruththuva</i> diseases</li> <li>• To recognize the emergency health situations &amp; take preventive measure</li> <li>• To elaborate the <i>siddha aspect of Siddha Maruthuva</i> diseases.</li> <li>• To Analyze the Diseases under Definition, Etiology, sign and symptom and treatment / Management</li> <li>• To carry out research studies in patient care / public health and disseminate the findings</li> <li>• To counsel and educate patients and their families with empathy</li> <li>• To apply the knowledge to diagnose and manage <i>Thol Noikal</i></li> <li>• To demonstrate self-learning in education &amp; practice in Siddha Medical view</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>• Perform the general examination and the systemic examination properly</li> </ul>	Skills	3, 4, 5, 8
<ul style="list-style-type: none"> <li>• Interact with their colleague during the clinical practice</li> </ul>	Attitude	9,10,11
<ul style="list-style-type: none"> <li>• Understand and apply the theoretical knowledge in clinical</li> </ul>	Mindset	12

**Content:**

2. *Thol Noikal*

Description, different types , prevention, aetiology, signs and symptoms, clinical features, and treatment and management of

- 1.1. *Kudda Noikal*,
- 1.2. *Venkutam*,
- 1.3. *Sory*,
- 1.4. *Sirangu*,
- 1.5. *Karappan*,
- 1.6. *Padukkai Pun*
- 1.7. *Setru Pun*
- 1.8. *Piththa Vedippu*,
- 1.9. *Kaal aani*,
- 1.10. *Naga Suttru*,
- 1.11. *Akkaram/ Vaaip pun*,
- 1.12. *Verkuru / Venil kaddi* ,
- 1.13. *Muga Paru*,
- 1.14. *Thol Varatchi*,
- 1.15. *Thadippukkal*,
- 1.16. *Kaanakadi*,
- 1.17. *Silvida Thadippukal & Sirupaampuk Kadi*,
- 1.18. *Padar thamarai*,
- 1.19. *Padai / Themal*,
- 1.20. *Puzhu Veddu*,
- 1.21. *Narai*,
- 1.22. *Mayir uthirthal and Vazhukkai*,
- 1.23. *Poduku*,
- 1.24. *Paalunni*,
- 1.25. *Marul*,
- 1.26. *Machcham*,
- 1.27. *Thazhumbu / Meka Thazhumbukal*
- 1.28. *Ammal koppalam*,
- 1.29. *Akki*,
- 1.30. *Kaalanjuka padai*
- 1.31. *Paenkal*. in Siddha view and Modern aspect.

Methods of Teaching and Learning :	Methods		Notional Learning Hours
	LMS based learning		30
	Self-study using study guide		40
	Case Study/Problem Based Learning		30
	Resource based Learning		50
	<b>Total</b>		<b>150</b>
Methods of Assessments :	Methods	Marks	Notional Learning Hours
	Formative Assessment	20 %	01

	Summative Assessment	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Thiyagarajan, R. Siththa maruththuvam sirappu, Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.</li> <li>2. Ramachchandran. S.P, <i>Pokamunivar varmasooththiram</i>, Thamarai noolakam, vadapalani, Chennai, 600026.1998</li> <li>3. Kannan rajaram. T.,<i>Varma odivu murivu maruththuvam</i>, Vol- 01, A.T.S.V.S. Siththamaruththuvak kalluri, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>4. Kannan rajaram. T.,<i>A text book of Varmam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>5. Kannan rajaram. T.,<i>Varmamruththuvam (pothu)</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2008</li> <li>6. Kannan rajaram. T.,<i>Varmapullikalin eruppidam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadai anjal, kanniyakumari mavaddam, tamilnadu.2007</li> <li>7. Jeyavenkadesh. J, (2014),<i>Akam puram 64</i>, Sanlaksh publication, Madurai.</li> <li>8. Pudparasu. K.P, (2014), <i>Tamil maruththuvam-Avasarakala puramaruththuva muraikal part I, Part II</i>, Ravanan pathippakam, Kumari mavaddam, Tamilnadu.</li> <li>9. Sanmukam. N, (2016), <i>Varma maruththuvam adippadai kalvi</i>,Thirumoolar varmalogy institute, Coimbatore.</li> <li>10. Kanapathy ramakrishnan, (2007), <i>Yoga kattukollungal</i>, Nalam, Chennai.</li> </ol>		

	<p>11. SriSri yoki sivandha paramahamsha, (2012), <i>Sooriya namaskaram Chandra Namaskaram</i>, Kanesha maruthi printers, Bangalore.</p> <p>12. Pon maran, (2016), <i>Thinamum yoga</i>, Addone publishing group, Thiruvandha Puram.</p> <p>13. Kuppusami muthaliyar. K.N, (2006) <i>Siddha vaithiya thiraddu</i>, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai.</p>
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<b>Subject Title</b> : <i>Siddha Maruthuvam - Sirappu IV (Medicine – Special - IV)</i>		
<b>Subject Code</b> : SMS 4103		
<b>Year &amp; Semester</b> : Final Professional <b>Semester X</b>		
<b>Credits</b> : 03		
<b>Status</b> : Clinical Stream (CS)		
<b>Aim:</b> To: <ol style="list-style-type: none"> <li>1. At the end of this clinical appointment, the students should be able to,</li> <li>2. Develop the clinical skill in history taking, Physical examination and investigation</li> <li>3. Diagnose the disease and plan the line of management</li> </ol>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
<ul style="list-style-type: none"> <li>• To diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li> <li>• To gain Knowledge about the different types of <i>Siddha Maruthuvam</i> diseases</li> <li>• To outline the different subtypes of <i>Siddha Maruthuvam</i> diseases</li> <li>• To recognize the emergency health situations &amp; take preventive measure</li> <li>• To elaborate the <i>siddha aspect of Siddha Maruthuvam</i> diseases.</li> <li>• To Analyze the Diseases under Definition, Etiology, sign and symptom and treatment / Management</li> <li>• To carry out research studies in patient care / public health and disseminate the findings</li> <li>• To counsel and educate patients and their families with empathy</li> <li>• To apply the knowledge to diagnose and manage <i>Katpam, Veri Noikal</i> and mental disorders.</li> <li>• To demonstrate self-learning in education &amp; practice in Siddha Medical view</li> </ul>	Knowledge	1, 2
<ul style="list-style-type: none"> <li>• Demonstrate the skills of a physician in Siddha medicine along with the knowledge of contemporary advances in the field of Siddha.</li> <li>• Recognize emergency health situations &amp; take preventive measure</li> <li>• Elaborate the Siddha aspect of Surgery and Surgical procedures.</li> </ul>	Skills	3, 4, 5, 8

<ul style="list-style-type: none"> <li>Analyse the Diseases under Definition, Aetiology, sign and symptom and treatment / Management</li> </ul>			
<ul style="list-style-type: none"> <li>Carry out research studies in patient care / public health and disseminate the findings</li> <li>Counsel and educate patients and their families with empathy</li> <li>Apply the knowledge to diagnose and manage diseases in relation to surgery in Siddha medical view</li> <li>Carry out professional responsibilities with adherence to ethical principles and an understanding of the legal implications of practice</li> <li>Interact with their colleague during the clinical practice</li> </ul>	Attitude	9,10,11	
<ul style="list-style-type: none"> <li>Demonstrate self-learning in education &amp; practice in Siddha Medical view</li> <li>Prescribe lifestyle modifications and preventive medicine and measures as a part of holistic treatment.</li> <li>Recognize the need for multidisciplinary involvement when necessary</li> <li>Understand and apply the theoretical knowledge in clinical</li> </ul>	MINDSET	12	
<p><b>Content:</b>            To demonstrate ability in comprehensive history taking, examination, interpretation and planning of the management of basic medical problems of diseases.</p> <ol style="list-style-type: none"> <li>Procedures</li> <li>Line of treatment               <ol style="list-style-type: none"> <li>Cleansing procedures to normalize affected doshas</li> <li>Treatment                   <ol style="list-style-type: none"> <li>Internal medicine</li> <li>External therapy (if necessary)</li> <li>Varma therapy (if necessary)</li> <li>Yoga therapy (if necessary)</li> </ol> </li> <li>Diet modifications</li> <li>Rehabilitation</li> </ol> </li> <li>Investigations               <ol style="list-style-type: none"> <li>Envagai thervu</li> <li>Manikkadai nool</li> </ol> </li> </ol> <p>Relevant modern diagnostic techniques – Blood Profiles, ECG, X-ray, CT scan, and Ultrasound scan</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	Clinical Appointments		<b>150</b>

Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Thiyagarajan, R. Siththa maruththuvam sirappu, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai.</li> <li>2. Ramachandran. S.P, <i>Pokamunivar varmasooththiram</i>, Thamarai noolakam, vadapalani, Chennai, 600026.1998</li> <li>3. Kannan rajaram. T., <i>Varma odivu murivu maruththuvam</i>, Vol-01, A.T.S.V.S. Siththamaruththuvak kalluri, munsirai, puthukkadaai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>4. Kannan rajaram. T., <i>A text book of Varmam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadaai anjal, kanniyakumari mavaddam, tamilnadu.2010</li> <li>5. Kannan rajaram. T., <i>Varmamruththuvam (pothu)</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadaai anjal, kanniyakumari mavaddam, tamilnadu.2008</li> <li>6. Kannan rajaram. T., <i>Varmapullikalin eruppidam</i>. Siddha maruththuva nool veliyeddalar, munsirai, puthukkadaai anjal, kanniyakumari mavaddam, tamilnadu.2007</li> <li>7. Jeyavenkadesh. J, (2014), <i>Akam puram 64</i>, Sanlaksh publication, Madurai.</li> <li>8. Pudparasu. K.P, (2014), <i>Thamil maruththuvam- Avasarakala puramaruththuva muraikal part I, Part II</i>, Ravanan pathippakam, Kumari mavaddam, Tamilnadu.</li> <li>9. Sanmukam. N, (2016), <i>Varma maruththuvam adippadai kalvi</i>, Thirumoolar varmalogy institute, Coimbatore.</li> <li>10. Kanapathy ramakrishnan, (2007), <i>Yoga kattukollungal</i>, Nalam, Chennai.</li> <li>11. SriSri yoki sivandha paramahamsha, (2012), <i>Sooriya namaskaram Chandra Namaskaram</i>, Kanasha maruthi printers, Bangalore.</li> </ol>		



	<p>12. Pon maran, (2016), <i>Thinamum yoga</i>, Addone publishing group, Thiruvandha Puram.</p> <p>13. Kuppusami muthaliyar. K.N, (2006) <i>Siddha vaithiya thiraddu</i>, Indiya maruththuvam homiyopathi thurai, arumpakkam, Chennai.</p>
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<b>Subject title</b> : <i>Kuzhanthai Maruththuvam-I (Paediatrics - I)</i>		
<b>Subject code</b> : KUM 4073		
<b>Year &amp; Semester</b> : Final Professional Semester VII		
<b>Credits</b> : 03		
<b>Status</b> : Siddha Clinical Science Stream (CS)		
<b>Aim:</b> To: 1. Identify the paediatric diseases, diagnosis, treatment and prevention		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to know pathology in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Define Growth & development	Knowledge	1,2
• Explain the Paediatric Examination	Skills	3,4,5,6,8
• Explain the Diet and prevention	Attitude	9,10,11
• Application of clinical paediatric	Mindset	12
<b>Content:</b> <b>Part I</b>  1. <i>Karuvitthontrum noikal</i> 1.1. Explain the <i>karuvitthontrum noikal</i> (sign & symptoms, diagnosis, treatment and the methods to adopt to prevent them).  2. Diet and prevention 2.1. Elaborate the Diet of the baby-Breast milk-Complementary food-nutritional. 2.2. Outline the Prevention of children diseases – Traditional method. 2.3. Explain the Immunization.  3. <i>Akak karana noikal</i> 3.1. Explain the <i>Mandham</i> - Common G.I.T. infections 3.2. Describe the <i>Kanai</i> - Primary Complex, common respiratory infection.  4. Explain the following diseases 4.1. <i>Kiranthi</i> ( <i>Karum kiranthi, Senkiranthi</i> ) 4.2. <i>Karappan</i> , 4.3. <i>Karuvappu, Sevvaappu</i> 4.4. <i>Mantham</i> 4.5. <i>Kazhichchal</i> 4.6. <i>Valippu</i> 4.7. <i>Oothal</i> 4.8. <i>Kaamalai</i>		

<p>4.9. <i>Paandu</i>  4.10. <i>Palar kirakathosham</i>  4.11. <i>Kendathali kunam&amp; chikichchai</i>  4.12. <i>Akkaram</i>  4.13. <i>Thodam</i>,</p> <p>*-Definition, Etiology, sign and symptom and treatment / Management has to be included for the above</p> <p><b>Part II</b></p> <p>5. Growth &amp; development  5.1. Define and Explain the Premature baby.  5.2. Elaborate the growth &amp; development before and after birth &amp; its problem.  5.3. Outline the Period of children.  5.4. Describe the Palar paruvangal.</p> <p>6. Paediatric Examination  6.1. Perform the History taking and Physical examination.  6.2. Demonstrate the New born baby Examination.  6.3. Describe the diseases of Intra uterine Period.</p> <p>7. Clinical demonstration  7.1. Develop the clinical skill in history taking, Physical examination and investigation</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		30
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		30
	4. Resource based Learning/Presentation		30
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03, Clinical 01
<b>Recommended Readings :</b>	<p>1. Ponnaiyapillai.I, <i>Pararasasekaram Palaroganithanam</i>, Committee for the publication of Siddha Medical Texts, Lanka Siddha Ayurvedic Medical College, 127, Stanley Road, Jaffna(Sri Lanka).</p> <p>2. Murugesamudaliar. C. S. <i>Balavagadom</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p> <p>3. <i>Pillaipini Maruthuvam</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p>		

	<p>4. Sivasanmugarajah.s, <i>Kuzhanthai Maruthuvam, Sithamaruthuva Vazharchchi kazhakam</i>, Jaffna, Sri Lanka</p> <p>5. <i>JeevaRatchamirtham</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p> <p>6. <i>AthmaRatchamirtham</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p> <p>7. Hutchinson,.<i>Lectures on diseases of Children</i>, Philadelphia: Churchill Livingstone</p>
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<b>Subject title</b>	: <i>Kuzhanthai Maruththuvam-II (Paediatrics - II)</i>	
<b>Subject code</b>	: KUM 4083	
<b>Year &amp; Semester</b>	: Final Professional semester VIII	
<b>Credits</b>	: 03	
<b>Status</b>	: Siddha Clinical Science Stream (CS)	
<b>Aim:</b>		
To:		
1. To manage the paediatric diseases and prevention		
<b>Intended Learning Outcomes:</b>		
At the end of this course students should be able to know pathology in brief		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
• Identify the paediatric diseases	Knowledge	1,2
• Perform the examination	Skills	3,4,5,6,8
• Management of diseases	Attitude	9,10,11
• Perform the general and systemic examination	Mindset	12
<b>Content:</b>		
<b>Part I - Diseases</b>		
1. Describe about the		
1.1. <i>Suram</i>		
1.2. <i>Sanni</i>		
1.3. <i>Kudatpuzhukkal / Kirumi noai</i>		
1.4. <i>Ammmai</i>		
1.5. <i>Sirangu</i>		
1.6. <i>Palavatham</i>		
1.7. <i>Akki</i>		
1.8. <i>Unnakku</i>		
1.9. <i>Padarthamarai</i>		
1.10. <i>Sooriyavartham, Chanthiravartham</i>		
1.11. <i>Ottaithalaivali</i>		
1.12. <i>Naamuki noai Naa nattam</i>		
1.13. <i>Kakkuvan</i>		
1.14. <i>Sevinoai/ Karnika Noaikal</i>		
1.15. <i>Mala vatham</i>		
<b>Part II</b>		
2. Describe the Diseases of cardiovascular system		
3. Explain the Diseases of alimentary tract		
4. Describe the Diseases of urinary tract		
5. Describe the Disorders of bone and joints		
6. Explain the Endocrine & metabolic disorder		
7. Explain the Skin diseases		
8. Elaborate the Blood disorders		

\*- Definition, Etiology, sign and symptom and treatment / Management has to be included

### Part III - Clinical demonstration

Develop the clinical skill in history taking, Physical examination and investigation

<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		40
	2. Self-study using study guide		40
	3. Case Study/Problem Based Learning		35
	4. Resource based Learning/Presentation		35
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>1. Ponnaiyapillai, I, <i>Pararasasekaram Palaroganithanam</i>, Committee for the publication of Siddha Medical Texts, Lanka Siddha Ayurvedic Medical College, 127, Stanley Road, Jaffna(Sri Lanka).</li> <li>2. Murugesamudaliar. C. S. <i>Balavagadam</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>3. Pillaipini <i>Maruthuvam</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>4. Sivasanmugarajah.s, <i>Kuzhanthai Maruthuvam, Sithamaruthuva Vazharchchi kazhakam</i>, Jaffna, Sri Lanka</li> <li>5. <i>JeevaRatchamirtham</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>6. <i>AthmaRatchamirtham</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li> <li>7. Hutchinson, <i>Lectures on diseases of Children</i>, Philadelphia: Churchill Livingstone</li> </ol>		

<b>Subject Title</b>	: <i>Siroroga Maruththuvam - I (ENT - I)</i>		
<b>Subject Code</b>	: SRM 4073		
<b>Year &amp; Semester</b>	: Final Professional Semester VII		
<b>Credits</b>	: 03		
<b>Status</b>	: Clinical Stream (CS)		
<b>Aim:</b> To: 1. Study about the <i>Vainoikal</i> , <i>Sirasu noikal</i> , Pharyngeal disorders, Diseases of larynx and Trachea			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Study about the <i>Vainoikal</i> , <i>Sirasu noikal</i> , Pharyngeal disorders, Diseases of larynx and Trachea	Knowledge	1, 2	
• Perform the general examination and the systemic examination properly	Skills	3, 4, 5, 8	
• Diagnose the diseases, manage and refer them to superiors / for specialized treatment.	Attitude	9,10,11	
• Understand and apply the theoritical knowledge in clinical aspect	Mindset	12	
<b>Content:</b> <b>Part I</b> 1. <i>Vainoikal</i> 1.1. Describe about the <i>Vai noikal</i> - stomatitis, <i>thantha noikal</i> , <i>earu noikal</i> (Thanthamoolam) 1.2. List out and explain about the <i>Naakku noikal</i> 1.3. Describe about <i>Uthadu noikal</i> 1.4. Elaborate the <i>Thondai noikal</i> (Throat diseases, Hoarseness or loss of voice) 2. <i>Sirasu noikal</i> 2.1. Explain about <i>Sirasu noikal</i> 2.2. Describe the <i>Kapalanoikal</i> 2.3. List out and elaborate the <i>Moolainoikal</i>  <b>Part II</b> 3.Explain about the Diseases of oral cavity and salivary glands- 3.1. Anatomy of Oral Cavity 3.2. Common Disorders of Oral Cavity 3.3. Tumours of Oral Cavity 3.4. Non-neoplastic Disorders of Salivary Glands			

<p>3.5. Neoplasms of Salivary Glands</p> <p>4. Pharyngeal disorders</p> <p>4.1. Describe about the Diseases of pharynx</p> <p>4.2. Anatomy and Physiology of Pharynx</p> <p>4.3. Adenoids and Other Inflammations of Nasopharynx</p> <p>4.4. Acute and Chronic Pharyngitis</p> <p>4.5. Acute and Chronic Tonsillitis</p> <p>4.6. Head and neck Space Infections</p> <p>4.7. Tumours of the Hypopharynx and Pharyngeal Pouch</p> <p>4.8. Snoring and Sleep Apnoea</p> <p>5. Diseases of larynx and Trachea</p> <p>5.1. Explain about the Diseases of larynx and trachea</p> <p>5.2. Anatomy and Physiology of Larynx</p> <p>5.3. Laryngotracheal Trauma</p> <p>5.4. Acute and Chronic Inflammations of Larynx</p> <p>5.5. Congenital Lesions of Larynx and Stridor</p> <p>5.6. Laryngeal Paralysis</p> <p>5.7. Benign Tumours of Larynx and Cancer of Larynx</p> <p>6. Perform the general and systemic examination</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		40
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		30
	4. Resource based Learning		50
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<p>1. Uthamarayanan, Siddhar Aruvaimaruthuvam, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p> <p>2. Mohammed Iqbal, Kanmaruthuvam, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</p>		



	<p>3. Simson Hall I., Bernard.Colman. H, <i>Diseases of the nose, throat and Ear</i>, elsevier chur chill livingstone</p> <p>4. Ponnaiya Pillai. <i>Pararasa Chekaram</i>, Jaffna: Saiva pirakasa sayanthira salai.</p>
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<b>Subject Title</b>	: <i>Siroroga Maruththuvam</i> - II (ENT - II)		
<b>Subject Code</b>	: SRM 4083		
<b>Year &amp; Semester</b>	: Final Professional Semester VIII		
<b>Credits</b>	: 03		
<b>Status</b>	: Clinical Stream (CS)		
<b>Aim:</b> To: 1. Study about the <i>Naasi rogam</i> , <i>Kann noikal</i> (Eye diseases), Ear diseases, Nose and Para nasal sinuses			
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
• Study about the <i>Naasi rogam</i> , <i>Kann noikal</i> (Eye diseases), Ear diseases, Nose and Para nasal sinuses	Knowledge	1, 2	
• Perform the general examination and the systemic examination properly	Skills	3, 4, 5, 8	
• Diagnose the diseases, manage and refer them to superiors / for specialized treatment.	Attitude	9,10,11	
• Understand and apply the theoretical knowledge in clinical	Mindset	12	
<b>Content:</b> <b>Part I</b> 1. Explain about <i>Naasi rogam</i> 2. Describe about the following <i>Sevi noikal</i> with internal and external medicines. 2.1. <i>Sevi vatha noi</i> 2.2. <i>Sevi soolai noi</i> 2.3. <i>Sevi sannai noi</i> 2.4. <i>Sevi vippuruthi noi</i> 2.5. <i>Sevi yezhuchi</i> 2.6. <i>Sevi karappan</i> 2.7. <i>Sevi kuttam</i> 2.8. <i>Sevi paru</i> 2.9. <i>Sevi pilavai</i> 3. Describe about the <i>Kann noikal</i> (Eye diseases) in following aspects 3.1. 96 eye diseases 3.2. Causes of eye diseases 3.3. Preventive aspect of eye diseases 3.4. <i>Nayanavithy</i> <b>Part II</b> 4. Explain about the following Ear diseases			

<p>4.1. Hearing loss</p> <p>4.2. Assessment of vestibular function</p> <p>4.3. Disorders of Vestibular system</p> <p>4.4. Diseases of External Ear</p> <p>4.5. Eustachian tube and its disorders</p> <p>4.6. Disorders of Middle ear</p> <p>4.7. Cholesteatoma</p> <p>4.8. Acute and chronic suppurative otitis media.</p> <p>4.9. Otosclerosis</p> <p>4.10. Facial nerves and its disorders</p> <p>4.11. Meniere's diseases</p> <p>4.12. Tumors of ears</p> <p>4.13. Acoustic Neuroma</p> <p>4.14. Rehabilitation of the Hearing- Impaired</p> <p>4.15. Otagia (Earache)</p> <p>4.16. Deafness</p> <p>4.17. Tinnitus</p> <p>5. Explain about Diseases of Nose and Para nasal sinuses</p> <p>5.1. Diseases of external nose and vestibule</p> <p>5.2. Nasal septum and its diseases</p> <p>5.3. Acute and chronic Rhinitis</p> <p>5.4. Allergic rhinitis</p> <p>5.5. Nasal polypi</p> <p>5.6. Epistaxis</p> <p>5.7. Trauma to the Face</p> <p>5.8. Acute Chronic Sinusitis</p> <p>5.9. Neoplasms of nasal cavity and Para nasal sinuses</p> <p>6. Perform the general and systemic examination</p>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	1. LMS based learning		40
	2. Self-study using study guide		30
	3. Case Study/Problem Based Learning		30
	4. Resource based Learning		50
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01

<b>Recommended Readings :</b>	<ol style="list-style-type: none"><li>1. Uthamarayanan, <i>Siddhar Aruvaimaruthuvam</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li><li>2. Mohammed Iqbal, <i>.Kanmaruthuvam</i>, Department of Indian Medicine and Homoeopathy, Chennai – 600 106</li><li>3. Simson Hall I., Bernard.Colman. H, <i>Diseases of the nose, throat and Ear</i>, elsevier chur chill livingstone</li><li>4. Ponnaiya Pillai. <i>Pararasa Chekaram</i>, Jaffna: Saiva pirakasa sayanthira salai.</li></ol>
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<b>Subject Title</b>	: <i>Aruvai Maruthuvam I</i> (Surgery I)																	
<b>Subject Code</b>	: ARM 4093																	
<b>Year &amp; Semester</b>	: Final Professional Semester IX																	
<b>Credits</b>	: 03																	
<b>Status</b>	: Clinical Stream (CS)																	
<b>Aim:</b> At the end of the sessions, the student should be able to																		
1. Describe Literary surgical evidences, <i>Aruvai</i> procedures in Siddha aspect, <i>Agni therapy, kaaram, Veekam, Kadikkal, Punkal, Silai Pun, Arpa Viranam, Kiranthi, Moolam, Pouthiram, Meka Kaddikal Yaanaikaal Noi, Kandamaalai, Kalladaippu Noikal, Adi thallal, Nakit katti, vithanai noikal, Ankuri Noikal, Penkuri Noikal and Puttru Noikal</i> with clinical demonstration, their various names, definition, causes, premonitory signs, signs & symptoms, types and subtypes of it.																		
2. Elaborate different types of Acute Infections, Wounds, Burns, Bone Fracture, Acute Abdomen, Ano rectal diseases and First aid in modern clinical views.																		
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to:																		
<table><tr><td>ILOs</td><td>Core Area</td><td>Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)</td></tr><tr><td><ul style="list-style-type: none"><li>• Diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li><li>• Knowledge about the different types of diseases in relation to Surgery.</li><li>• Knowledge about different surgical procedures</li></ul></td><td>Knowledge</td><td>1, 2</td></tr><tr><td><ul style="list-style-type: none"><li>• Recognize emergency health situations &amp; take preventive measure</li><li>• Elaborate the Siddha aspect of Surgery and Surgical procedures.</li><li>• Analyse the Diseases under Definition, Aetiology, sign and symptom and treatment / Management</li></ul></td><td>Skills</td><td>3, 4, 5, 6, 8</td></tr><tr><td><ul style="list-style-type: none"><li>• Carry out research studies in patient care / public health and disseminate the findings</li><li>• Counsel and educate patients and their families with empathy</li><li>• Apply the knowledge to diagnose and manage diseases in relation to surgery in Siddha medical view</li></ul></td><td>Attitude</td><td>9,10,11</td></tr><tr><td><ul style="list-style-type: none"><li>• Demonstrate self-learning in education &amp; practice in Siddha Medical view</li></ul></td><td>Mindset</td><td>12</td></tr></table>				ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	<ul style="list-style-type: none"><li>• Diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li><li>• Knowledge about the different types of diseases in relation to Surgery.</li><li>• Knowledge about different surgical procedures</li></ul>	Knowledge	1, 2	<ul style="list-style-type: none"><li>• Recognize emergency health situations &amp; take preventive measure</li><li>• Elaborate the Siddha aspect of Surgery and Surgical procedures.</li><li>• Analyse the Diseases under Definition, Aetiology, sign and symptom and treatment / Management</li></ul>	Skills	3, 4, 5, 6, 8	<ul style="list-style-type: none"><li>• Carry out research studies in patient care / public health and disseminate the findings</li><li>• Counsel and educate patients and their families with empathy</li><li>• Apply the knowledge to diagnose and manage diseases in relation to surgery in Siddha medical view</li></ul>	Attitude	9,10,11	<ul style="list-style-type: none"><li>• Demonstrate self-learning in education &amp; practice in Siddha Medical view</li></ul>	Mindset	12
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)																
<ul style="list-style-type: none"><li>• Diagnose &amp; manage health and disease relating the normal &amp; deranged structure &amp; function of the human body</li><li>• Knowledge about the different types of diseases in relation to Surgery.</li><li>• Knowledge about different surgical procedures</li></ul>	Knowledge	1, 2																
<ul style="list-style-type: none"><li>• Recognize emergency health situations &amp; take preventive measure</li><li>• Elaborate the Siddha aspect of Surgery and Surgical procedures.</li><li>• Analyse the Diseases under Definition, Aetiology, sign and symptom and treatment / Management</li></ul>	Skills	3, 4, 5, 6, 8																
<ul style="list-style-type: none"><li>• Carry out research studies in patient care / public health and disseminate the findings</li><li>• Counsel and educate patients and their families with empathy</li><li>• Apply the knowledge to diagnose and manage diseases in relation to surgery in Siddha medical view</li></ul>	Attitude	9,10,11																
<ul style="list-style-type: none"><li>• Demonstrate self-learning in education &amp; practice in Siddha Medical view</li></ul>	Mindset	12																
<b>Content:</b> <b>Part I</b> 11. Literary surgical evidences																		

12. *Aruvai* (Surgical) procedures
13. *Asura Maruththuvam*
14. *Veekkam / Thadippu* – Swelling/ Inflammations
15. *Kaddikal* (Abscess)
16. *Punkal* (Ulcers)
17. *Silai pun* (Sinus ulcers)
18. *Arpa viranam*
19. *Kiranthi*
20. *Moolam* – Hemorrhoids
21. *Pouthiram* – Fistula
22. *Meka Kaddikal* – Tumours
23. *Yaanaikaal noi*
24. *Kandamaalai*
25. *Kalladaippu Noikal*
26. *Adi thallal*
27. *Nakit katti / (Sthana Vitpuruthi)*
28. *Vithai noikal (Anda rokam)*
29. *Ankuri noikal*
30. *Penkuri noikal*
31. *Puttru noikal*

## Part II - Modern Aspects

1. Acute skin infections
2. Wounds
3. Burns
4. Bone Fracture
5. Acute abdomen
6. Ano Rectal diseases
7. First aid
8. Pre and post-operative care
9. Hernia
10. Renal stones
11. Diseases of testis and scrotum
12. Neck swelling
13. Diseases of artery, vein and lymphatic vessels
14. Carcinoma

Methods of Teaching and Learning :	Methods	Notional Learning Hours
	Theory	30
	1. Class room lectures	
	2. Small group discussions and tutorials	
	3. Problem based learning	
	4. Presentation	

	5. Virtual/Real Group Discussion		
	6. Assignment		
	7. Quiz		
	8. Self-directed learning		90
	9. Self-learning		
	Clinical Appointments		30
	Total		150
Methods of Assessments :	Methods	Marks	Hours
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Clinical 01
Recommended Readings :	1. Uththamarajan, K.S, Siddhar Aruvai Maruththuvam, India maruththuvam homiyopathi thurai,arumpakkam, Chennai.		
	2. Eraththina nayakar. B, (2006), <i>Therayar thailavarka surukkam</i> , Eraththinanayakar and sons, venkadramatheru, kendiththoppu, Chennai.		
	3. Kuppusami muthaliyar. K.N., <i>Siddha maruththuvam-Pothu</i> , Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.		
	4. Thirunarayanan. T, (2010), <i>External therapies of Siddha medicine</i> , Center for traditional medicine and research, Chennai.		
	5. Mokaan.R.C, (2014), <i>Agasthiyar Iranavaithiyam</i> , Thamarai noolakam, Chennai.		
	6. James Garden. O, (2007), <i>Principals and practice of Surgery</i> , Elsevier Churchill livingstone.		
	7. Glive. R.G, (2014), <i>Essential surgery</i> , Elsevier Churchill livingstone.		

<b>Subject Title</b>	: <i>Aruvai Maruthuvam II (Surgery II)</i>		
<b>Subject Code</b>	: ARM 4104		
<b>Year &amp; Semester</b>	: Final Professional Semester X		
<b>Credits</b>	: 04		
<b>Status</b>	: Clinical Stream (CS)		
<b>Aim:</b> At the end of this clinical appointment, the students should be able to, 1. Develop the clinical skill in history taking, Physical examination and investigation 2. Diagnose the disease and plan the line of management 3. clinical views.			
<b>Intended Learning Outcomes:</b> At the end of this Subject students should be able to:			
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)	
<ul style="list-style-type: none"><li>Obtain the knowledge about relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li><li>Knowledge about the different types of diseases in relation to Surgery.</li><li>Knowledge about different surgical procedures</li></ul>	Knowledge	1, 2	
<ul style="list-style-type: none"><li>Demonstrate the skills of a physician in Siddha medicine along with the knowledge of contemporary advances in the field of Siddha.</li><li>Recognize emergency health situations &amp; take preventive measure</li><li>Elaborate the Siddha aspect of Surgery and Surgical procedures.</li><li>Analyse the Diseases under Definition, Aetiology, sign and symptom and treatment / Management</li></ul>	Skills	3, 4, 5, 6, 8	
<ul style="list-style-type: none"><li>Carry out research studies in patient care / public health and disseminate the findings</li><li>Counsel and educate patients and their families with empathy</li><li>Apply the knowledge to diagnose and manage diseases in relation to surgery in Siddha medical view</li><li>Carry out professional responsibilities with adherence to ethical principles and an understanding of the legal implications of practice</li></ul>	Attitude	9,10,11	
<ul style="list-style-type: none"><li>Demonstrate self-learning in education &amp; practice in Siddha Medical view</li></ul>	Mindset	12	



<ul style="list-style-type: none"><li>• Prescribe lifestyle modifications and preventive medicine and measures as a part of holistic treatment.</li><li>• Recognize the need for multidisciplinary involvement when necessary</li></ul>			
<b>Content:</b> To demonstrate ability in comprehensive history taking, examination, interpretation and planning of the management of basic medical problems of diseases. <div><div>3. Procedures</div><div>4. Line of treatment<div><div>2.1. Cleansing procedures to normalize affected doshas</div><div>2.2. Treatment<div><div>2.2.1. Internal medicine</div><div>2.2.2. External therapy (if necessary)</div><div>2.2.3. Varma therapy (if necessary)</div><div>2.2.4. Yoga therapy (if necessary)</div></div></div><div>2.3. Diet modifications</div><div>2.4. Rehabilitation</div></div></div><div>3. Investigations<div><div>3.1. Envagai thervu</div><div>3.2. Manikkadai nool</div><div>3.3. Relevant modern diagnostic techniques – Blood Profiles, ECG, X-ray, CT scan, and Ultrasound scan</div></div></div></div>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>	<b>Notional Learning Hours</b>	
	Clinical Appointments	200	
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment:	20 %	01
	Summative Assessment:	80%	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<div><div>1. Uththamarajan, K.S, Siddhar Aruvai Maruththuvam, India maruththuvam homiyopathi thurai,arumpakkam, Chennai.</div><div>2. Eraththina nayakar. B, (2006),<i>Therayar thailavarka surukkam</i>, Eraththinanayakar and sons, venkadramatheru, kendiththoppu, Chennai.</div><div>3. Kuppusami muthaliyar. K.N., <i>Siddha maruththuvam-Pothu</i>, Indiya maruththuvam homiyopathi thurai,arumpakkam, Chennai.</div></div>		

	<ol style="list-style-type: none"><li>4. Thirunarayanan. T, (2010), <i>External therapies of Siddha medicine</i>, Center for traditional medicine and research, Chennai.</li><li>5. Mogan.R.C, (2014), <i>Agasthiyar Iranavaithiyam</i>, Thamarai noolakam, Chennai.</li><li>6. James Garden. O, (2007), <i>Principals and practice of Surgery</i>, Elsevier Churchill livingstone.</li><li>7. Glive. R.G, (2014), <i>Essential surgery</i>, Elsevier Churchill livingstone.</li></ol>
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<b>Subject Title</b>	: <i>Mahalir Maruthuvam Sool Maruththuvam</i> –I (Gynaecology & Obstetrics - I)	
<b>Subject Code</b>	: MMS 4093	
<b>Year &amp; Semester</b>	: Final Profession Semester IX	
<b>Credits</b>	: 03	
<b>Status</b>	: Clinical Stream (CS)	
<b>Aim:</b> To: <div><div>1. Understand the basic concepts of <i>Sool maruththuvam</i></div><div>2. Get practical knowledge in <i>Sool maruththuvam</i></div><div>3. Identify the root causes, <i>mukkuttraviyal</i> (pathogenesis) and the management of the diseases in <i>Sool maruththuvam</i> based on Siddha system of medicine</div><div>4. Get experience in <i>Sool maruththuvam</i></div></div>		
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain theoretical and clinical knowledge on <i>Sool maruththuvam</i>		
ILOs	Core Area	Categories of Learning Outcome (SLQF, Sep 2015, Page 26 -27)
Gain through knowledge in the basic concepts of <i>Sool maruththuvam</i> , root causes and <i>mukkuttraviyal</i> (pathogenesis) of the diseases during pregnancy and its managements, anti natal and postnatal care	Knowledge	1, 2
Able to interpret the pregnancy and investigational findings and diagnosis the disease during pregnancy based on Siddha system medicine	Skills	3, 4, 5, 8
Practise the intervention to the health problem based on the Siddha system medicine	Attitude	9,10,11
Explore the knowledge in <i>Sool maruththuvam</i> towards Siddha system of medicine	Mindset	12
<b>Content:</b> <b>Part I</b> <b>Gynecology – Siddha aspect</b>  Detail study of following disorders, its management in Siddha aspect with modern comparison <div><div>1. Poopu Kolarugal: (Disorders of Menstruation).</div><div>2. Amennorrhoea – Menorrhagia – Metrorrhagia – Dysfunctional Uterine bleeding – Types – DD -Management and treatment</div><div>3. Soothagavali (Dysmenorrhoea) -Siddha and modern concepts– Management and treatment</div><div>4. Karuppai Adithallal (Displacement of Uterus).Genital prolapse – Retroversion – chronic inversion. – Management and treatment</div><div>5. Maladu - Infertility in Siddha and modern aspects – Types, Treatment and Management</div></div>		

6. Yoni Rogangal Diseases of the Vagina in Siddha aspect and treatment
7. Koopaga Urupugallin azharchi: Infections of the pelvic organs.
8. Vellai -(Leucorrhoea) – Vulvitis – Bartholinitis – Vaginitis – Cervicitis – Endometritis – Salpingitis – Oophoritis – Parametritis – Genital Tuberculosis – Management and treatment
9. Siruneer vega Kolarugal: Urinary problems in Gynecology.
10. Maravai kattigal  
Nan Maravai Kattigal-Karuppai: Benign lesions of the Uterus. Fibroid – polyps. – Management and treatment  
Nachu Maravai Kattigal- Karuppai: Malignant lesions of the Uterus Cancer of cervix, Uterus and Vagina. – Management and treatment  
Nan Maravai Kattigal- Sinaippai- Benign lesions of the ovary.  
Nachu Maravai Kattigal – Sinaippai: Malignant Ovarian Tumors. – Management and treatment
11. Nagil Sothanai: Breast Examination – Fibro adenoma – Carcinoma. – Management and treatment
12. Contraception in siddha

## Part II

### Obstetrics – Siddha aspect

13. *Karu utpaththi*
  - 13.1. Analyze the different school of thoughts of *Karu utpathi* (development of embryo) according to Siddha aspect
  - 13.2. Compare with modern science
14. Diagnosis methods of *Karrpam* (pregnancy)
  - 14.1. *Envagai thervu*
  - 14.2. *Karpa naadi*
15. Explain about *Sisu jananam* (labour) in Siddha aspect
16. Elaborate about the *Karpini pathukappu* (antenatal care)
  - 16.1. *Karpa ratchani*
  - 16.2. *Agasththiyar pindautpaththi*
17. Disorders during pregnancy and after the delivery – Siddha aspect (detail study of following disorders, its management in Siddha aspect)
  - 17.1. *Suronitha kerpa vayu*
  - 17.2. *Kerppa suram*
  - 17.3. *Kerpa soolai*
  - 17.4. *Raththa soolai*
  - 17.5. *Nithamba soolai*
  - 17.6. *Kerpa vayu*
  - 17.7. *Vayittru porumal*
  - 17.8. *Kerpa kirumi*
  - 17.9. *Kerpa vippuruthi*
  - 17.10. *Kerppa punarchi*
  - 17.11. *Kerppa vanjanai*
  - 17.12. *Kerppa maruntheedu*
  - 17.13. *Perumpadu*
  - 17.14. *Kaya suvatham*
  - 17.15. *Abana vayu*

- 17.16. *Kuthirai vali*
- 17.17. *Mantha vali*
- 17.18. *Karum kiranthi*
- 17.19. *Soosika vayu*
- 17.20. *Vellai saayithal*
- 17.21. *Kerpini raththam saayithal*
- 17.22. *Neer kaduppu*
- 17.23. *Suvatha kaasam*
- 17.24. *Maarpu puttru*
- 17.25. *Sool mahotharam*
- 17.26. *Vanthi*

18. Intra uterine fetal death - Management in Siddha aspect

19. Post-natal care (mother and child care) - *Thaisei nalan / karpapathin pin paramarippu muraikal*

- 19.1. Care of the mother and newborn baby
- 19.2. Special medicines and diet for increase milk secretion

### **Part III - Gynecology – Modern aspect**

- 20. Sexually Transmitted Infections.  
Gonorrhoea – Syphilis – AIDS – Hepatitis B & C – Bacterial vaginosis – Trichomonas Vaginitis – monilial vaginitis – Management and treatment
- 21. Urinary Tract Infections – Incontinence – Fistula – Vesico vaginal fistula and Recto vaginal fistula (VVF & RVF). – Management and treatment
- 22. Polycystic ovarian Disease (PCOD) – Siddha treatment. Follicular cyst – Endometrial cyst (Chocolate cyst) – Dermoid cyst. – Management and treatment
- 23. Post-menopausal bleeding – Low backache – Dyspareunia – Pruritus Vulvae – Hirsutism. – Management and treatment - Hermaphroditism Turner syndrome, Klinefelter's syndrome- Virilism - Management
- 24. Contraception
- 25. Infertility
- 26. Gynaecologic problems from birth to adolescence

### **Part IV - Obstetrics – Modern aspect**

- 27. Physiological changes during pregnancy
  - 27.1. Genital organs
  - 27.2. Breast
  - 27.3. Cutaneous changes
  - 27.4. Weight gain
  - 27.5. Hematological changes
  - 27.6. Cardio vascular changes
  - 27.7. Metabolic changes
    - 27.7.1. Systemic changes
    - 27.7.2. Hormonal changes

- 27.8. Diagnosis of pregnancy
  - 27.8.1. First trimester
  - 27.8.2. Second trimester
  - 27.8.3. Last / third trimester
  - 27.8.4. Differential diagnosis of pregnancy
  - 27.8.5. Investigations
- 27.9. Estimation of gestational age and prediction of expected date of delivery
- 28. Antenatal care
  - 28.1. Procedures at the first visit and examination
  - 28.2. Procedures at the subsequent visits and examinations
  - 28.3. Antenatal advice
  - 28.4. Values of antenatal care
  - 28.5. Pre - conceptional counselling and care
- 29. Labour
  - 29.1. Normal labour
  - 29.2. Normal puerperium
- 30. Disorders of pregnancy
  - 30.1. Vomiting
  - 30.2. Hyperemesis gravidarum
  - 30.3. Haemorrhage in early pregnancy
  - 30.4. Abortion
  - 30.5. Ectopic pregnancy
- 31. Multiple pregnancy
- 32. Hydramnios
- 33. Abnormalities of placenta and cord
- 34. Hypertensive disorders in pregnancy
  - 34.1. Pre-eclampsia
  - 34.2. Eclampsia
  - 34.3. Gestational hypertension
- 35. Antepartum Haemorrhage
  - 35.1. Placenta praevia
  - 35.2. Abruptio placenta
  - 35.3. Indeterminate bleeding
- 36. Disorders of amniotic fluid
- 37. Brief study on medical and surgical illness complicating pregnancy
  - 37.1. Haematological disorder
  - 37.2. Heart disorder
  - 37.3. Diabetes mellitus
  - 37.4. Thyroid dysfunction
  - 37.5. Epilepsy
  - 37.6. Tuberculosis

<p>37.7. Viral infections</p> <p>38. Brief study on preterm labour and preterm rupture of the membrane</p> <p>39. Intra uterine fetal death</p> <p>40. Malposition, mal presentation and cord prolapse</p> <p>41. Complication of labour</p> <p>42. Abnormalities of the puerperium</p> <p>43. Post-natal care (mother and child care)</p> <p><b>Clinical</b></p> <ol style="list-style-type: none"> <li>Examination of a gynecological patient <ol style="list-style-type: none"> <li>History</li> <li>Examination</li> </ol> </li> <li>Investigation techniques</li> <li>Imaging studies <ol style="list-style-type: none"> <li>X-ray, Ultrasonography, Computed Tomography (CT) and Magnetic Resonance Imaging (MRI)</li> </ol> </li> <li>Methods of obstetrical examination and diagnosis</li> <li>Conduct the normal labour – preparation of the patient, save perineum, episiotomy, position, septic precautions, delivery of shoulders, ligation of the cord, repair of perineal laceration, placenta examination, retained placenta, care of the baby</li> <li>Investigation techniques</li> </ol>			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	6. LMS based learning		30
	7. Self-study using study guide		50
	8. Case Study/Problem Based Learning		15
	9. Virtual/Real Group Discussion		20
	10. Resource based Learning		35
	<b>Total</b>		<b>150</b>
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01
<b>Recommended Readings :</b>	<ol style="list-style-type: none"> <li>Sivashanmugarah. S., <i>Pararasasekara vaiththiyam moolamum uraiyum part I – Kerparoga nithanam</i>. Siddha maruththuva valarchchikalakam, Jaffna, Sri Lanka.</li> <li>Venugopal. P.M., <i>Sool Maruthuvam</i>, Department of Indian Medicine &amp; Homoeopathy, Govt. of Tamil Nadu, Chennai.</li> <li>Dutta. DC, DC Dutta's Textbook of Obstetrics, Hiralal Konar, JAY PEE Bros. Medical Publishers Pvt. Ltd., ISBN:9789351527237</li> </ol>		

	<ol style="list-style-type: none"><li>4. Prema, <i>Agathiyar vaithiya chinthamani</i>, Thamarai noolakam, Chennai</li><li>5. Kannusami pillai. C. <i>Chikicha rathina deepam 4000</i>, Rathnanayagar &amp; sons, Chennai.</li><li>6. Sanmukavelu. M. Noi naadal noi mudhal nadal Vol.I. Department of Indian Medicine &amp; Homoeopathy, Govt. of Tamil Nadu, Chennai.</li><li>7. Mudaliar and Menon's Clinical Obstetrics, Universities Press Pvt Ltd., Hyderabad.</li><li>8. Pararasasekaram – Kerparoga nithanam</li><li>9. Venugopal, P.M. <i>Makaleer Maruththuvam</i>, Department of Indian Medicine &amp; Homoeopathy, Govt. of Tamil Nadu, Chennai,</li><li>10. Venugopal, P.M. <i>Sool Maruthuvam</i>, Department of Indian Medicine &amp; Homoeopathy, Govt. of Tamil Nadu, Chennai.</li><li>11. Dutta, D.C. DC Dutta's Textbook of Gynecology, Hiralal Konar, JAY PEE Bros. Medical Publishers Pvt. Ltd.</li><li>12. Mudaliar and Menon's Clinical Obstetrics, Universities Press Pvt Ltd., Hyderabad.</li></ol>
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<b>Subject Title</b>	: <i>Mahalir Maruthuvamum Sool Maruthuvamum</i> – II (Gynaecology & Obstetrics - II)
<b>Subject Code</b>	: MMS 4104
<b>Year &amp; Semester</b>	: Final Profession Semester X
<b>Credits</b>	: 04
<b>Status</b>	: Clinical Stream (CS)
<b>Intended Learning Outcomes:</b> At the end of this course students should be able to obtain theoretical and clinical knowledge on <i>Mahalir Maruthuvamum Sool Maruthuvamum</i>	
<b>Clinical Appointment</b> <ul style="list-style-type: none"> <li>• Obtain the knowledge about relevant history in order to compose a rational differential diagnosis, with the intention of selecting appropriate diagnostic tool, and manage accordingly</li> <li>• Demonstrate the skills of a physician in Siddha medicine along with the knowledge of contemporary advances in the field of Siddha.</li> <li>• Demonstrate diagnosis through “Envagaithervu including Naadi, Neerkkuri and Neikkuri” and treat Noi (disease) and Noi Mudhal (root cause of the disease) simultaneously.</li> <li>• Prescribe lifestyle modifications and preventive medicine and measures as a part of holistic treatment.</li> <li>• Communicate effectively with patient’s families, colleagues and others.</li> <li>• Demonstrate a commitment to research and adopt evidence based practice for solving problems</li> <li>• Recognize the need for multidisciplinary involvement when necessary</li> <li>• Demonstrate the qualities required to sustain lifelong learning</li> <li>• Carry out professional responsibilities with adherence to ethical principles and an understanding of the legal implications of practice</li> <li>• Function as a team member and a leader in an inter professional team to provide safe and effective patient care</li> <li>• Competent in management of medical problems and medical emergencies</li> </ul>	
<b>Content</b> <ol style="list-style-type: none"> <li>4. To demonstrate ability in comprehensive history taking, examination, interpretation and planning of the management of basic medical problems of diseases.               <ol style="list-style-type: none"> <li>4.1 Procedures</li> <li>4.2 Line of treatment                   <ol style="list-style-type: none"> <li>4.2.1 Cleansing procedures to normalize affected doshas</li> <li>4.2.2 Treatment                       <ol style="list-style-type: none"> <li>4.2.2.1 Internal medicine</li> <li>4.2.2.2 External therapy (if necessary)</li> <li>4.2.2.3 Varma therapy (if necessary)</li> <li>4.2.2.4 Yoga therapy (if necessary)</li> </ol> </li> <li>4.2.3 Diet modifications</li> <li>4.2.4 Rehabilitation</li> </ol> </li> </ol> </li> <li>5. Investigations               <ol style="list-style-type: none"> <li>5.1 Envagai thervu</li> <li>5.2 Manikkadai nool</li> </ol> </li> </ol>	

5.3 Relevant modern diagnostic techniques – Blood Profiles, ECG, X-ray, CT scan, and Ultrasound scan			
<b>Methods of Teaching and Learning :</b>	<b>Methods</b>		<b>Notional Learning Hours</b>
	Clinical Appointments		200
<b>Methods of Assessments :</b>	<b>Methods</b>	<b>Marks</b>	<b>Hours</b>
	Formative Assessment	20 %	01
	Summative Assessment	80 %	Theory 03 Clinical 01

- Course Specification (Lesson Plan) of each course unit consist of intended learning outcomes (ILOs) for the course, course contents, teaching-learning methods, assessment methods and recommended readings.

## **6. ADDITIONAL FACILITIES**

### **6.1. LIBRARY FACILITIES**



The main library is the central information center of Trincomalee Campus which offers range of reading materials resources & services to support students' academic activities of the Faculty of Siddha Medicine. The Library offers the service books for lending and reading. The journals, encyclopedias, newspapers, e-Journals, and in-house photocopy services at reasonable rate are available for students and staff.

#### **Library hours**

- Scheduled Reference Section – 9.00 am to 03.45 pm (Monday – Friday)
- Periodical Section – 8.30 am to 4.00 pm (Monday – Friday)
- Permanent Reference Section - 8.30 am to 6.00 pm (Monday – Friday) and 8.30 am to 4.30 pm (Saturday)
- Lending Section - 8.30 am to 3.30 pm (Monday – Friday)

## **6.2. CENTER FOR INFORMATION TECHNOLOGY**



A full-fledged Center for Information and Communication Technology is functioning at the Campus. Students can access general IT facilities at the IT laboratory which provides students with opportunities for computer assisted learning. BSMS curriculum offers a course on information Technology during the 2<sup>nd</sup> profession to familiarize students with information technology.

### **6.3. CAREER GUIDANCE UNIT**

The career Guidance Unit, established at the time of commencement of the Trincomalee Campus has been carrying out a great deal of services in developing undergraduates' knowledge, skills, attitude, and professionalism for the new millennium.

#### **Objective**

- To help undergraduates to choose and proceed on an optimal career path based on the students' ability, desire and available opportunities.
- To help undergraduates obtain an orientation to the employment sector and develop transferable skills such as effective communicable skills, leadership skills, team work force.
- To liaise with private and public sector organizations to find out about existing job opportunities bring them to the notice of graduates and direct the most suitable applicants to such organization.

### **6.4. GENDER EQUITY / EQUALITY CELL (GEE)**

Ragging on campus is a legal offense, social abomination, and public health hazard. Violence on campus, Sexual and gender-based violence refers to acts that harm or threaten based on one's gender and/or sexuality and includes practices such as sexual harassment and domestic violence. The University Grants Commission (UGC) has recognized the need to address these deep-rooted issues and has established the Centre for Gender Equity / Equality (GEE) in October 2015 to create socially and gender-sensitive university sub-cultures. This will allow students and staff to pursue their studies and work without discrimination or oppression. The UGC – GEE Centre will be managed directly under the UGC Standing Committee for Gender Equity / Equality.



## **6.5. STUDENTS' HOSTELS**



Trincomalee Campus was established as a residential Campus. It maintains 05 hostels within its premises. There are two male hostels and three female hostels for residential purpose of students of Trincomalee Campus. The Trincomalee campus was originally planned as an entirely residential facility. Due to the increased intake of students in recent years, residential facilities cannot be provided to all the students. Hence, the hostel accommodation provides 1<sup>st</sup> and final year students since 2023. However, more than 1200 students are accommodated in all these 05 hostels based on their eligibility for accommodation.

The administration of hostel affairs is assigned to Student Affairs Division. Academic wardens from the senior academic staff are appointed in charge of the organization and maintenance of discipline in the hall of residence. They are assisted by permanent sub-wardens and part time academic sub-wardens.

## **6.6. HEALTH CENTRE**



Health centre has been functioning since 2008. The health Centre, headed by the University Medical Officer, provides preventive and curative health care to the University community including non-resident students and employees. Campus Medical Centre opens weekdays except public holidays.

In addition, the students seek medical care at the Teaching Hospital of Siddha Medicine, Konesapuri which is near to the Trincomalee Campus.

## 6.7. SPORT FACILITIES AND RECREATION



The Trincomalee Campus Physical Education Unit was established in November 2016. The Physical Education Unit organizes the following activities:

- Inter faculty fresher's championship.
- Inter faculty fresher's-Senior's championship.
- Inter faculty championship.
- (Invites / Open) University games
- Leadership program
- Fitness activity (Gym)

### **Recreation Centre**

The two-story Recreation centre built in 2013 with Indoor games facilities, Gymnasium, and badminton court. Presently Physical Education Unit is functioning in that building. In addition to that three stores canteen have one floor for Recreational common gathering place for students which provides facilities to have cultural and religious activities, symposia, discussions, and guest lectures.





## **6.8. FINANCIAL ASSISTANCE**

Mahapola and bursary Scholarships are awarded to students. In every admission year, students who satisfy the eligibility criteria are selected by University Grants Commission for the Mahapola Scholarships. Likewise, the Bursary Scholarship is awarded to students who satisfy the eligibility criteria, and the Bursary Scholarship form is issued to the students during student registration.

## **6.9. BANKING FACILITIES**

A mobile banking service of Peoples Bank operates within the Campus premises 3 days per week. The students receive their Mahapola Scholarship instalments through this branch. In addition, the Bank of Ceylon ATM/CDM machine function at the entrance of the Campus.

## **6.10. CAFETERIA**



The catering services provide through the well-structured and established canteens located in Trincomalee Campus premises which cater the needs of students & staff where obtain food & beverages at reasonable prices.

## **6.11. COMMERCIALIZATION OF RESEARCH INVENTION (UBL)**

University Business Linkages (UBL) Cell was initiated in Eastern University, Sri Lanka with collaboration of GIZ Small and Medium Enterprises (SME) Development Programme with the approval of the University Grants Commission of Sri Lanka. The main role of UBL cell, which is to be formally established in the University, will coordinate and act as the interface with private sector of Eastern Province. Business Facilitation and support, analysis, strategy design,

organization, documentation, planning and monitoring of UBL portfolio, were identified as the future responsibilities. The cell facilitates the students to commercialize his/her valuable inventions when it channels properly through his/her supervisors.

## **6.12. CICL – WORK WITH COMMUNITY AND INDUSTRY**

Center for Industry and Community Linkage (CICL) established in February 2022 and Unit for Industry and Community Linkage established September 2022 at Campus. Which is a unique featured institution where the university connects and bridge (between community) academic as well as undergraduate having their expertise to be disseminated among the concurrent society for its wellbeing for the last two to three decades. Issues of comprehensive day today life accumulated as problems and fortunately university has the capacity to facilitate for solutions. Therefore, this center CICL will work as a hub to connect solutions for problems. Where university merged within the community here the research influences the development, and the expectation is to commercialize.

This is where the industry comes to support economics of the same community. Technical knowledge and skill will be interpreted via CICL for community's industrialization. The functionality of CICL will be across the faculties, institutes, and campus in a multidisciplinary approach.

## **6.13. LEARNING MANAGEMENT SYSTEMS (LMS)**

The FSM has introduced online Learning Management System recently. The academics use this system to upload content of the courses enabling the students to engage in independent learning.

The LMS provides an online platform for academic administration and allows students to enroll for courses, access lecture notes / study materials, and view results of examinations, notices and announcements posted by the teaching panel. In addition, students can view their personal information by visiting their student profile in the LMS such as registration date, degree completion date, etc.

The student profile displayed in the LMS can be edited only by the relevant authorities. Every student should check the information displayed in his / her LMS account and any inaccurate information should be informed to the registration branch of the Centre for Information Technology.

## **7. EXAMINATION RULES, OFFENCES, PUNISHMENTS AND LEGAL PROCEDURES**

Given below are the Procedures for conduct of Examination recommended by the 336<sup>th</sup> meeting of the Senate and approved by the 325<sup>th</sup> meeting of the Council of the Eastern University, Sri Lanka.

### **7.1. EXAMINATION RULES**

1. Candidates shall be in attendance outside the examination hall at least 15 minutes before the commencement of each paper but shall not enter the halls until they are requested to do so by the supervisor.
2. On admission to the hall, a candidate shall occupy the seat allotted to him / her and shall not change it except on the specific instructions of the supervisor.
3. No candidate shall be admitted to the examination hall for any reason whatsoever after the expiry of half an hour from the commencement of the examination. Nor shall a candidate be allowed to leave the hall until half an hour has lapsed from the commencement of the examination or during the last 15 minutes of the paper.
4. Candidates shall have their Student Record Book, Student Identity Card and Admission Card with them in the examination hall on every occasion they attend for a paper / an exam. The candidature is liable to be cancelled if a student does not produce the Student Record Book. If a candidate fails to bring his / her record book on any occasion, he / she shall sign a declaration in respect of the paper for which he / she had not produced the record book in the form provided for it and produce the record book on the next occasion when he / she appears for the examination. The presentation of the Record Book thus, should be documented on the declaration form. The declaration forms shall be checked by the DR / SAR / AR of the faculty before the release of results.
5. If it is the last paper or the only paper, he / she is sitting, they shall produce the record book to the DR / SAR / AR of the faculty on the following day and get the documentation on the declaration form. <sup>[1]</sup><sub>[SEP]</sub> If a candidate loses his/her record book in

the course of the examination; he/she may present his / her Student Identity Card and shall obtain a duplicate record book from the DR / SAR / AR of the faculty, for producing at the examination hall.

6. No candidate shall have any notes, signs, formulae, mobile phones, smart watches, other communication devices or any other unauthorized documents on his person, in his clothes, on the admission card, time table or record book. Books, notes, parcels, hand bags, mobile phones, other information and communication devices etc. which a candidate has brought with him / her should be kept at a place indicated by the Supervisor / Invigilator.
7. A candidate may be required by the supervisor to declare any item in his possession or person.
8. No candidate shall copy or attempt to copy from any book or paper or notes or similar material or from the scripts of another candidate. Nor shall any candidate either help another candidate or obtain help from another candidate or any other person. Nor shall any candidate conduct himself so negligently that an opportunity is given to any other candidate to read anything written by him/her or to watch any practical examination performed by him. Nor shall any candidate use any other unfair means or obtain or render improper assistance at the examination.
9. No candidate shall submit a practical or field book or dissertation or project study or answer script, which has been done wholly or partly by anyone other than the candidate himself.
10. Candidate shall bring their own pens, ink, mathematical instruments, erasers, pencils, or any other approved equipment or stationary, which they have been instructed to bring.
11. Examination stationery (i.e., writing paper, graph paper, drawing paper, ledger paper, précis paper etc.) shall be supplied as and when necessary. No sheet of paper or answer book supplied to a candidate may be torn crumpled, folded or otherwise mutilated. No paper other than those supplied to him / her by the supervisor / invigilator shall be used by candidates. Log tables or any other material provided shall be used with care and



left behind on the desk. All the material supplied, whether used or unused, shall be left behind on the desk and not removed from the examination halls by the candidate.

12. Every candidate shall enter his / her index number on the answer book and on every continuation paper. He/she shall also enter all necessary particulars as indicated in the cover of the answer book. A candidate who inserts on his script and index number other than his own is liable to be considered as having attempted to cheat. A script that bears no index number or an index number, which cannot be identified, is liable to be rejected. No candidate shall write his name or any other identifying mark on the answer script.
13. All calculations and rough work shall be done only on paper supplied for the examination and shall be cancelled and attached to the answer script. Such work should not be done on admission cards, timetables, question papers, record books or on any other paper. Any candidate who disregards these instructions runs the risk of being considered as having written notes or outline of answers with the intention of copying.
14. Any answer or part of an answer, which is not to be considered for the purpose of assessment, shall be neatly crossed out. If the same question has been attempted in more than one place the answer or answers that are not to be counted shall be neatly crossed out.
15. Candidates are under the authority of the supervisor and shall assist him / her by carrying out his instructions and those of his invigilators, during the examination and immediately before and after it.
16. Every candidate shall conduct himself in the examination hall and its precincts so as not to cause disturbance or inconvenience to the supervisor or his staff or to other candidates. In entering and leaving the hall, he/she shall conduct himself as quietly as possible. A candidate is liable to be excluded from the examination hall for disorderly conduct.
17. Candidates shall stop work promptly when ordered by the supervisor / invigilator to do so.
18. Absolute silence shall be maintained in the examination hall and its precincts. A candidate is not permitted for any reason whatsoever to communicate or to have any

dealings with any person other than the supervisor/ invigilator.

19. During the course of answering a paper, no candidate shall be permitted to leave the examination hall temporarily. In case of an emergency, the supervisor / invigilator shall grant him / her permission to do so but the candidate will be under his surveillance.
20. No person shall impersonate a candidate at the examination, nor shall any candidate allow himself to be so impersonated by another person.
21. Serious note will be taken of any dishonest assistance given to a candidate, by any person.
22. If circumstances arise which in the opinion of the supervisor render the cancellation or postponement of the examination necessary, he / she shall stop the examination, collect the scripts already written and then report the matter as soon as possible to the Vice-chancellor / Registrar.
23. The supervisor / invigilator is empowered to require any candidate to make a statement in writing on any matter, which may have arisen during the course of the examination, and such statement shall be signed by the candidate. No candidate shall refuse to make such a statement or to sign it.
24. No candidate shall contact any person other than the Vice-Chancellor, Dean, Head of the Department or the Registrar regarding any matter concerning the examination.
25. Every candidate shall hand over the answer script personally to the supervisor / invigilator or remain in his seat until it is collected. On no account shall a candidate hand over his answer script to the attendant, a minor employee or another candidate.
26. Every candidate who registers for an examination shall be deemed to have sat the examination unless he / she withdraws from the examination within the specified period or submits a medical certificate. The illness should be informed to the Dean of the Faculty within 7 days from the date of examination and the hardcopy of a Medical Certificate should reach to the Dean, Faculty of Siddha Medicine within 14 days to consider he / she as the proper candidate for the next attempt of examination. The



Medical Certificate shall be from the University Medical Officer. If this is not possible the Medical Certificate should be obtained from a Government Medical Practitioner, and submitted to the University Medical Officer for the certification.

27. When a candidate is unable to present himself for any part / section of an examination, he / she shall notify or cause to be notified this fact to the Assistant Registrar / Senior Assistant Registrar / Deputy Registrar of the faculty immediately and the evidence for the cause as Medical Certificate or any others should be reached as specified in Rule 25 to consider as proper candidate for the next attempt of examination.
28. A student who withdraws or absents himself from the examination and submitted the Medical Certificate within the stipulated time frame shall be eligible for classes if he / she completes the requirements needed to award the class.
29. No student shall sit an examination, if he / she has exhausted the number of attempts, including the proper and three repeats, and a mercy chance with the approval of Faculty Board, Campus Board and the Senate, that he / she is allowed to sit that particular examination, unless he / she has been granted special permission to do so by the Senate.

## **7.2 EXAMINATION OFFENCES AND PUNISHMENTS**

The Examination Rules mentioned below refer to Examination Rules and Regulation Chapter XI of the Manual of Procedure on Conducting Examination, Eastern University Sri Lanka.

1. Any candidate who violates Examination Rule 5 shall be deemed guilty of the offence of possession of unauthorized documents and shall be liable to cancellation of his candidature from the examination and to any further punishment that the Senate may decide upon.
2. Any candidate who violates Examination Rule 7 shall be deemed guilty of the offence of copying and shall therefore be liable to cancellation of his candidature from the examination and to be prohibited from sitting any examination of the university for a period of time and to any other punishment that the Senate may decide

3. Any candidate who violates Examination Rule 8 shall be deemed guilty of the offence of having cheated at the examination and shall be liable to the cancellation of his candidature from the examination and to be prohibited from sitting any examination of the university for a period of not less than three years and to any further punishment that the Senate may decide.
4. Any candidate who is detected removing examination stationary and other material provided for the examination (Rule 10) shall be deemed guilty of an examination offence and shall be liable for punishment including cancellation and / or prohibition from sitting any examination of the university for such period as may be specified by the Senate.
5. Any candidate who violates any one or more of the Examination rules 6, 14, 15, 16, 17 or 18 shall be deemed guilty of the offence of disorderly conduct and shall be liable to punishment including cancellation / or prohibition from any examination of the university for such period as may be specified by the Senate.
6. Any candidate who violates Examination Rule 19 shall be guilty of the offence of impersonation and shall be liable to cancellation of candidature from the examination and to be prohibited from sitting any examination of the university for a period of not less than 5 years and to any further punishment that the Senate may decide. He / she may also be liable to any punishment under the penal code / criminal law.
7. Any candidate who violates Examination Rule 20 shall be guilty of an examination offence and shall be liable to cancellation of candidature from the examination and to any further punishment that the Senate may decide upon.
8. Any candidate found aiding and abetting in the commission of any of the above examination offences shall be deemed to have committed that offence and shall be liable to the same punishments.

### **7.3. LEGAL PROCEDURES FOR VIOLATION OF EXAMINATION RULES**

There shall be an Examination Disciplinary Committee of not less than 3 members appointed annually, at the beginning of each Academic Year, by the Senate to enquire into and make recommendations (including punishments) into examination offences referred to it. Members should be from different faculties, to ensure that at least two members are from another Faculty when an inquiry is under process.

#### **7.3.1. PROCEDURE FOR REPORTING OF EXAMINATION OFFENCES AND PUNISHMENT**

1. In all cases of violation of examination rules (Chapter XI) detected, the Supervisor shall take actions as outlined in this section and forward his report to the DR / SAR / AR of the faculty. The Supervisor's report should be countersigned by one of the invigilators.
2. In cases of disorderly conduct the supervisor shall in the first instance warn the candidate to be of good behavior. Disorderly conduct shall be considered grave, only if such conduct in the opinion of the supervisor is considered as causing a disturbance in the conduct of the Examination. Where the candidate persists in unruly or disorderly conduct the supervisor may exclude the candidate from the examination hall and issue him/her a letter with copies to the relevant Dean and DR / SAR Academic Affairs, cancelling his /her candidature from the examination. Where a candidate's offence is only disobedience the supervisor shall warn the candidate and forward a report to Dean and DR / SAR Academic Affairs.
3. In all other cases of examination offences detected, the Supervisor shall on the detection of the offence take possession of unauthorized documents if any and obtain a statement from the candidate and write his report on the matter to the Dean of the faculty. Materials taken into custody shall be authenticated by placing the signature of the candidate and the Supervisor/invigilator and the date time and place of detection.
4. The Dean after a preliminary inquiry shall place all reports of examination offences submitted by the Supervisors to the Exam Disciplinary Committee for further action.
5. Any examiner, Head of Department or any other official of the University who detects an examination offence, shall report the matter in writing to the Dean, who shall call for a preliminary inquiry and place the complaint to the Exam Disciplinary Committee for further action.

### **7.3.2. FINAL DECISION ON EXAMINATION OFFENCES**

1. The punishments recommended by the Examination Disciplinary Committee shall be submitted to the relevant Faculty Board for a decision and be referred to the Senate for ratification.

## **7.4 APPEALS BOARD**

1. There shall be an Appeals Board, consisting of three members, appointed by the Vice-Chancellor to consider the decisions made under Section 14.5.
2. Any student wishing to appeal against the punishment imposed on them should write to the Vice-chancellor in this regard within two weeks from the date of communication to them.

The vice-chancellor shall consider the appeal and may decide to refer to the Appeals Board. Appeals Board shall either affirm or review the imposed punishment and make recommendation to the Vice- Chancellor.

## **8. CODE OF CONDUCT FOR SIDDHA MEDICAL STUDENTS**

As a Siddha Medical student, you are embarking on a life-long journey of learning to serve the public responsibly. This is an excellent opportunity as you will soon have the chance to heal and care for people in society. The society contributes significantly to your career development not just economically but also through their time and privacy while you learn from their illnesses. Ultimately, becoming a Siddha Medical Practitioner is a life-long commitment which brings high social recognition and vast expectations from your conduct. Achieving this goal will give you the happiness of becoming a good and caring Siddha Medical Practitioner.

### **8.1. ATTITUDE TOWARDS LEARNING**

As a Siddha Medical student, your responsibility for learning goes beyond simply gaining knowledge and skills. You must also cultivate good attitudes and behaviors that are appropriate for a Siddha Medical Practitioner. Additionally, your learning should be continuous and self-reflective throughout your career as a Siddha Medical Practitioner. This involves gaining clinical experience, engaging in wide reading and sharing experiences with others. It is important to work collaboratively with others in a harmonious manner in order to achieve these goals.

### **8.2. RELATIONSHIP WITH PATIENTS, SOCIETY, TEACHERS & COLLEAGUES**

#### **8.2.1. RAPPORT**

Establishing authentic and compassionate rapport with patients, instructors and other healthcare professionals is a crucial aspect of providing effective healthcare. Occasionally, such relationships may lead to emotional connections. A better understanding of this dynamic will train you to handle these situations with emotional flexibility and without experiencing significant psychological distress.

### **8.2.2. UNCONDITIONAL RESPECT AND CARE**

As a healthcare professional including as a Siddha Medical Practitioner, it is essential to provide unconditional respect and care to all patients and colleagues, regardless of their social status, attitudes, or behavior. This is a valuable skill that you must cultivate from the outset of your career starting from your undergraduate studies.

### **8.2.3. COMMUNICATION**

Effective communication is an essential component of clinical practice and requires continuous learning and practice to enhance one's natural abilities. To become skilled communicators, healthcare professionals should follow certain guidelines such as avoiding a dominating tone or voice, asking open-ended questions, actively listening and expressing empathy in a humane manner. Moreover, it is important to terminate discussions respectfully to maintain a positive relationship with patients and colleagues. These simple rules can be developed and improved throughout one's career to ensure effective communication in clinical practice.

## **8.3. MEDITATION**

Students must participate in the meditation daily 8.00 a.m. to 8.30 a.m. to increase the learning capacity and to maintain positive attitude which will lead to eminence in medical profession.

## **8.4. DRESS CODE**

In accordance with the rich traditions of our culture and the importance of professionalism in the medical practice, the Faculty of Siddha Medicine must adopt strict clothing guidelines for students.

As future Siddha Medical Practitioner, it is important to dress appropriately and meet the expectations of society. A professional appearance promotes confidence and earns respect. To achieve this, students should follow the rules of simplicity, cleanliness, and modesty.

Medical scrubs or white coats must be always worn in hospitals and laboratories. Males should not wear slippers or sandals, while females should avoid extravagant high heels and excessive makeup. Facial expressions are vital in communication; therefore, covering the face should be avoided.

In case of violation of the dress code the student concerned will be asked to leave the academic session / Examination. If a student repeatedly violates the dress code, strict disciplinary action will be taken against him / her.

#### 8.4.1. RECOMMENDED DRESS CODE

For Males

- Trousers and collared shirts
- Shoes and socks

For Females

- Blouse and skirt (Blouse must extend to the waist band and skirts must extend below the knee level)
- Shalwars
- Abaya
- Sarees
- Formal footwear

#### 8.4.2. STRICTLY PROHIBITED

- T-shirts, shorts, and trousers with extra pockets
- Caps, sports shoes
- Extra body adornment
- Extreme hair styles (e.g., “spiked hair”, multicolored, make-up, piercing set)
- Beards
- Revealing clothes such as miniskirts, sleeveless tops etc.
- Wearing concealing clothes that prevent clear identification of the student (the face should be always clearly visible)

#### 8.4.3. DRESS CODE FOR EXAMINATION

	Viva voice Examination	Practical Examination	Clinical Examination
<b>Male</b>	White shirt with Black formal trouser and tie.	White coat	White shirt with Black / formal trouser with white coat
<b>Female</b>	White Saree / White Abaya	White coat	White Saree / White Abaya with white coat

### **8.5. USE OF DRUGS, ALCOHOL AND SMOKING**

It is essential to avoid using drugs, consumption of alcohol and smoking is strictly prohibited. Refraining from these habits in your personal life will improve your reputation as a responsible physician.

### **8.6. CONTINUE TO TAKE PART IN NON-MEDICAL INTERESTS**

Nurture and develop your artistic abilities and other talents, as they can be beneficial in your medical profession. Set aside time to engage in these activities and manage your schedule accordingly.

### **8.7. USE OF MOBILE PHONE**

Usage of Mobile phones are strictly prohibited in Lecture halls, Practical halls and Clinical lecture hours and examination halls.

### **8.8. SIDDHA MEDICAL STUDENT'S PLEDGE**

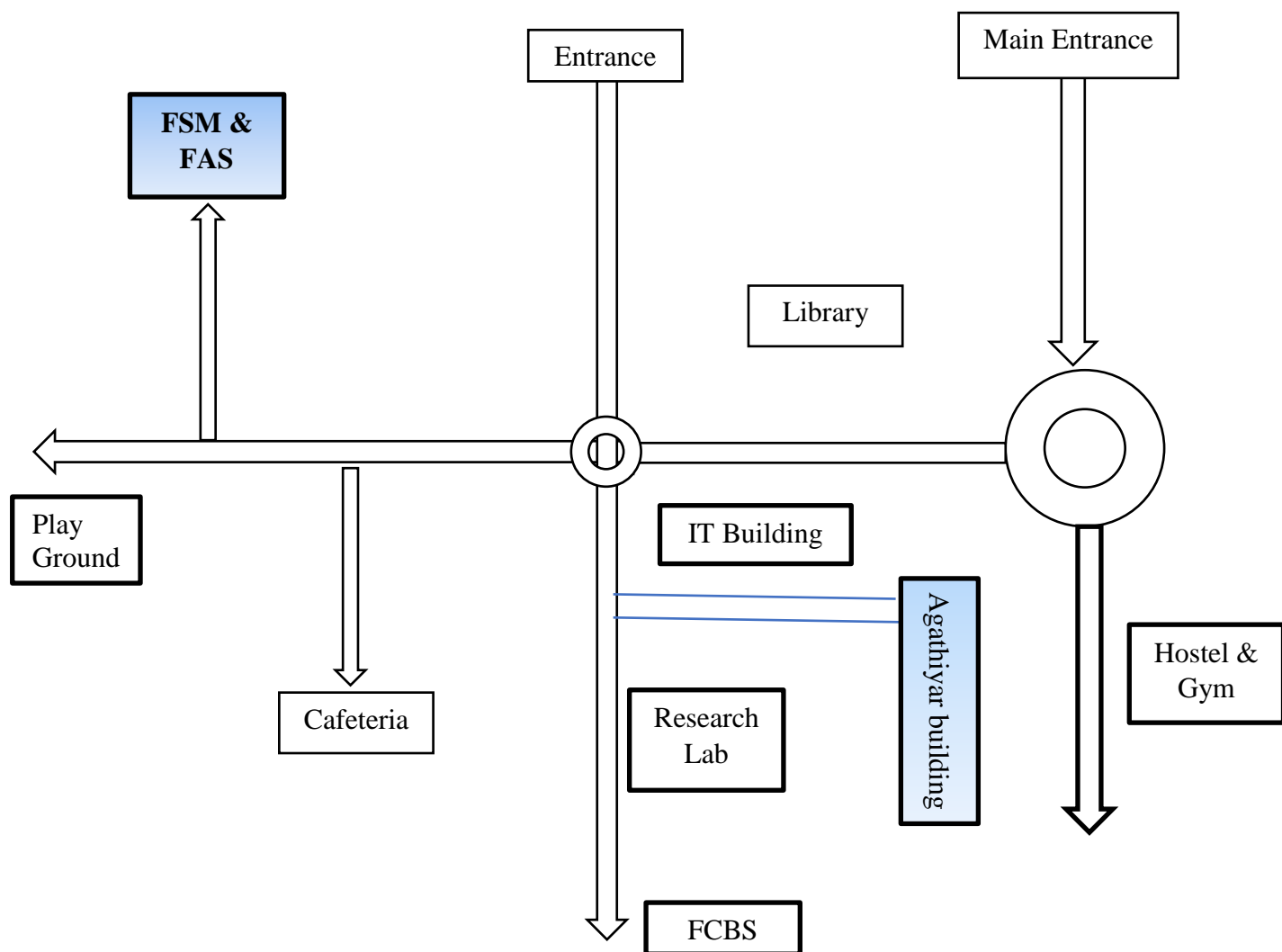
1. It is my sincere pledge to strive to obtain the knowledge, abilities and attitudes required to become a skillful Siddha Medical Practitioner to the best of my capabilities.
2. I recognize the significance of learning both independently and as a team in partnership with my colleagues and other healthcare professionals.
3. I will devote myself to mastering both the scientific principles and the art of Siddha Medicine.
4. I acknowledge that I have a responsibility to maintain a way of life that is expected of the medical profession by society.
5. I will provide all patients regardless of their social status, attitudes or behavior with unconditional respect and the highest possible level of care.
6. I will always maintain professional secrecy while adhering to the principle of sharing information and being aware of my personal limitations in disclosing information.
7. During my undergraduate period, I will not identify myself as a Siddha doctor nor pretend to be one.



8. I am grateful for the contributions and dedication of patients, teachers, healthcare professionals, my parents, and society at large towards my training and I acknowledge them with appreciation.
9. I will never exploit or abuse my relationship with patients for personal gain whether direct or indirect.
10. I will strictly adhere to the expected ethical behavior established by the Sri Lanka Ayurveda Medical Council.
11. I will comply with the rules and regulations of the society, the Unit of Siddha Medicine and the hospital where I will receive my clinical experience.
12. I will always dress appropriately particularly when interacting with patients.
13. I will maintain communication with my guardian, family members and unit members and request their assistance when needed.
14. I will nurture empathy, effective communication skills and a patient-centered attitude.

The University has ownership rights to about 298 acres of land. The faculties, resident halls, administrative offices, staff quarters, offices, and centers for extracurricular activities all occupy around 40% of the land.

The Faculty of Siddha Medicine located at the 3<sup>rd</sup> floor of Faculty of Applied Science. The Faculty of Applied Science is nearly 1 km from the entrance of Trincomalee Campus.



## 10. SITE MAP

