

# *Revised Curriculum*

## **Bachelor of Siddha Medicine and Surgery (BSMS)**

**Unit of Siddha Medicine  
University of Jaffna  
2023**



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# 1.0 Introduction

## 1.1 Preamble

The University of Jaffna Sri Lanka, has a rich history that dates back to its establishment as the Jaffna Campus of the University of Sri Lanka in 1974. Since then, it has emerged as the epicenter of higher education in Northern Sri Lanka, with a staunch commitment to promoting education and culture within the Tamil-speaking community. Following the Universities Act number 16 of 1978, the Jaffna Campus transitioned into an independent, autonomous national university and was officially renamed as the University of Jaffna on January 1, 1979. Its humble beginning as a Campus with only three faculties namely the Faculty of Science, Faculty of Humanities and Faculty of Medicine - has since evolved into a University with a total of eleven faculties, boasting an impressive undergraduate population of over 13,000.

The Siddha System of Medicine is an Indigenous System, and is considered as a cultural heritage of the Tamil community. In 1929, the College of Indigenous Medicine was established in Borella, Colombo to consolidate various forms of Indigenous Medicine, including Ayurveda, Siddha and Unani with the enactment of the Ayurveda Act No. 31 of 1961. The College was renamed as the College of Ayurvedic Medicine and later the College was elevated to the status of Institute of Indigenous Medicine (IIM) affiliated to University of Colombo in April, 1977. It is worth noting that the Institute of Indigenous Medicine played a crucial role in developing the three unique Indigenous Medical Degree Programs; each with its own unique curriculum, in 1983.

- Bachelor of Ayurvedic Medicine and Surgery (BAMS)
- Bachelor of Siddha Medicine and Surgery (BSMS)
- Bachelor of Unani Medicine and Surgery (BUMS)

The University of Colombo underwent a significant restructuring in 1984 following the aforementioned changes, which led to the transfer of the Siddha Section to the University of Jaffna. As a result, the section of Siddha Medicine found a new home in the Faculty of Arts as a Department and began to operate with the facilities existing at Kaithady, which is about eleven kilometers away from the University. In 1993, the Department formally commenced the academic activities. In October 1995, the Department of Siddha Medicine was brought under the direct control of the Vice Chancellor and functioned as a Unit of Siddha Medicine. At present, the Unit of Siddha Medicine attracts the students from all over Sri Lanka, with the student intake increasing from 50 (in 2016) to above 100 (in recent years); 123 numbers in the academic year 2020/2021.

The Council of the University of Jaffna has authorized a proposal to promote the Unit of Siddha Medicine to a Faculty. This decision was recommended at the 444<sup>th</sup> meeting (held on 30.06.2020) of the Senate and approved by the 444<sup>th</sup> meeting of the Council held on 03.07.2020. The proposal has been recommended by the University Grants Commission (UGC) to the Ministry of Education with the aim of elevating to Faculty of Siddha Medicine. The Cabinet of Ministers has recommended the establishment of the Faculty of Siddha Medicine and now the gazzete notification is awaited.

## **1.2 Vision, Mission and Values of Siddha Medicine**

### **The Vision**

To be a leading center of excellence in teaching, learning, research and scholarship in Siddha Medicine.

### **The Mission**

To produce competent graduates with sound knowledge and skills in Siddha Medicine and Surgery who could serve in the National Health Care System and engage in research and innovation in Siddha Medicine with special emphasis on the social, economic and spiritual development to foster and promote the cultural heritage.

### **Values**

**Excellence:** Promoting quality of Siddha Medicine being extremely good.

**Integrity:** Maintaining the highest academic, professional and ethical standards of Siddha Medicine and practice through trust, honesty and respect.

**Diffusion:** Disseminating knowledge of Siddha Medicine through teaching and learning, research and community engagement.

**Equity, Equality and Inclusion:** Ensuring equity and equality and valuing difference and respect for all the students, staff and stakeholders of Siddha Medicine.

**Care:** Recognizing and serving to the Siddha Medicine based on the needs of students, staff and society.

**Transparency and Accountability:** Ensuring freedom of thoughts and expression of Siddha Medicine and accountability in all activities.

**Passion:** Fostering creativity, ingenuity, and innovation of Siddha Medicine.

### **1.3. Rationale for Revising the Curriculum**

The curriculum of the Unit of Siddha Medicine underwent thorough revision in 2008, which was further updated in 2016 to align with the Sri Lanka Qualification Framework (SLQF). Feedback from stakeholder surveys and recommendations from the Quality Assurance Program Review Committee were considered while making the revisions. This new curriculum is designed to replace the traditional teaching methods with innovative students centered teaching and emphasizes the Students centered, Problem-based, Integrated teaching, Community-based, Elective and Systematic learning (SPICES) approach.(Table I)

Further, the assessment methods are given more emphasis on Structured and Objective originated evaluation, ensuring the students to acquire a comprehensive understanding of the subject matters. The Unit of Siddha Medicine is committed to continually reevaluating its curriculum to ensure that it meets the national requirements and modernize the educational processes with the cultural basis. This curriculum is divided in to three phases such as Pre-clinical, Para-clinical and Clinical.

The revised curriculum focuses on greater emphasis on practical, fieldwork, and clinical experience, allowing students to gain hands-on experience in the field of Siddha Medicine. In particular, the Para Clinical Phase, in addition to the clinical exposure, special emphasis is given to Research Projects. Additional subjects have been added to increase the weightage of the fundamentals of Siddha Medicine, and students are given exposure to other branches of Indigenous Medicine, such as Ayurveda and Unani Medicines as well as to Allopathic Medicines. These revisions aim to produce graduates who are well-rounded and equipped with the skills and knowledge necessary to succeed in their careers.

As a result of these revisions, all stakeholders are expected to benefit, including graduates who will have ample opportunities to pursue careers both Nationally and Internationally. The Unit of Siddha Medicine remains committed to provide a dynamic and relevant curriculum that prepares the students to excel in all the areas of Siddha Medicine.

## **1.4. Scope of BSMS Degree Programme**

The BSMS is a comprehensive, full-time five-year degree program that aims to equip students with the knowledge, skills, abilities, and mind set necessary to become competent practitioners in Siddha Medicine. The scope of the program is defined by its program learning outcomes, which are the expected achievements of students upon completing the academic program. These outcomes encompass a broad range of knowledge and skills, including diagnostic and therapeutic competencies, research skills, ethical awareness, and the ability to integrate Siddha Medicine with other Medical Systems.

The graduate profile serves as a roadmap for the cognitive, personal, and interpersonal competencies that the students should possess upon graduation. The BSMS program aims to produce graduates who are capable of thinking critically and analytically, with a deep understanding of the principles and practices of Siddha Medicine. Graduates should also possess a high degree of emotional intelligence and interpersonal skills, enabling them to build relationships with patients and colleagues effectively. The program aims to develop graduates who are committed to ethical and professional conduct, lifelong learning, and making a positive impact on society through their work in the field of Siddha Medicine.

### **1.4.1. Program Learning Outcomes (PLOs)**

- PLO 01: Apply Siddha and related modern sciences to identify, evaluate and solve health problems.
- PLO 02: Demonstrate proficiency in clinical, laboratory, and field procedures, including patient examination, sample collection, and analysis of results.
- PLO 03: Communicate effectively through presentations, case discussions, and report writing, using appropriate terminology and language, to convey information to both professional and lay audiences.
- PLO 04: Collaborate effectively with experts in special clinical problems, demonstrating teamwork and leadership skills in diagnosis, treatment and management.
- PLO 05: Apply critical thinking and decision-making skills to diagnose and manage complex health problems and promote health and disease prevention in the community.
- PLO 06: Develop entrepreneurial skills in the preparation of medicines used by Siddha Physicians, and demonstrate the ability to create new employment opportunities in the field.

- PLO 07: Demonstrate effective information management skills in both learning process and the healthcare environment.
- PLO 08: Engage responsibly in preventive and curative health, social, and cultural environments to promote individual, community, and national wellbeing.
- PLO 09: Exhibit adaptability and flexibility in clinical practice and show the ability to absorb new trends and knowledge.
- PLO 10: Exhibit good attitudes, values, and professionalism in applying knowledge gained from the degree program, and utilize them for the achievement of organizational excellence.
- PLO 11: Develop the vision for career opportunities and create the roadmap for career progression.
- PLO 12: Demonstrate self-updating and lifelong learning strategies in personal development, with a vibrant set of goals.

### 1.4.2. Graduate Profile

The graduate profile of the BSMS graduates is describe in the Figure I.

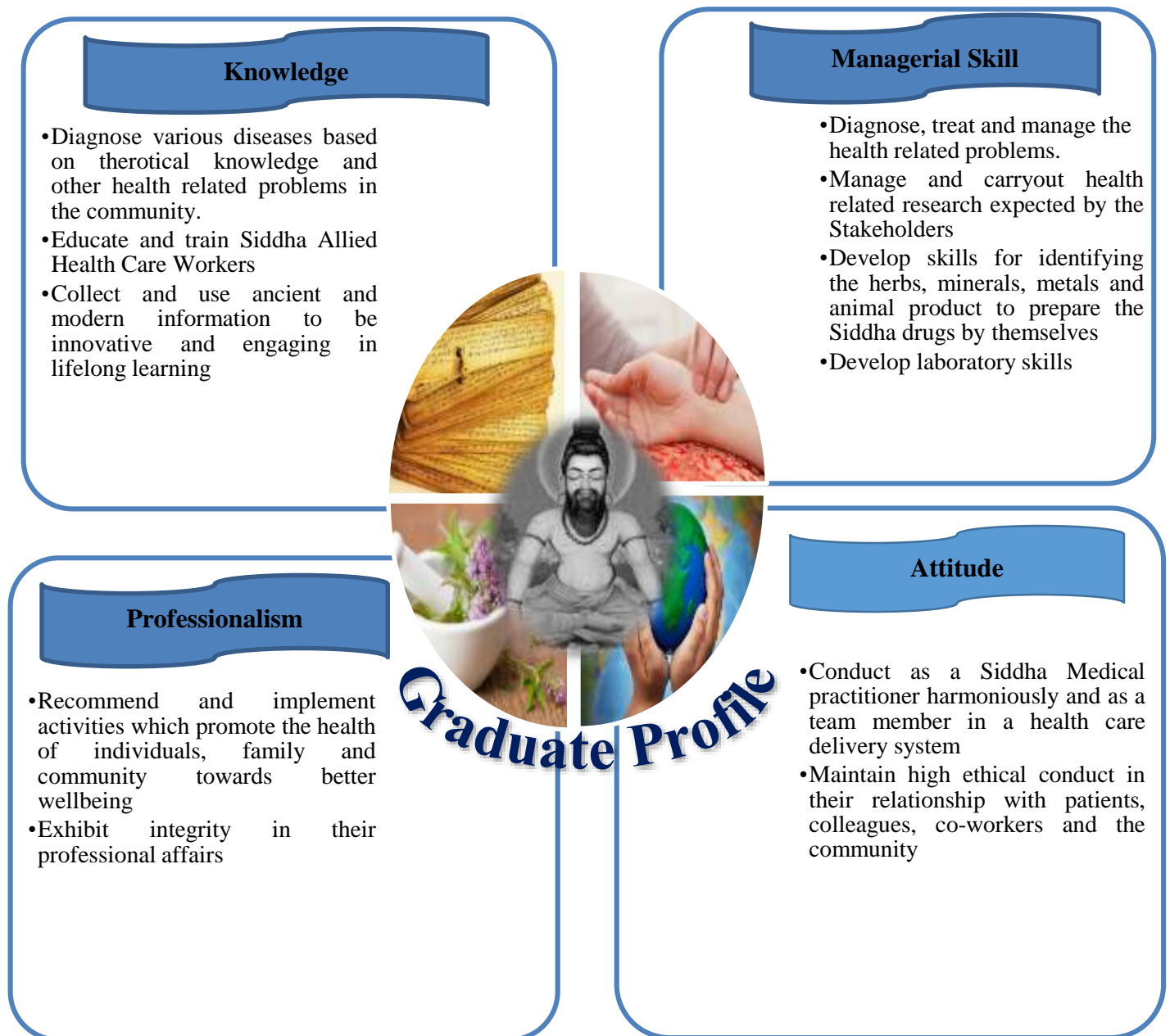


Figure I: Graduate profile of BSMS Degree

## 1.5. Structure of BSMS Degree Programme

**Table I:** Details of structure of BSMS Degree programme

Details of Degree Programme		
University	University of Jaffna, Sri Lanka	
Unit	Unit of Siddha Medicine (to be gazetted as Faculty of Siddha Medicine)	
Nature of the Programme	Traditional Curriculum with SPICES model	
SLQF level	Level - 6	
System of Curriculum	Term basis	
Name of the Degree	Bachelor of Siddha Medicine and Surgery	
Abbreviation	BSMS	
Duration	05 Years	
Medium	Tamil	
Volume of Learning	Total Direct Contact Hours	4418+600*=5018
	Equivalent Credits	144 + 6* = 150
	Notional Hours	7200+600=7800
	Induction Programme (Co-Module subjects (English and IT)	165 (Equivalent Credits 10)

\*Research Project

## 1.6. Teaching and Learning

A range of different instructional methods will be used to create and engage student-centered learning environment, which includes lectures, small group discussions, tutorials, presentations, assignments, laboratory experiments, fieldwork, research projects, clinical case presentations, and community based research projects.

The total hours of 4418 will be allocated for the BSMS study programme; of which 953 hours will be allocated for taught subjects, 630 hours for laboratory studies and, 2835 hours for field and clinical studies. For Research Project, 600 hours will be allocated in the Para Clinical Phase have on the SLQF 2015 (Table II). This approach aims to provide students with the essential knowledge, skills, and competencies needed to succeed in the field of study through a dynamic and interactive learning experience.

**Table II:** Distribution of allocated notional hours for each phase

Phase	Distribution of Direct Contact Hours				Equivalent Credits of Core Subjects	Notional Hours
	Direct Contact Hours	Lecture	Practical	Field / Clinical		
Phase I- Pre Clinical	863	398	465	-	40	2000
Phase II - Para Clinical	1215+600*	375	165	675	44+6	2200+600*
Phase III - Clinical	2340	180	-	2160	60	3000
<b>Total</b>	<b>4418+600*</b>	953	630	<b>2835</b>	<b>144+6</b>	<b>7200+600*</b>

Definitions of Core and Co-module Subjects are given in Section 1.7.

\*Research Project

### Industrial Training

In Phase II core subjects, the students will have the opportunity to gain practical, hands-on drug preparation methods and shall have better understanding on different drugs. To enrich this knowledge, the students shall be sent to different pharmaceutical industries in Northern, Eastern and Western Provinces. This shall help them to witness the handling of modern machinery and equipment in the local industries. Upon completion of the industrial training, students must submit a comprehensive industrial training report.

### Clinical Training

The aim of this training is to provide the opportunity to gain clinical experience by working institutions mainly at the Kaithady Siddha Teaching Hospital, different Rural and District Siddha Hospitals located in the Northern and Eastern Provinces. Furthermore, students will be encouraged to observe and learn from Siddha Traditional Physicians who are practicing in Northern Province. In addition, the students will also be visiting the Borella Ayurveda Teaching Hospital and Gampaha Wickramarachchi Hospital to obtain the Ayurvedic clinical knowledge. The students will have chances to gather experiences in the Western Medical practice in Teaching Hospital - Jaffna, Chest Clinic - Pannai and Cancer Trial Hospital - Tellipalai mainly for the referral purposes. These diverse clinical training experiences will provide students with a deeper understanding on the challenges and opportunities expected to provide healthcare services under varieties of settings and prepare them to meet the complex needs of patients in their future career.

## **Field Visit**

The aim of the field visit is to identify the distribution of the flora and fauna in different geographical areas in Northern and Eastern Provinces. Student will gain the skill for mapping and collecting the mineral & metal and animal based material, and the parts of medicinal plants for preparing the herbal album and nurseries.

During the Phase I, in the core subjects of study, the students shall visit the herbal gardens in Northern Province to gain skills on cultivation of medicinal plants in small scale, preparation of nurseries beds, herbal pest control, preparation of natural organic composed and preservation of herbal, animal, mineral & metal raw materials.

Phase II students will visit various renowned herbal gardens such as the Government Herbal Gardens attached to the Department of Ayurveda and the National Royal Botanical Garden Herbarium in Peradeniya to enrich their botanical knowledge and gain practical experience in identifying, studying medicinal plants and to understand the methods of authentication of the medicinal plants. These immersive and hands-on experiences will provide students with a deeper understanding on the properties and uses of medicinal plants and equip them with the skills necessary to identify and utilize these valuable natural resources in their future practice of Siddha Medicine.

## **1.7. Type of Subjects**

The study program consists of core and co-module subjects.

### **Core Subjects**

The BSMS degree program requires the students to complete all the core subjects, which are essential for the acquisition of foundational knowledge, skills, attitudes, and mindset. These courses are offered in three phases: Pre-Clinical, Para-Clinical, and Clinical, and are mandatory for all students admitted to the program. Through these core course units, students will be equipped with a comprehensive understanding of the principles and practices of Siddha Medicine and Surgery, enabling them to develop a strong foundation for their future academic and professional endeavours.

## **Co-module subjects**

The Bachelor of Siddha Medicine and Surgery Degree program consists of various co-modules designed to supplement and enrich the core subjects. English Language and Information Technology (IT) are co-module subjects and will be taught during the Induction Programme. This programme will be conducted twelve weeks. These subjects are essential for students. They need to successfully complete these co-modules before entering the Phase III (Clinical), with a minimum grade of 50%, to be eligible for obtaining the degree.

## **1.8. Evaluation Procedures and Examination**

### **1.8.1. Assessment of a Subject**

The BSMS program evaluates each of the core and co-module subjects. The evaluation process comprises In-course Assessments and an End-of-Course Examinations. The End-of-Course Examinations of the core subjects will be conducted in three phases:

Phase I BSMS Examination

Phase II BSMS Examination and

Phase III BSMS Examination

#### **1.8.1.1. In-Course Assessments**

In-Course Assessment shall be ongoing and well-structured process designed to evaluate the progress of the student in a subject. Each In-Course Assessment, will be conducted at the end of each term. The 100 marks will be allocated for each In-Course Assessment and shall contribute 30 marks of the End-of-Course Assessment. The different methods of evaluation of each In-Course Assessment methods are given under the evaluation method of each of the subject in the detailed curriculum.

If the students are unable to complete the In-Course Assessment due to a medical or any other valid reason, they may request for makeup assessments. The request must be made in writing to the Head of the Unit within five days.

#### **1.8.1.2. End-of-Course Examination**

The End-of-Course Examination is the final assessment that includes various components such as multiple-choice questions, structured essay questions, practicals, spot examinations, viva-voce, clinical examinations, and research project reports. The components included may vary depending on the subject, and each subject is assessed independently.

The student must obtain a minimum of 50% marks overall and at least 45% marks for each component except for the viva-voce examination to pass. The marks allocation for the End-of-Course assessment methods is mentioned under the evaluation method of each of the subject in the detailed curriculum.

The viva-voce examination will be conducted by a panel of two examiners for each subject of Phases I, II and *Paramparai Maruthuvam* in Phase III.

Clinical Examination - The long case examination will be conducted by a panel of two examiners among the two, one should be the external examiner for each clinical subjects of the Phase III. One external examiners will be appointed for atleast two Panel of short case clinical examination of each subjects in the Phase III and Noi Nadal & Chikitsai Adippadaithathuvangal in Phase II.

Siddha Medical Officers who are taking clinical lectures at Siddha Teaching Hospital in particular subject / in-charge for the particular clinics at the Hospital they will appoint as External examiner in Phase III and Noi Nadal & Chikitsai Adippadaithathuvangal in Phase II.

#### **1.8.1.3. Repeating the End-of-Course Examination**

- If a student fails to pass the End-of-Course BSMS examination (1<sup>st</sup>), a Repeat Examination (2<sup>nd</sup>) will be held in six weeks after the release of the results of the End-of-Course Examination (1<sup>st</sup>).
- The schedule for the Repeat Examination (2<sup>nd</sup>) will be announced to the students subsequent to the release of the results, and it will be held at the end of the 6<sup>th</sup> week from the date of the release of results.
- Students who are unable to attend the examination due to medical grounds or valid reason (such as bereavement), shall submit a student appeal with Medical Certificate or supporting documents (valid reason) with Head of the Unit. The appeal must be submitted within seven days of the examination. The Medical Certificate shall be forwarded to get the recommendation of the University Medical Officer by the Head of the Unit. The Senate approval will be sought and the attempt will be treated as a “1<sup>st</sup> attempt” for the next available End-of-Course Examination. There shall be no academic penalty.
- When a student sits for the Repeat Examination as a second attempt, the In-Course Assessment marks will not be factored in. However, it is possible for them to attain a maximum grade of "B," and the student will loose the eligibility obtain a class.

## **1.8.2. Eligibility Requirements to Sit for the End-of-Course Examination**

### **1.8.2.1. Attendance**

The students must gain a minimum of 80% in the lecture, tutorial, practical and clinical components. The students do not attain the required attendance shall be requested to the students have to cover the missed lecture/ tutorial/ practical / clinical to sit for the following exam.

### **1.8.2.2. Attempts of End- of -Course Examination**

- Students are permitted to take up to four scheduled attempts at Phase I, six scheduled attempts at Phase II and four scheduled attempts at Phase III BSMS Examination.
- Notwithstanding, it is expected that students complete the course within ten years from the date of their enrollment.
- Student fails to apply to the particular examination, it will be considered as one attempt.

## **1.8.3. Title of the Examinations**

The end-of-course examinations conducted for the Degree of Bachelor of Siddha Medicine and Surgery shall carry the following titles for the Particular Phase of the Examination (Table III).

**Table III:** Title of the Examinations

<b>Name of Examination</b>	<b>Proper Examination</b>	<b>Repeat Examination</b>
Phase I BSMS Examination	Phase I BSMS Examination End- of- the Fourth Term	The date of the Repeat Examination will be announced to the students after the Results board.
Phase II BSMS Examination	Phase II BSMS Examination End- of- the Ninth Term	
Phase III BSMS Examination	Phase III BSMS Examination End- of- the Fifteenth Term	

### 1.8.4. Grading Criteria

Table IV: Grading Criteria

Range of Marks	Core and Co-module Subjects
75 % or above	Distinction
70 - 74%	A
60 – 69%	B
50 - 59 %	C
Below 50%	F

A student must obtain a minimum of a "C" grade in all the Core and Co-Module Subjects in the BSMS Degree Program to complete the subjects. (Table IV)

### 1.8.5. Bar Examination

#### Bar I at Phase I (Pre Clinical)

- A candidate shall be permitted to follow Phase II / Para Clinical courses of BSMS Study Programme once he or she passes all the Core Subjects of Phase I / Pre Clinical BSMS Examination.

#### Bar II at Phase II (Para Clinical)

- A candidate shall be allowed to follow the Phase III / Clinical Courses of BSMS study programme once he or she passes all the Core Subjects of Phase II / Para Clinical and all the Co-Module Subjects.

## 1.9. Degree Awarding Criteria

### 1.9.1. BSMS Awarding

The criteria for awarding the BSMS degree are:

- 1) Complete a total of subjects 20: Phase I- Preclinical (06 subjects), Phase II – Para Clinical (08 subjects), Phase III – Clinical (06 subjects) and the Co-module subjects (English Language & IT).
- 2) Obtain a minimum passing mark of 50% in all core subjects and 40% in all co-module subjects of the programme.

- 3) Obtain a minimum of 45% for Written, Practical/Clinical components of the all-core subjects and total of 50% in the End -of -Course Examination.
- 4) Obtain a minimum 60% for Research Project.
- 5) Satisfy all the aforementioned requirements (1-4) within a maximum of ten academic years from the initial enrolment in the University, including for instances of approved medical withdrawal.

A student who has satisfied the above requirements for the award of the BSMS degree within five academic years shall be awarded as specified below Table V:

**Table V:** Award of Class

<b>Categories of Class</b>	<b>Average of the Total Marks</b>	<b>Minimum Required Grades</b>
First Class	69.5 % or above	15 D's and 5 A's
Second Class Upper Division	64.5 % or above	15 A's and 5 B's
Second Class Lower Division	59.5 % or above	15 B's and 5 C's
Pass	50% or above	20 C's

### **1.9.2. Determining the (effective) Date of the Degree**

The effective date of conferral for the BSMS degree shall be the last day of the written examination of the End of Course Examination of Phase III. However, for students who need to repeat any subjects, the effective date of the degree shall be the last day of the written examination of the repeated subject. If a student pursues the fallback option, the effective date will be decided based on the UGC Commission Circular No. 04/2021 dated April 7, 2021.

### **1.9.3. Release of Results – Examination Board**

The Head of the Unit of Siddha Medicine holds the responsibility of collecting marks from the examiners, conducting a scrutiny and ascertain board, and recommending the results to the Examination Branch for further processing. The results are then submitted for approval to the Senate. The scheduling of the Board of Examiners is the responsibility of the Deputy Registrar/Senior Assistant Registrar/Assistant Registrar of the Examination Branch at the University of Jaffna.

#### **1.9.4. Early Exit or Fall-back Option (Bachelor of Siddha Science – BS.Sc.)**

Pursuant to Commission Circular No. 04/2021 issued on April 7, 2021, students who have completed the five-year study program but failed to meet the requirements of Phase I, II, and III (SLQF Level 6 -) courses may now avail for the fallback option. Those who successfully complete the Phase I and II (SLQF level 5) courses would be granted Bachelor of Siddha Sciences Degree.

**Note:**

If a student is unable to complete the BSMS program after finishing Phase II, they may be eligible for the BS.Sc degree. However, it should be noted that the BS.Sc degree is not equivalent to the BSMS degree and does not qualify the holder to register with Sri Lanka Ayurvedic Medical Council (SLAMC) as a Siddha Medical practitioner.

## Curriculum Overview 2023

Curriculum Overview 2023																		
Year 1				Year 2				Year 3			Year 4			Year 5				
Induction programme	T1	T2	T3	T4	Ex	T5	T6	T7	T8	T9	Ex	T10	T11	T12	T13	T14	T15	Ex
1. Orientation Programme 2. English Language 3. Information Technology	<b>Phase I of BSMS Degree</b>				<b>Phase I Examination</b>	<b>Phase II of BSMS Degree</b>					<b>Phase II Examination</b>	<b>Phase III of BSMS Degree</b>					<b>Phase III Examination</b>	
	1. <i>Thathujeevaviyal</i> 2. <i>Pathartha Guna Vignanam</i> 3. <i>Siddhaamruththuva Moolathathuvamum Udatkootieyalum</i> 4. <i>Siddhamaruthuvam varalarum uyar thamizhum</i> 5. <i>Siddha Udalthathuvamum Udattholilieyalum</i> 6. <i>Uyirrasayanam</i>					1. <i>Marunthusei muraieyal</i> 2. <i>Mooligaieyal</i> 3. <i>Samooganala Maruthuvam</i> 4. <i>Paarampariya Unavum Aarokiyamum</i> 5. <i>Nanchieyalum Neethi Maruthuvamum</i> 6. <i>Chikitsai Adippadaithathuvangal</i> 7. <i>Noi Naadal</i> 8. Research Project						1. <i>Siroroga Maruthuvam</i> 2. <i>Aruwai Maruthuvam</i> 3. <i>Mahalir Maruthuvamum Mahapetieyalum</i> 4. <i>Kuzhanthai Maruthuvam</i> 5. <i>Paramparai Maruthuvam</i> 6. <i>Maruthuvam</i>						
	<b>Pre Clinical Subjects</b>					<b>Para Clinical Subjects</b>						<b>Clinical Subjects</b>						

## Curriculum Overview 2023 in English

Curriculum Overview 2023 in English																		
Year 1					Year 2					Year 3			Year 4			Year 5		
Induction programme	T1	T2	T3	T4	Ex	T5	T6	T7	T8	T9	Ex	T10	T11	T12	T13	T14	T15	Ex
1. Orientation Programme 2. English Language 3. Information Technology	<b>Phase I of BSMS Degree</b>				<b>Phase I Examination</b>	<b>Phase II of BSMS Degree</b>					<b>Phase II Examination</b>	<b>Phase III of BSMS Degree</b>					<b>Phase III Examination</b>	
	1. Mineral, Metal & Animal Materialized Medicines 2. Materia Medica 3. Basic Principles of Siddha Medicine & Anatomy 4. History of Siddha Medicine & Advanced Tamil 5. Siddha <i>Udalthathuvam</i> and Physiology 6. Biochemistry					1. Pharmacy 2. Pharmacology 3. Community Medicine 4. Traditional Food and Wellness 5. Toxicology & Forensic Medicine 6. Fundamentals of Therapeutics 7. Pathology 8. Research Project						1. Ear, Nose, Throat Medicine, Ophthalmology & Dentistry 2. Surgery 3. Gynaecology and Obstetrics 4. Paediatrics 5. Traditional Medicine 6. Medicine						
	<b>Pre Clinical Subjects</b>					<b>Para Clinical Subjects</b>						<b>Clinical Subjects</b>						

**Title** : **BSMS Co-Modules Programme**

**Duration** : **12 Weeks**

**Table VI:** Details of the Co-module subjects

<b>SN</b>	<b>Name of the Subjects</b>	<b>Credits</b>	<b>Hours</b>	<b>Notional Hours</b>
1.	English Language	8	120	400
2.	Information Technology	2	45	100
	<b>Total</b>	<b>10</b>	<b>165</b>	<b>500</b>

Induction programme shall commence three months prior to the academic programme. Co-module subjects will be taught three months of the Induction Programme. The student should complete all the pre-clinical, para-clinical and co-module subjects before entering the clinical phase.

Title of Degree

Bachelor of Siddha Medicine & Surgery BSMS

Level

Pre-Clinical (Phase I)

Duration

04 Terms

Table VII: Pre-Clinical Subjects with allocated hours

SN	Name of the Subjects		Components							Notional Hours	
			Lectures+ Tutorial/ Small group discussion		Practical		Clinical/Field		Total		
			C	H	C	H	C	H	C		
1.	தாதுஜீவவியல் <i>Thathujeevaeyal</i>	Mineral, Metal & Animal Materialized Medicines	4	60	4	180	-	-	8	400	
2.	பதார்த்த குண விஞ்ஞானம் <i>Pathartha Guna Vignanam</i>	Materia Medica	4	60	4	120	-	-	8	400	
3.	சித்தமருத்துவ வரலாறும் உயர் தமிழும் <i>Siddhamaruthuva Varalarum Uyar Thamizhum</i>	History of Siddha Medicine & Advanced Tamil	5	75	-	-	-	-	5	250	
4.	சித்தமருத்துவ மூலதத்துவமும் உடற்கூற்றியலும் <i>Siddhamaruthuva Moolathathuvam Udatkootieyalum</i>	சித்தமருத்துவ மூலதத்துவம் <i>Siddhamaruthuva Moolathathuvam</i>	Basic Principles of Siddha Medicine & Anatomy	3	45	1	30	-	-	4	200
		உடற்கூற்றியல் <i>Udatkootieyal</i>		1	15	2	60			3	150
5.	சித்த உடல்தத்துவமும் உடற்கூற்றியலும் <i>Siddha Udalathathuvam Udattholilieyalum</i>	சித்த உடல்தத்துவம் <i>Siddha Udalathathuvam</i>	Siddha Udalathathuvam and Physiology	2	30	1	30	-	-	3	150
		உடற்கூற்றியல் <i>Udattholilieyal</i>		3	45	1	30	-	-	4	200
6.	உயிர்இரசாயனம் <i>*Uyirrasayanam</i>	Biochemistry	4.5	60+8	0.5	15			5	250	
<b>Total</b>			<b>26.5</b>	<b>398</b>	<b>13.5</b>	<b>465</b>	<b>-</b>	<b>-</b>	<b>40</b>	<b>2000</b>	
<b>Total Hours</b>			<b>863</b>								

\*In time to come, this will be dealt by Department of *Manitha Uyirial*  
C-Credits, H- Hour

Title of Degree  
Level  
Duration

Bachelor of Siddha Medicine & Surgery (BSMS)  
Para Clinical (Phase II)  
05 Terms

Table VIII: Para-Clinical Subjects with allocated hours

SN	Name of the Subjects	Components										Notional Hours
		Lectures+ Tutorial/ Small group discussion				Practical		Clinical/ Field		Total		
		Credit	Hour			Credit	Hours	Credit	Hours	Credit		
			Lecture	Tutorial	Total							
1.	மருந்து செய்முறையியல் <i>Marunthu Seimuraieyal</i>	Pharmacy	4	50	10	60	3	135	2	90	9	450
2.	மூலிகையியல் <i>Mooligaieyal</i>	Pharmacology	4	50	10	60	1	30	4	180	9	450
3.	சமூகநல மருத்துவம் <i>Samooganala Maruthuvam</i>	Community Medicine	4	50	10	60			2	90	6	300
4.	பாரம்பரிய உணவும் ஆரோக்கியமும் <i>Paarampariya Unavum Aarokiyamum</i>	Traditional Food and Wellness	3	40	5	45			1	45	4	200
5.	நஞ்சியலும் நீதி மருத்துவமும் <i>Nanchieyalum Neethi Maruthuvamum</i>	Toxicology & Forensic Medicine	4	50	10	60			2	90	6	300
6.	சிகிட்சை அடிப்படைத்துவங்கள் <i>Chikitsai Adippadaithathuvangal</i>	Fundamentals of Therapeutics	2	25	5	30	-	-	2	90	4	200
7.	நோய்நாடல் <i>Noi Naadal</i>	Pathology	4	50	10	60			2	90	6	300
<b>Subtotal</b>												<b>2200</b>
8.	ஆய்வு அறிக்கை Research Project										6	600
<b>Total</b>			<b>25</b>	<b>375</b>			<b>4</b>	<b>165</b>	<b>15</b>	<b>675</b>	<b>44+6</b>	<b>2800</b>
<b>Total Hours</b>			<b>(375+165+675)= 1215</b>									

C-credits, H- Hours

Title of Degree

Bachelor of Siddha Medicine & Surgery (BSMS)

Level

Clinical (Phase III)

Duration

06 Terms

Table IX: Clinical Subjects with allocated hours

SN	Name of the Subjects		Components											Clinical Appointments & Teaching		
			Lectures+ Tutorial/ Small group discussion				Clinical		Total							
			Credit	Hours			Credits	Hours	Credits	Hours						
Lecture	Tutorial	Total														
1.	சிரரோக மருத்துவம் <i>Siroroga Maruthuvam</i>	Ear, Nose, Throat Medicine, Ophthalmology & Dentistry	1	12	3	15	6	270	7	350						
2.	அறுவை மருத்துவம் <i>Aruwai Maruthuvam</i>	Surgery	2	25	5	30	6	270	8	400						
3.	மகளிர் மருத்துவமும் மகப்பேற்றியலும் <i>Mahalir Maruthuvamum Mahapetieyalum</i>	Gynaecology and Obstetrics	2	25	5	30	7	315	9	450						
4.	குழந்தை மருத்துவம் <i>Kuzhanthai Maruthuvam</i>	Paediatrics	2	25	5	30	6	270	8	400						
5.	மருத்துவம் <i>Maruthuvam</i>	Medicine	வாதரோக மருத்துவம் <i>Vatharoga Maruthuvam</i>	0.8	3	10	1	11	4.2	17	190	765	5	20	250	1000
			பித்தரோக மருத்துவம் <i>Pitharoga Maruthuvam</i>	0.5		7	1	8	2.5		110		3		150	
			கபரோக மருத்துவம் <i>Kapharoga Maruthuvam</i>	0.5		7	1	8	2.5		110		3		150	
			உதரரோக மருத்துவம் <i>Udhararoga Maruthuvam</i>	0.4		5	1	6	2.6		120		3		150	
			சருமரோக மருத்துவம் <i>Sarumaroga Maruthuvam</i>	0.4		5	1	6	2.6		120		3		150	
			சுரரோக மருத்துவம் <i>Suraroga Maruthuvam</i>	0.3		3	1	4	1.7		75		2		100	
			உளரோக மருத்துவம் <i>Ularoga Maruthuvam</i>	0.1		1	1	2	0.9		40		1		50	
			<b>Subtotal</b>	<b>3</b>		<b>38</b>	<b>7</b>	<b>45</b>	<b>17</b>		<b>765</b>		<b>20</b>		<b>1000</b>	
6.	பரம்பரை மருத்துவம் <i>Paramparai Maruthuvam</i>	Traditional Medicine	2	25	5	30	6	270	8	400						
<b>Total</b>			<b>12</b>	<b>180</b>			<b>48</b>	<b>2160</b>	<b>60</b>	<b>3000</b>						
<b>Total Hours</b>			<b>(180+2160) = 2340</b>													

Following subjects to be dealt by the different Departments

**Table X:** Subjects taught by different Departments

SN	Departments	Subjects	
1.	<i>Gunapadam</i> குணபாடம்	1.1. பதார்த்த குண விஞ்ஞானம்	1.1. Materia Medica
		1.2. மூலிகையியல்	1.2. Pharmacology
		1.3. தாதுஜீவவியல்	1.3. Mineral, Metal & Animal Materialized Medicines
		1.4. மருந்து செய்முறையியல்	1.4. Pharmacy
2.	<i>Moolathathuvam</i> மூலதத்துவம்	2.1. சித்தமருத்துவ வரலாறும் உயர் தமிழும்	2.1. History of Siddha Medicine & Advanced Tamil
		2.2. சித்தமருத்துவ மூலதத்துவமும் உடற்கூற்றியலும்	2.2. Basic Principles of Siddha Medicine & Anatomy
		2.3. சித்த உடல் தத்துவமும் உடற்தொழிலியலும்	2.3. Siddha <i>Udalthathuvam</i> and Physiology
3.	<i>Manitha Uyiriyal</i> மனித உயிரியல்	3.1. உயிர்இரசாயனம்	3.1. Biochemistry
		3.2. உடற்கூற்றியல்	3.2. *Anatomy
		3.3. உடற்தொழிலியல்	3.3. *Physiology
4.	<i>Samooganala Maruthuvam</i> சமூகநல மருத்துவம்	4.1. சமூகநலமருத்துவம்	4.1. Community Medicine
		4.2. பாரம்பரிய உணவும் ஆரோக்கியமும்	4.2. Traditional Food and Wellness
		4.3. ஆய்வு அறிக்கை	4.3. Research Project
5.	<i>Nanchiyal and Paramparai Maruthuvam</i> நஞ்சியல் மற்றும் பரம்பரை மருத்துவம்	5.1. நஞ்சியலும் நீதி மருத்துவமும்	5.1. Toxicology & Forensic Medicine
		5.2. பரம்பரை மருத்துவம்	5.2. Traditional Medicine

SN	Departments	Subjects	
6.	<i>Noi Naadal Chikitsai</i> நோய்நாடல் சிகிச்சை	6.1. நோய்நாடல்	6.1. Pathology
		6.2. சிகிச்சை அடிப்படைத்தத்துவங்கள்	6.2. Fundamentals of Therapeutics
		6.3. மருத்துவம் :	<b>6.3. Medicine:</b>
		6.3.1.வாதரோக மருத்துவம்	6.3.1. <i>Vatharoga Maruthuvam</i>
		6.3.2.பித்தரோக மருத்துவம்	6.3.2. <i>Pitharoga Maruthuvam</i>
		6.3.3.கபரோக மருத்துவம்	6.3.3. <i>Kapharoga Maruthuvam</i>
		6.3.4.உதரரோக மருத்துவம்	6.3.4. <i>Udhararoga Maruthuvam</i>
		6.3.5.சருமரோக மருத்துவம்	6.3.5. <i>Sarumaroga Maruthuvam</i>
		6.3.6.கரரோக மருத்துவம்	6.3.6. <i>Suraroga Maruthuvam</i>
6.3.7.உளரோக மருத்துவம்	6.3.7. <i>Ularoga Maruthuvam</i>		
7.	<i>Sirorogam and Aruvai Maruthuvam</i> சிரரோகம் மற்றும் அறுவை மருத்துவம்	7.1. சிராரோக மருத்துவம்	7.1. Ear, Nose, Throat Medicine, Ophthalmology & Dentistry
		7.2. அறுவை மருத்துவம்	7.2. Surgery
8.	<i>Kuzhanthai and Mahalir Maruthuvam</i> குழந்தை மற்றும் மகளிர் மருத்துவம்	8.1. குழந்தை மருத்துவம்	8.1. Paediatrics
		8.2. மகளிர் மருத்துவமும் மகப்பேற்றியலும்	8.2. Gynaecology and Obstetrics

\*Anatomy and Physiology subjects should be dealt by the Department of *Manitha Uyirial*. Examination will be conducted for Anatomy and Physiology with the Basic Principles of Siddha Medicine & Anatomy and Siddha *Udalthathuvam* and Physiology respectively

## 2.0 Induction Programme

(Person In-Charge- Head, Unit of Siddha Medicine)

Induction Programme shall be conducted for Twelve weeks before the commencement of Academic Programme to the newly enrolled students. It includes Orientation Programme for two weeks and Co – Module subjects for ten weeks.

### 2.1. Orientation Programme

The orientation program consists of lectures and visits to key areas of the University and the Siddha Medical Course. Details of the Orientation Programme are given in the Table XI.

**Table XI:** Details of the Orientation Programme for 02 Weeks

Hrs.	Activities	Topic	Person/Department
4	Welcome	Welcome Programme	Student Counselor/ Siddha
1	Lecture	Siddha Curriculum	Head/ Siddha Medicine
1	Lecture	Administrative setup of Siddha Medicine	Head/ Siddha Medicine
1	Lecture	Student Welfare	Director -Welfare, AR- Welfare
1	Lecture & Visit	Health Facilities in the University	UMO
1	Visit	Sports in University	Director/ Physical Education
1	Lecture	Student discipline	Director/ Student Welfare
1	Lecture	Examination Regulations	DR Examination
1	Visit	Library	Librarian
1	Lecture	Student wellbeing	Counselor / Well-being Centre
1	Lecture & Practical	First Aid	St. John Ambulance

### 2.2. Co-modules for Siddha Medicine Degree Programme

This programme will be spread for 10 weeks during the Induction Programme. English Language and Information Technology will be taught as Co – module subjects.

### 2.2.1. Co-module subject I - English Language

<b>Subject</b>	English Language				
<b>No of Hours</b>	120			400 Notional Hours	
<b>Hourly Breakdown</b>	<b>Lecture</b>	<b>Tutorial</b>	<b>Library</b>	<b>Learning in Groups</b>	<b>Independent Learning</b>
	100	20	100	80	100

**Aim:**

The aim of this subject is to develop learners' ability to use English effectively for the purpose of practical communication, promote interpersonal communication skills of the students and prepare students to function in different environments while enhancing their communicative skills in their field of study.

**Intended Learning Outcomes:**

Upon the completion of this subject, the student will be able to:

- recognize key and supporting ideas from simple and complex authentic materials
- build up notes from lectures and audio texts
- respond to multiple contexts of written and spoken discourses
- describe people, places, tools, graphs and tables
- apply grammatical rules and mechanics of writing appropriately
- identify key ideas of a short audio/audio visual text
- infer the main ideas from the complex texts
- construct simple, compound and complex sentences
- summarize long texts on familiar subjects with accuracy
- utilize more complex questions in written and spoken communication
- create paragraphs using cohesive and coherence devices

**Subject Contents:**

**Reading:** Short and simple authentic reading texts and Complex authentic reading materials relevant to the course of study to identify the main ideas from, letters, emails, advertisements, charts, web pages, magazines, research articles, reports, etc.

**Writing:** Introduction of structural elements, formation of simple sentences, describing people, places and objects using appropriate tenses, short essays, emails, note writing, small ads, writing

agenda for meetings and functions, leaflets, etc. gap filling exercise with blanks, sentences-completion, sentence-reordering, filling various forms, writing instructions. Construct paragraph using compound and complex sentences, guided composition, writing notes, notice, message etc., composition based on a verbal and / or visual stimulus such as an advertisement; notice, newspaper cutting, table, diary extracts, notes, letters (formal/informal) or other forms of correspondence, composition based on a verbal and / or visual stimulus such as a diagram, picture, graph, map, cartoon, or flowchart.

(Grammar integrated)

**Speaking:** Making simple commands, asking for and giving directions, introducing self and others, describing events and explaining the functions of objects, asking for things, making inquiries using yes/no questions and wh-questions, making telephone calls, making short speeches, expressing and responding to opinions/personal feelings and attitudes, involving in conversations on particular topics and contexts. Responding to complex questions (with reasonable accuracy) (e.g., discussions or dialogue/conversation on different familiar topics in their field of study, answering telephone calls, explaining graphs and charts, casual chats at social gatherings); Expressing opinions on familiar topics with reasonable degree of fluency and accuracy (debates, impromptu speeches, presentations). (The contents given for speaking should focus the relevancy of their field of study).

**Listening:** Short extracts and longer texts (lectures, dialogues, announcements, talks, news, presentations, lectures, speeches/talks, discussions etc.) to identify key ideas; understand internal cohesion; following instruction regarding processes and production of siddha Medicine, etc.)

**Teaching and learning methods:**

CLT based illustrated lectures, presentations with interaction/feedback, interactive speaking activities, peer activities for writing, Content Language Integrated Learning (CLIL), Task Based Language Teaching (TBLT), web learning, language lab

**Evaluation - The assessment methods of In-Course and End-of-Course Assessment.**

No	No of In-course	Distribution of Marks		Details of Evaluations	
<b>01</b>	<b>In course Assessment – During the Induction Programme</b>				
	1 <sup>st</sup> In -course	30%	<b>10%</b>	100 marks	<b>Writing a field report</b>
	2 <sup>nd</sup> In -course		<b>10%</b>	100 marks	<b>Panel discussion</b>
	3 <sup>rd</sup> In -course		<b>05%</b>	100 marks	<b>Listening</b>
4 <sup>th</sup> In -course	<b>05%</b>		100 marks	<b>Reading Skills</b>	
<b>02</b>	<b>End-of-Course Assesment - End of the Induction Programme</b>				
	Written Paper Part I	70%	300 marks	Reading- choosing sub titles for paragraphs, true or false, matching words with similar meanings, skimming and scanning questions, transfer of information, cloze test, etc. <b>(75 Marks)</b>	03 Hours
	Part II			Grammar – tenses, prepositions, word order, use of adjectives and adverbs, complex tenses, conjunctions, transformation of active & passive structures, relative pronouns, using cohesive words, etc.  Writing – describing people, places objects, processes, profile writing, note writing, emails, short essays & letters, small ads, agenda for meetings, leaflets, composition based on a verbal and / or visual stimulus such as a diagram, picture, graph, map, cartoon, or flowchart etc. <b>(125 Marks)</b>	
	Part III			Speaking - Presentation/Viva-voce <b>(75 Marks)</b> Listening – <b>(25 Marks)</b>	
<b>Overall pass Marks</b>				<b>50 %</b>	

### **Recommended readings:**

1. Adrian, D. and Christopher, J. (2004). *Listening 1 and 2*. Ninth Imprint. Cambridge: [Cambridge University Press](#).
2. Beglar, D. (2011). *Advanced Listening and note Taking Skills*. 2<sup>nd</sup> Edition. Mac Grow Hill.
3. Frangoise, G. (2012). *Developing Reading Skills: A Practical Guide to Reading Comprehension Exercises*. Cambridge: Cambridge University Press.
4. Harmer, J and Arnold, J. (2008). *Advanced Speaking Skills*. Longman.
5. Joanne, C. and Stephen, S. (2003). *Speaking 1 and 2*. Eleventh Imprint. Cambridge: [Cambridge University Press](#).
6. John, S. (2013). *The Oxford Guide to Effective Writing and Speaking*. 3<sup>rd</sup> Edition. Oxford: Oxford University Press.
7. [Raymond, M. \(2012\)](#). *English Grammar in Use Book with Answer: A Self-Study Reference and Practice Book for Intermediate Learners of English*. Cambridge: [Cambridge University Press](#).
8. [Richard, H. \(2011\)](#). *Headway Academic Skills: 3: Listening, Speaking, and Study Skills Student's Book*. Oxford: [Oxford University Press](#).
9. [Sarah, P. and Lesley, C. \(2013\)](#). *Headway Academic Skills: 3: Reading, Writing, and Study Skills Student's Book*. Oxford: Oxford University Press.
10. Tricia, H. (2005). *Writing*. Oxford: [Oxford University Press](#).

## 2.2.2. Co-Module subject II – Information Technology (IT)

<b>Subject</b>	Information Technology		
<b>No of Hours</b>	45	100 Notional Hours	
<b>Hourly Breakdown</b>	<b>Lecture</b>		<b>Practical</b>
	<b>Direct Contact</b>	<b>Independent Learning</b>	<b>Guided time</b>
	15	35	20
<b>Objectives:</b>			
This course aims to provide sufficient knowledge, skills and attitude to make use of Information Technology for effective learning and practice in Siddha Medicine.			
<b>Intended Learning Outcomes:</b>			
<ul style="list-style-type: none"> <li>• Describe the basic concepts and components of ICT</li> <li>• Describe the functions of communication network components</li> <li>• Explain the terminologies related to the Internet and the World Wide Web</li> <li>• Explain the connecting to the Internet and how web works</li> <li>• Design and produce various types of documents using Microsoft word</li> <li>• Prepare effective electronic presentations</li> <li>• Create and format spreadsheets, including the use of formulae</li> <li>• Use statistical packages to carry out data analysis</li> <li>• Perform literature search and electronic communication using the internet</li> <li>• Practice computer ethics</li> </ul>			
<b>Subject Contents:</b>			
<b>1. Fundamentals of IT</b>			
<ul style="list-style-type: none"> <li>• <b>Basic Concepts of ICT:</b> ICT and its Promises, Computer Systems, Characteristics of Computers, Types of computers and their classification.</li> <li>• <b>Hardware:</b> System Unit, Input devices, Output devices and Secondary storage devices.</li> <li>• <b>Software:</b> System software and Application software.</li> <li>• <b>Introducing Computer Networks:</b> The uses of a Network, Types of Computer Network, Structure of a Network, Network Media, Network connectivity devices, Protocols, Communication standards, connecting to a network and to the Internet.</li> <li>• <b>The Internet and Internet Services:</b> World Wide Web, e-mail, Social media, Blogs, Video conferencing, Cloud storage, E-Learning, etc.</li> <li>• <b>Challenges of Information Technology:</b> Health Issues, Ergonomics &amp; the Environment, Cyber Ethics, Threats and Safe Guarding Computers and Communications Systems.</li> </ul>			

- 2. Word Processing**
- Introduction to Windows operating system and Microsoft word.
  - Working with Text, Formatting Pages, Formatting Characters and Paragraphs, Tabs, working with Tables, Documents with Columns, Reviewing documents.
  - Automating Tasks, creating simple web pages, Mail merge, previewing and Printing Documents.
- 3. Presentation Techniques**
- Creating presentations, applying and modifying design templates, viewing and formatting presentations
  - Adding and modifying slide text, animating text and objects
  - Inserting multimedia information into PowerPoint, drawing and modifying shapes
  - Setting up and delivering a slide show and printing a presentation
- 4. Spreadsheet Application**
- Environment settings, working with cells, formatting cells and worksheets
  - Working with formulas and functions
  - Creating and modifying charts, page setup and printing
- 5. Statistical Package**
- Introduction to Statistical Package SPSS and its application for data analysis

**Teaching and Learning Methods:**

Lecture, Demonstration, Practical classes, Tutorial

**Evaluation:** The assessment methods of In-Course and End-of-Course Assessment.

No	No of In-course	Distribution of Marks	Details of Evaluations
<b>01</b>	<b>In course Assessment – During the Induction Programme</b>		
	1 <sup>st</sup> In -course	40%	100 marks
	2 <sup>nd</sup> In -course		100 marks
			One practical examination - 90 minutes per student One theory examination - 1 hour
			One practical examination - 90 minutes per student One theory examination - 1 hour
<b>02</b>	<b>End-of-Course Assessment - End of the Induction Programme</b>		
	Written	60%	300 marks
	Practical		
			One (01) written theory examination of two (02) hours duration
			One (01) practical examination of two (02) hours duration
<b>Overall pass Marks</b>			<b>50 %</b>

**References:**

- Stair, R., & Reynolds, G. (2018). Principles of Information Systems, 13th Edition: Cengage Learning. (Available from pdfdrive.com)]
- Sara Baase, A gift of Fire: Social, Legal and Ethical Issues for Computing Technology, 4th ed., ISBN: 0-13-249267-9
- Richard Fox, Information Technology An Introduction for Today's Digital World, 1<sup>st</sup>Ed., CRC Press, 2013.
- Emergent Learning, Introduction to Computers and Information Technology, 2nd Ed., Pearson, 2015.
- New Perspectives Microsoft Office 365 & Office 2019 Introductory (MindTap Course List) 1st Edition by Patrick Carey, Katherine T. Pinard, Ann Shaffer, Mark Shellman , Sasha Vodnik.
- Advanced Excel by Tutorialspoint

## 3.0 Detailed Syllabus of the subjects

### 3.1. Phase I – Pre Clinical Subjects

#### 3.1.1. *Thathujeevaeyal*

<b>Subject</b>	<i>Thathujeevaeyal</i> - Mineral, Metal & Animal Materialized Medicines				
<b>No. of Hours</b>	240			400 Notional Hours	
<b>Level</b>	Phase I – Pre Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Practical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	<b>50</b>	<b>10</b>	<b>140</b>	<b>180</b>	<b>20</b>
<b>Aim</b>					
The aim of this subject is to impart knowledge on the classification and detoxification of mineral, metal, and animal-based material, train students in preparing mineral, metal, and animal-based medicines, handling equipment, and administering medicines to patients.					
<b>Intended Learning Outcomes:</b>					
<ul style="list-style-type: none"> <li>• Analyze properties, synonyms, detoxification, dosage, indications, contraindications, and dietary restrictions of minerals, metal and animal-based compounds</li> <li>• Construct herbo - minerals, metal and animal -based medicines by demonstrating preparation skills</li> <li>• Apply appropriate detoxification methods for minerals, metal and animal-based materials</li> <li>• Operate indigenous appliances to prepare herbo-mineral, metal and animal - based medicines</li> <li>• Perform the skill of collecting fuller's earth during the appropriate season</li> <li>• Identify mineral, metal and animal-based compounds and their synonyms</li> <li>• Describe their properties, detoxification and preparation methods, dosage, diseases treated, and dietary restrictions for herbo -minerals, metal and animal -based medicines</li> <li>• Develop skills in preparing herbo - minerals, metal and animal-based medicines</li> <li>• Develop skills for formulating the traditional equipment and handling the modernized equipment</li> </ul>					
<b>Subject Content</b>					
Introduction, types, synonyms, agonist, antagonist, detoxification methods, preparation of medicines, incineration and its types of metal, mineral and animal materials. Details of bullers' earth ( <i>Poonuru</i> ), three salts and regeneration ( <i>Muppu</i> ) and regeneration by mineral, metal and animal materials ( <i>thathukarpam</i> )					
Animal materialized medicine- Preparation of traditional and modern instrument for preparing metal, mineral and animal materialized medicine. Basic needs for preparation of Siddha Medicine. Basic principles of animal based material. According to the classical siddha texts, synonyms, detoxification					

methods, medicinal preparation, characteristic, indications, dosage forms, dose, vehicle (*Anupanam*) and dietary advice (*Pathiya Apathiyam*) of animal based materials and medicines.

### Practical

Detoxification and medicinal preparation of mineral, metal and animal based material in *thathujeeva* laboratory. Collection of bullers' earth (*Poonuru*) from the seaside accompany with the seasons. Collection of mineral, metal and animal based materials for exhibiting in the museum and preparation of medicines during vacations.

### Teaching- Learning Methods:

Lecturers, Small group discussions, Practical, Assignments, Presentations, Field visits, seminars and tutorial classes. The practical classes include experiments performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the Term</b>					
	Term I	30 %	100 Marks	Written – Three Structured essay Question – one hour	Not Applicable (NA)	
	Term II		100 Marks	Two practicals per student – one hour		
	Term III		100 Marks	Viva – 06 Minutes per student		
	Term IV		100 Marks	Two practicals per student – one Hour		
02	<b>End of the Phase I Examination – (End of the IV term)</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I- *MCQ	10 %	10%	100 Marks	20 questions (True or False) – One Hour	45 %
	Paper II- SEQ	30 %	40%	1000 Marks	10 structured essay questions – 3 hour	
	Viva	10 %	10%	100 Marks	06 Minutes per student	NA
Practical Assessment of Skills	20%	40%	100 Marks	Three Practical per student - 03 hour	45 %	
<b>Overall pass Marks</b>					<b>50 %</b>	
*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.						

## Reference books

1. *Thathujeeva Vakuppu*. Thiyagarajan. R. Chennai, Indian Medicine, Homeopathy Deaprtment, 1<sup>st</sup> Edition, 2003
2. *Therayar Yamaga Venpa*, Thiyagarajan. R. Poomathevi Printers, Part I-III, 1976
3. *Patharthaguna Vilakkam*. Kannusaamipillai.M.P. Jeyam Printers, 2003
4. *Panchakaaviya Nigandu*. Aranganathan.A. Thanjavur Saraswathy Mahal Library 2016
5. *Agathiyar Loga Maaranam – 110*. Thanjavur Saraswathy Mahal Library 2014
6. **Indian Meteria Medica**. Nadkarani.K.N. Harsha Bhatkul for popular parkashan pvt. Ltd, 1984.
7. *Siddhamarunthu Muraieyal Patharthaguna Vignanam*. Ponnaiya S. Part I, 2008
8. *Siddhavaiythirattu*. Kuppusami muthaliyar, K.N. UththamarayanK.S. Chennai, Indian Medicine, Homeopathy Department, 1998
9. *Anupogavaithya Pramma Ragasiyam*. Mohammed Abdullasaiu.P. Chennai, Lotur Library, 1995
10. *Pogar Vaithiyam 700*. Prema.S. Thanjavur Tamil University. 1<sup>st</sup> Edition , 1985
11. *Pogar 7000*. Mohan.R.C. Lotus Library, 1995

### 3.1.2. Patharthaguna Vignanam

<b>Subject</b>	<i>Patharthaguna Vignanam</i> - Materia Medica				
<b>No. of Hours</b>	<b>180</b>			<b>400 Notional hours</b>	
<b>Level</b>	<b>Phase I – Pre Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>			<b>Practical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>	<b>Independent Learning</b>	<b>Guided time</b>	<b>Independent Learning</b>
	<b>50</b>	<b>10</b>		<b>140</b>	<b>120</b>
<b>Aim</b>					
The aim of this subject is to provide an understanding of the fundamental principles, properties of medicinal plants and its classification, as well as the skills necessary for identifying medicinal plants, purity tests of plant materials and establishing a herbal garden and herbarium.					
<b>Intended Learning Outcomes:</b>					
<ul style="list-style-type: none"> <li>• Explain mooligai principles and their relationship to <i>suvai</i>, <i>veeriyam</i>, <i>vipagam</i>, <i>gunam</i>, and <i>Seikaikal</i> of medicinal plants.</li> <li>• Discuss therapeutic values of compound medicinal plants (<i>thokai sarakku</i>) with quotes.</li> <li>• Explain medicinal plants for <i>anupanam</i> and <i>Pathiya apathiyam</i>.</li> <li>• Identify, collect, and store medicinal plant parts using various methods.</li> <li>• Explain the pharmacological properties and usage of medicinal plant parts.</li> <li>• Discuss the diversity, conservation, and sustainable use of medicinal plants.</li> <li>• Evaluate the biological status of medicinal plants in Sri Lanka.</li> <li>• Conduct phytochemical tests to identify medicinal plants.</li> <li>• Identify medicinal plant actions based on <i>suvai</i> and demonstrate the skill</li> <li>• Prepare herbarium sheets and voucher specimens for plant identification</li> <li>• Establish a small-scale herbal garden</li> <li>• Demonstrate skills in obtaining different extracts from medicinal plants via research</li> </ul>					
<b>Subject Content</b>					
Introduction of medicinal herbs, five elements and plants, correlation between the <i>Suvaigal</i> and five elements, Classification of herbs based on taste. Correlation between the <i>trydhadhu</i> and <i>udatthathu</i> , types and importance of <i>veerium</i> , <i>thanmai</i> and <i>mahimai</i> . Classification, actions of gunas of herbs. Describe the actions based on the taste and gunas of plants. Describe the actions of plants based on the <i>vatha pitha kapha</i> . Describe and importance of the <i>koottusarakku</i> and its ingredients of plants. Stanta of herbs and medicinal usage. Vehicle ( <i>anupanam</i> ) – importance of vehicle and medicinal plants used as vehicle. Classification of <i>anupanam</i> . Benefits of herbs of anupanam. Comparison of <i>anupanam</i> . <i>Kalappadam</i> (adulteration) –					

definition, methods, identification and differentiation, advantages and disadvantages, preventive measures. *Paththiyapaththiyam*. Introduction of herbarium. Formation and maintenance of herbarium, voucher specimen. Select the herbs to herbal garden. Reproduction of the herbs. Preparation and maintenance of nurseries. Seed banks. Classification of herbal parts based on the medicinal use (bark, dry fruits, roots, seeds.....) Classification of medicinal herbs based on the morphology. Collection and storage of medicinal plants parts. Standardization of plants. Collection methods which are mentioned by siddhas and compared with WHO Guidelines for plant collections & Storage. Guidelines for Post Harvesting Techniques. Diversity of Medicinal plants, Biological status of medicinal plants (Extinct, Rare, Vulnerable, Endangered, Critical, Threatened, Endemic), National red list of Sri Lanka, Conservation and Preservation of Medicinal plants in Sri Lanka. Describe the phytochemical of herbs. Correlation between the taste and phytochemical. Classification of *kaayakatpam* and medicinal herbs (*moolagai katpangal*), Classification and importance of poisonous plants.

### **Practical**

Preparation of Herbarium

Develop small scale home or school garden

Maintain the nurseries of medicinal plants

Extraction techniques of medicinal plants

Preparation of Dry herb album

Phytochemical screening of medicinal plants

Standardization of plant parts

Physio chemical parameters of medicinal plants

Correlation between the taste and action - eg. - Bitter taste - pulukolli seikai.

Institutional visit (During Vacation) – Visit to the herbal gardens in the Northern Province, National Herbarium Royal Botanical Garden, Peradeniya.

Identify the endangered plants and National red-listed plants

### **Teaching- Learning Methods:**

Lectures, Practical, Fieldworks & field demonstrations (During Vacation), Practical Demonstration, Small group discussions, Assignments, Seminars and Tutorial classes. The practical classes include experiments performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation-** The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks	Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the Term</b>				
	Term I	30 %	100 Marks	Written - Three structured essay questions - one hour	
	Term II		100 Marks	Phytochemical tests or physiochemical tests or <i>Thara nirnaya</i> test – 01 per student – 30 minutes	
	Term III		200 Marks (100+100)	1. Spots (10x5 Herbs) – 30 minutes per student 2. Ten nurseries preparation per student	
	Term IV		200 Marks (100+100)	1. One dry herbal album – 10 specimens from each part of medicinal plants 2. Prepare one plant extract – 30 minutes	
				Not Applicable (NA)	
02	<b>End of the Phase I Examination (End of the IV term)</b>				
		<b>Examination</b>			
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>		
	Paper I - *MCQ	10 %	10%	100 Marks	20 questions- True or False – 1hour.
	Paper II - SEQ	30 %	60%	1000 Marks	10 structured essay questions – 3 hour
	Viva	10 %	10%	100 Marks	06 Minutes per student
Spots	20%	20%	100 Marks	20X5 herbs - one hour per student	
	<b>Over all pass Marks</b>			<b>50 %</b>	

\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.

#### Reference books

1. *Gunapadam Porutpanpu nool*. Murugesamuthaliyar, Indian Medicine, Homeopathy Deaprtment, 2000
2. *Theraiyar Gunavaakadam*. Prema.S, Thanjai Saraswathy Mahal.
3. *Patharthaguna Vilakkam*. Kannusamipillai M.P. Jeyam Printers, 2003
4. Medicinal plants used in Ceylon. Jeyaweera D.M.A. National science publication. vol I-V (2006).
5. *Angathipatham ennum Siddhavaithiya Arichchuvady*, Vinayagamoorthy. V.K. Batticaloa Sun Printer, 1<sup>st</sup> Edition, 2010
6. *Patharthaguna Sinthamany*. Kannusamipillai M.P. Jeyam Printers, 2001
7. *Munivargal Aruliseitha Atputhasinthamani ennum Patharthaguna Sinthamani moolam urayum*. Kalaimaathuvilakka Printer, 1891
8. *Pararasasegarm*. Ponnaiyappillai. Department of Indigenous Medicine, Northern Province. Part 1-10, 1932
9. *Panchakaaviyanigandu*. Dr.Angaraasan S. Director. Saraswathy Mahal Library Thanjavur, 3<sup>rd</sup> Edition, 2016.

### 3.1.3. Siddha Maruththuva Moolathathuvamum Udatkootieyalum

Subject	<i>Siddha Maruththuva Moolathathuvamum Udatkootieyalum</i> - Basic Principles of Siddha Medicine & Anatomy				
No. of Hours	150			350 Notional Hours	
Level	Phase I – Pre-Clinical				
Hourly Breakdown	Direct Contact		Independent Learning	Practical	
	Lecture	Tutorial or Small group discussion		Guided time	Independent Learning
<i>Siddha Maruththuva Moolathathuvam</i>	40	05	105	30	20
<i>Udatkootieyal</i>	12	03	35	60	40
<b>Aim:</b>					
The aim of this subject is to provide students with a foundational understanding of the principles of Siddha medicine through philosophical approaches with basic skills in yoga and to equip students with the necessary knowledge and skills to comprehend the gross structure of the human body and its correlation with important clinical manifestations.					
<b>Intended Learning Outcomes:</b>					
At the end of the course the students should be able to,					
<ul style="list-style-type: none"> <li>• Describe the basic principles of Siddha Medicine</li> <li>• Explain the role of the <i>panchapoothas</i></li> <li>• Discuss the specialties of Siddha Medicine</li> <li>• Demonstrate skills in the basic yoga</li> <li>• Explain the fundamental concepts and terminology related to the anatomy of the human body</li> <li>• Identify the types of bones and joints found in the human body</li> <li>• Define the surface markings of important organs and structures in the body wall</li> <li>• Demonstrate an understanding of the structures and their locations</li> <li>• Discuss the blood supply, nerve supply, lymphatic drainage, and their clinical significance</li> </ul>					
<b>Subject Content</b>					
<b>1. Basic Principles of Siddha Medicine</b>					
<p><b>Lecture:</b> Introduction and Description of Siddha Medicine and Philosophy, <i>Srushti (Parinamam)</i> and its purpose, Description of the <i>Srushti</i> based on <i>Sannkiya Tharshanam</i> and <i>Sivagnana Sithiyar</i>, Philosophy of <i>Anda</i> and <i>Pinda</i>, Development of <i>Panchapoothas</i>, <i>Panchapootha Pancheekaranam</i>, Site of <i>Uyir thaathus</i>, <i>Udal thaathus</i>, <i>Mummalankal</i>, <i>Udal thee</i>; Introduction of six <i>Atharangal</i>; <i>Kalam</i> (Human cell); <i>Panchapoothas</i> in the body, Reasons for a Man calling as a <i>Chikitcha purashan</i>; Specialty of Siddhas: Introduction and description of <i>Attanga Yogam</i>, <i>Attama sidthy</i>, <i>Philosophy of Nadi</i>, <i>Sara Palakkam (Breathing Exercise)</i>, <i>Rasa vatham</i>, <i>Kayakalpam</i> and <i>Muppu</i>; Types of <i>Antha karanankal</i>; <i>Iruvinai payankal</i>; <i>Yakayin Elakanam</i>; <i>Udal Vanmai</i>; Definition of Health and disease; <i>Pathanjali yoga</i> and <i>Thirumoolar Yoga</i></p>					

**Practical:** Basic Yoga Practices

## 2. Anatomy

**Lecture:** Introduction of the Human Anatomy; Structures and organs with its blood, nerve supply and lymphatic drainage of the Upper limb, Lower limb, Thorax, Abdomen, Pelvis, Head and Neck Regions; Applied anatomy of the above-mentioned regions.

**Practical:** Identify and surface mark the above-mentioned structures.

### Teaching- Learning Methods:

Lectures, small group discussions, tutorial classes, practical, presentations, cadaveric dissection/videos, & model demonstration (practical), assignments and self-learning. The practical classes performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation -** The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment (During the Term)</b>					
	Term I	30%	100 Marks (70+30)	1.SEQ – Part A-02 questions (SM) & Part B-02 questions (Ana) - One hour and 30 minutes 2.Submitted an assignment in SM	Not Applicable	
	Term II		100 Marks (30+20+50)	1.Submitted an assignment in SM 2.Practical - One Yoga performance - 5 min. per student 3.10 Spots x 3 min./ Student		
	Term III		100 Marks (70+30)	1.SEQ – Part A-02 questions (SM) & Part B-02 questions (Ana) - One hour and 30 minutes 2.Submitted an assignment in SM		
	Term IV		100 Marks (50+50)	1.Viva (SM)-06 min per student 2.10 Spots x 3 min. per Student		
02	<b>End of the Phase I Examination (End of the IV Term)</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I - *MCQ	10 %	10 %	100 Marks	True or False - Part A-10 questions(SM) & Part B-10(Ana) questions -1 hr.	45 %
	Paper II - SEQ	30 %	50 %	1000 Marks	Structured questions - Part A-05 questions(SM) & Part B- 05 questions(Ana) from - 3 hrs.	
	Viva	10 %	10 %	100 Marks	06 min per Student	NA
Practical/ Assessment of skills	20 %	30 %	100 Marks	Two Yoga performance - 10 min. per student AND 20 Spots x 3 min. per Student	45 %	
<b>Over all pass Marks</b>					<b>50 %</b>	

SM- Siddhamaruthuva Moolathathuvam

Ana- Anatomy

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

## Reference books

1. *Siddharkalin Anda Pinda Thathuvam*. Swami Akamukanathar, Chennai, Ganapathy Enterprises, 2017.
2. *Pathinen Siddhar Aruliya Naadisasthiram*. Kalathur Kandaswamy Muthaliyar, Rathinanayakar and Sons, Thirumakal Achakam, 1976.
3. *Agasthiyar 2000*. Venkadrajan, S. Thanjai Saraswathi mahal, Thanjavoor. 5<sup>th</sup> edition, 2006.
4. *Indiya Thathvagnanam*. Lakshmanan, K, Palaniyappa brothers, 1<sup>st</sup> edition, 1960.
5. *Thotakirama Aarayichiyum Siddhamaruthuva Varalarum*. Udthamarayan, K.S. Chennai. Indian Medicine and Homeopathy, 5<sup>th</sup> reprint. 2010.
6. **Text book of Anatomy** (Regional, Functional and Clinical), Kanagasuntharam. R. Sivanathasingham. P, & Krishnamoorthi.A. Orient Black Swan. 1996.
7. **Clinical Neuroanatomy**. Richard.S. Snell. Published by Lippincott Williams & Wilkins, 7<sup>th</sup> edition. 2008.
8. **Grant's Atlas of Anatomy**. Anne.M. RAgur. Published by Lippincott Williams & Wilkins, 13<sup>th</sup> edition. 2012.
9. **Clinical Anatomy by Regions**. Richard. S. Snell. Published by Lippincott Williams & Wilkins, a Wolters Kluwer business. 9<sup>th</sup> edition. 2012.

### 3.1.4. Siddha Maruththuva Varalarum Uyarthamizhum

<b>Subject</b>	<i>Siddha Maruththuva Varalarum Uyarthamizhum - History of Siddha Medicine &amp; Advance Tamil</i>		
<b>No. of Hours</b>	75	250 Notional Hours	
<b>Level</b>	Phase I – Pre-Clinical		
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>	
	<b>63</b>	<b>12</b>	<b>175</b>
<b>Aim:-</b> The aim of this subject is to provide students with an understanding of the historical knowledge related to Siddha Medicine, and skills to comprehend the fundamental concepts and principles of <i>Siddhars</i> and Siddha literatures.			
<b>Indented Learning Outcomes:</b> At the end of the course the students should be able to, <ul style="list-style-type: none"> <li>• Explain the origin and history of Siddha Medicine</li> <li>• Discuss the basis of other medical systems</li> <li>• Describe the administrative setup of Indigenous Systems of Medicine in Sri Lanka</li> <li>• Describe the fundamental concepts and principles of <i>Siddhars</i></li> <li>• Acquire the ability to read Siddha texts authored by <i>Siddhars</i></li> <li>• Explain Siddha literature and its significance</li> <li>• Understand the quotations related to Siddha medicine mentioned in Siddha literatures</li> <li>• Discuss the medicinal aspects mentioned in ancient Tamil literature</li> </ul>			
<b>Subject Content</b>  <b>History of Siddha Medicine and Advance Tamil</b> <b>Lecture:</b> History of Medicine – Origin and development of Siddha Medicine, Medical knowledge of ancient people, Various civilization of the world, <i>Kumari Kandam</i> , <i>Sinhu civilization</i> , Define the word of <i>Thiravidar</i> and <i>Aariyar</i> . History of Tamil Medicine and development of Siddha and Ayurvedic Medicine, Development of Indigenous Medicine in Sri Lanka, Development of Siddha Medicine in Elam, Other Medicinal Practices in Sri Lanka, Participation of Sri Lankan Government in the development of Indigenous Medicine. Introduction of Tamil Literatures, Notes about <i>Siddhars</i> and Siddha medicine in Tamil literatures; Medical facts in 20 <sup>th</sup> Century Literatures, Introduction of <i>Siddhars</i> , Detail study of <i>Siddhars</i> , Reason for <i>Siddhar</i> name, Different facts about the <i>Siddhars</i> , <i>Siddhar Neri</i> , Period of <i>Siddhars</i> and 64 super natural powers; Atomic policy of <i>Siddhars</i> , Evolution theory of <i>Siddhars</i> , Classification of <i>Siddhars</i> , Details of History of <i>Siddhars</i> . their creative texts and participation			

in Siddha Medicine; *Siddhars* Poem - Philosophical meanings of *Siddha* poems; *Vaithiya Perunkural*; *Siddhars* in Elam; Siddha Medical literatures in *Elam*. Medicinal aspect of Alavaieyal.

Introduction of Siddha Literature; Literature in Philosophical perspective; Myths and Symbolism revealed in Siddha Literature; Indigeneous Medical thoughts inbedded in Ancient Tamil Literature sangam Literature, post Sangam Literature (Selected study); Siddha Medical thoughts expounded in Thirumanthiram and Thirukkural; Sara Janana and Sarira Janana; The Serpent power (*Kundalani*); Alchemy (*Rasavaatham*); Relation between macrosm and Microsm; Chuvadiiyal / Manuscriptology; Introduction to Manuscriptology, History of editing palm leaf manuscripts editing; Akarathiyal/ Encyclopedias and Dictionaries; Fundamental Tamil Grammer; Stylistic approaches in Tamil (*Nadaieyal*); Basic Introduction to prosody in Tamil poetic tradition (*Yappu*).

Educational Tour: Visit to the historical places such as Thirukkarasayampathy Kanguveli Agasthiyar Thapanam, Mutur, Trincomalee during the vacation.

**Teaching and Learning Methods:** Lectures, small group discussions, tutorial classes, practical, PBL, Presentations, assignments and self-learning. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks	Details of Evaluations	Qualifying pass marks
01	<b>In course Assessment (During the Term)</b>			
	Term I	30%	100 Marks	SEQ-Three- ( <i>Siddhamaruththuva Varalaru</i> -01, <i>Uyarthamizh</i> -02) - one hour
	Term II		100 Marks (50+50)	1. An assignment 2. Debate
	Term III		100 Marks	SEQ-Three- ( <i>Siddhamaruththuva Varalaru</i> -01, <i>Uyarthamizh</i> -02) - one hour
	Term IV		100 Marks (50+50)	1.Explain the selected poem in <i>Pararajasegaram</i> (2 poems) 2. Explain the selected <i>Siddhar Paadalkal</i> (02)
Not Applicable (NA)				
02	<b>End of the Phase I Examination (End of the IV term)</b>			
		<b>Examination</b>		
		1 <sup>st</sup>	2 <sup>nd</sup>	
	Paper SEQ -	60 %	80 %	1000 Marks
Viva	10 %	20 %	100 Marks	06 min. per student
<b>Over all pass Marks</b>				<b>50 %</b>

## Reference books

1. *Thirumoolar Thirumanthiram*. Thirumoolar, 4<sup>th</sup> edition. Reprint, Thiruvavaduthurai Adeenam, 2004.
2. *Agasthiyar 12000*
3. **Thirukkural**
4. *Ilakiyaththil Maruththvakaruthukkal*, Balasundara, I. *Jaffna Naadar Valakiyal Kalakam*, 1990.
5. *Aasarakkovai*. Punnaivananatha Mudhaliyar, P. S. U. A, Cheenai, Saivasithantha Nootpathippu kalakam, (1946).
6. **Pararasasekaram (All parts)**, Ponnaiah I, Thirugnanasampanthar Achukoodam, Elali, (1936).
7. *Siddhar Paadal Moolamum Uraiyum*. Tamilpriyan. Chennai. Novino off-set company. 2019.
8. *Sankakala tamil noolkaal*
9. *Thottakirama Aarachiyum Siddha Maruththuva Varalarum*. Udthamarayan. K. S. Indian Medicine and Homeopathy, Chennai, 5<sup>th</sup> reprint. 2010.
10. *Siddha Maruthvankachurrakkam*. Udthamarayan. K.S. Indian Medicine and Homeopathy, Chennai, 5<sup>th</sup> reprint. 2010.
11. *Tamil Ilakkiya varalaru*. Selvanayakam, V. Sri Lanka Publication. 5<sup>th</sup> edition. 1973.
12. *Siddha Maruthuvam Thokuthi I- Varalaru*, Ganapathy. K. Tamil Valarchchi Kalakam. 1<sup>st</sup> edition, 2003.
13. *Tamilil Maruthuva Ilakiyankal Oraivu*. Vasuthevan, R, Poonkodi Pathippakam, Chennai. 2006.
14. *Pathinenkeelkanakku Vilakkam*. Matharas Otumai Office, 1956.
15. *Siddharkal kannda Vizhgnanam – Thathuvam*. Sami Sithambaranar. Saraswathy Achchakam, 1961.
16. *Elaththu Siddharkal*. Muthaiya N., Aathmajothy Publication. 2<sup>nd</sup> edition, 1968.

### 3.1.5. Siddha Udalthathuvamum Udattholilieyalum

<b>Subject</b>	<i>Siddha Udalthathuvamum Udattholilieyalum - Siddha Udalthathuvam and Physiology</i>				
<b>No. of Hours</b>	135			350 Notional hours	
<b>Level</b>	Phase I – Pre-Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Practical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided time</b>	<b>Independent Learning</b>
<i>Siddha Udalthathuvam</i>	25	05	70	30	20
<i>Udattholilieyal</i>	40	05	105	30	20
<b>Aim:</b>					
<p>The aim of this subject is to equip students with the necessary knowledge and skills to comprehend the fundamental principles and philosophical approaches underlying Siddha Medicine as it relates to the human body and to provide students with a comprehensive understanding of the functions of the human body and the practical application of this knowledge in healthcare settings.</p>					
<b>Intended Learning Outcomes:</b>					
<p>At the end of the course the students should be able to,</p> <ul style="list-style-type: none"> <li>• Explain the fundamental principles of <i>Udal thathuvam</i></li> <li>• Discuss the basis of <i>Tridoshas</i>, <i>Seven Udatthadus</i>, and <i>Trimalas</i> in relation to the human body</li> <li>• Describe the functions of Ninety-six <i>Thathuvas</i> in the human body</li> <li>• Demonstrate proficiency of examination methods and assessing <i>Yakkayin Ilakkanam</i></li> <li>• Explain basic principles of homeostasis</li> <li>• Discuss body system functions, regulation, mechanisms and factors affecting normal functions</li> <li>• Demonstrate proficiency in understanding tests for system function assessment</li> <li>• Recognize ethical practices during practical and group work</li> <li>• Apply knowledge and skills to manage patient problems and continue for studying Patho-Physiology</li> <li>• Demonstrate basic physical examination and use of common instruments to make measurements on normal individuals including classmates</li> </ul>					
<b>Subject Content</b>					
<p>1. <i>Siddha Udal thathuvam</i> (Siddha Udalthathuvam)</p> <p><b>Lecture:</b> Introduction of <i>Udal thathuvam</i>; 96 Philosophy for the Formation of body; Five senses, Five Sense organs, Description about the body function; Relationship between the</p>					

panchapoothas, *uyir thathu* and *udal thathu*; Functions of types of the *Uyir thathu* and describe its activities in Five *Kosham* (coverings) and Five *Asayam*, Describe the relationship between the six *atharankal*, three *Mandalas* and body; Description of Formation of *Thasa* (ten) *Naadi* and its function, Description of function of the *Thasa* *vayus*; Examination of *Naadi*; Defecation, Micturition, Excretion of Sweat, Digestion. Cellular respiration; Relationship between the function of *udal thee* and cellular respiration; liver metabolism. Utilization of food (*Parinamam*) and Change of *Annarasa* into seven *Udal thathus* and its philosophy; Details study of classification and functions of *Surothas*; Function of *Pranavayu* and respiration; Three *gunas*, Description of Knowledge, Functions of *anthakaranam*; Function of eight *gunas*.

**Practical:** Examination of *Naadi*, Identification of the type of body (*Thekakooru*)

## 2. Physiology

Introduction of Physiology; Homeostasis; Blood; Nerve and Muscle: Nerve conduction, Synaptic transmission, Muscle contraction; Autonomic Nervous System; Circulatory System: Circulation, Cardiac cycle, Heart sounds, Conductive system of the heart and Blood Pressure, Physiological changes in circulatory system in severe haemorrhage and during exercise; Urinary system: Urine formation, Compositions and characteristics of urine, Acid base balance and ions balance, Micturition; Digestive system: Functions of saliva, Mechanism of swallowing, Functions of stomach, small intestine, pancreas, liver, large intestine, and its secretions and defaecation; Endocrinology; Metabolic rate, Energy balance and Regulation of temperature; Respiratory system: Mechanical respiration, Volumes, Capacities, Gas exchange, Regulation of respiration; Reproductive system: Spermatogenesis, Menstrual cycle and regulation Endocrine function of ovary and testes; Neurophysiology; Special senses

### **Practical**

Estimation of haemoglobin concentration, Blood cells count, Blood group, Clotting time, Bleeding time, Measurement of blood pressure, Measurement of blood pressure during exercise, Urine tests, Body temperature, Body Mass Index, Skin fold thickness, Measurement of respiratory volumes, Visual acuity, Renne's Test and Weber's Test, Reflexes

**Teaching- Learning Methods:** Lectures, tutorial classes, practical, practical manual, small group discussions, presentations, PBL assignments and self-learning. The practical classes include experiments performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks
01	<b>In course Assessment (During the Term)</b>				
	Term I	30%	100 Marks (70+30)	1.SEQ – Part A-02 questions (UT) & Part B-02 questions (Phy) -One hour and 30 minutes 2.Submitted an assignment in UT	Not Applicable (NA)
	Term II		100 Marks (30+20+50)	1.Submitted an assignment in UT 2.Practical - <i>Naadi Pareetchai</i> OR <i>Theka Kooru</i> - 15 min. per student 3. Practical (Phy) - 15 min. per student	
	Term III		100 Marks (70+30)	1.SEQ – Part A-02 questions (UT) & Part B-02 questions (Phy) -One hour and 30 minutes 2.Submitted an assignment in UT	
	Term IV		100 Marks (50+50)	1.Viva (UT)-06 min per student 2. Practical (Phy) - 15 min. per student	
<b>02 End of the Phase I Examination (End of the IV term)</b>					
		<b>Examination</b>			
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>		
Paper I- *MCQ	10%	10%	100 Marks	True or False - Part A-10 questions(UT) & Part B-10 questions(Phy) - 1 hr.	45 %
Paper II - SEQ	30 %	50 %	1000 Marks	Structured essay questions - Part A-05 questions(UT)& Part B- 05 questions(Phy)- 3 hrs.	
Viva	10 %	10 %	100 Marks	06 Min. / Student	NA
Practical/ Assessment of skills	20 %	30 %	100 Marks	<i>Naadi Pareetchai</i> OR <i>Theka Kooru</i> - 10 min. per student AND Practical (Phy)- 30 min. per Student	45 %
<b>Over all pass Marks</b>					<b>50 %</b>
UT- Udalthathuvam Phy- Physiology <i>*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.</i>					

### Reference books:

1. *Angathipatham Vakada Thathvathudan Pararasekarathai Sarnthathu*. Ponnaiah, I. Thirugnanasampanthar Achchianthirasalai, 1936.
2. *Thottakirama Aarachiyum Siddha Maruthuva Varalarum*. Udthamarayan. K. S. Indian Medicine and Homeopathy, Chennai, 5<sup>th</sup> reprint. 2010.
3. *Siddha Maruthvankachurrukkam*. Udthamarayan. K.S. Indian Medicine and Homeopathy, Chennai, 5<sup>th</sup> reprint. 2010.
4. *Vaithiya Sinthamani*. Kannusamypillai, S. Rathinanayakar and Sons, Thirumakal Achakam. 2<sup>nd</sup> edition, 1938.
5. *Pathinen Siddhar Aruliya Naadisasthiram*. Kalathtur Kandaswamy Muthaliyar, Rathinanayakar and Sons, Thirumakal Achakam, 1976.
6. *Siddha Maruththuva Udal thathuvam*. Sithamparathanuppilai, S. Siddha Maruthuva Nool Aarachinilayam, 1999.
7. *Udal thathuvam*. Venukopal, P.M. Indian Medicine and Homeopathy, Chennai,, 1993.
8. *Agasthiyar 2000*. Venkadrajan, S. Thanjai Saraswathy Mahal, Thanjavoor, 5<sup>th</sup> edition, 2006.
9. **Treatise on Ayurveda**. Srikantha Arunachchalam. VijithaYapa Publications, 1<sup>st</sup> edition. 2004.
10. **Review of Medical Physiology**. William.F. Ganong. Boston: McGraw Hill, 22<sup>nd</sup> edition. 2005.
11. **Textbook of Medical Physiology**. Arthur C Guyton and John E Hall. Philadelphia: Saunders, 11<sup>th</sup> edition. 2006.
12. **Anatomy and Physiology**. Ross & Wilson. Anne Waugh: Churchill Livingstone, 12<sup>th</sup>edition. 2014.

### 3.1.6. Uyirrasayanam

<b>Subject</b>	<i>Uyirrasayanam - Biochemistry</i>				
<b>Number of Hours</b>	83	<b>250 Notional Hours</b>			
<b>Level</b>	Phase- I – Pre Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Indepent end Learning</b>	<b>Practical</b>	
	<b>Lectur e</b>	<b>Tutorial / Small Group Discussion</b>		<b>Guided Time</b>	<b>Indepentend Learning</b>
	60	08	157	15	15
<b>Aim</b>					
<p>The aim of the subject in Biochemistry is to develop basic knowledge on normal biochemical processes in the body, biochemical aspects of nutrients and nutrition, develop basic understanding of changes in biochemical processes in diseases, and develop skills in performing biochemical investigations to identify the above changes.</p>					
<b>Intended Learning Outcome</b>					
<p>On successful completion of the course the student should be able to</p> <ul style="list-style-type: none"> <li>• describe the biochemical basis of acid base balance and the buffers in the body fluids.</li> <li>• describe the structure and function of biomolecules of the body and outline the causes and conditions that cause alterations in them.</li> <li>• describe the structure and kinetic properties of the enzymes and explain the alterations in the properties and levels in disease conditions.</li> <li>• describe the structure, functions and metabolism of haemoglobin and identify the causes and conditions leading to abnormalities of haemoglobin metabolism and perform tests to identify bilirubin.</li> <li>• Describe the metabolism of carbohydrates, lipids, amino acids &amp; proteins and nucleic acids, and explain the effects of under nutrition and over nutrition, foods that provide essential nutrients and dietary advice for patients.</li> <li>• analyse urine for normal constituents and abnormal constituents and analyse serum for indicators of disease.</li> </ul>					
<b>Subject Content</b>					
<p>pH and buffers, Chemistry of carbohydrates, lipids, amino acids &amp; proteins, and nucleic acids, enzymes, regulation of enzyme activity, Movement of Substances Across Membrane, Digestion and absorption, Haemoglobin, Vitamins, Biological oxido-reduction, Metabolisms of Minerals, Carbohydrate, Lipids, Amino Acids &amp; Nucleic acid, Foods and Nutrition.</p>					
<b>Practical</b>					
<p>Analysis of Macromolecules, Estimation of blood glucose and serum cholesterol levels, Analysis of normal and abnormal constituents in urine.</p>					

## Teaching Learning Methods

Teaching-learning activities include lectures, practical & tutorial classes, and small group discussions. The practical classes include experiments performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the Term</b>					
	Term I	30 %	100 Marks	Each Assessment consist of MCQ (50 Marks) & SEQ (200 Marks)  Four Assessments, Each of 1h Duration	Not Applicable (NA)	
	Term II		100 Marks			
	Term III		100 Marks			
	Term IV		100 Marks			
<b>02 End of the Phase I Examination – (End of the IV term)</b>						
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I- *MCQ	10 %	20%	100 Marks	20 Questions – 1hour	45 %
	Paper II- SEQ	40 %	60%	1000 Marks	10 Structrued Essay Question – 3 hours	
	Viva	10 %	10%	100 Marks	10 Minutes per student	NA
	Practical	10%	10%	100 Marks	45 Minutes	45 %
<b>Overall pass Marks</b>					<b>50 %</b>	
<i>*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.</i>						

## References

### Textbooks [Latest Editions]

- Textbook of Biochemistry for Medical Students.** Vasudevan, D. M., Sreekumari, S. and Vaidyanathan, K. Published by Jaypee Brothers Medical Publishers (P) Ltd., India.
- Harper's Illustrated Biochemistry.** Murray, R. K., Bender, D. A., Botham, K. M., Kennelly, P. J., Rodwell, V. W. and Weil, P. A. Published By McGraw-Hill, New York.
- Lippincott's Illustrated Reviews Biochemistry.** Harvey, R. A. and Ferrier, R. H. D. Published By Watters Kluwer (India) Pvt Ltd, New Delhi.
- Essential of Medical Biochemistry.** Bhagavan, N.V. and Chug Eun Ha. Published By Elsevier, London
- Mark's Basic Biochemistry, A Clinical Approach.** Peet, A., Lieberman M. and Marks, A. D. Published By Wolters Kluwer Business, Philadelphia.

## 3.2. Phase II - Para Clinical Subjects

### 3.2.1. Marunthu Seimuraieyal

<b>Subject</b>	<i>Marunthu Seimuraieyal</i> - Pharmacy						
<b>No. of Hours</b>	285			450 Notional Hours			
<b>Level</b>	Phase II – Para Clinical						
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Practical</b>		<b>Clinical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>	<b>Guided Time</b>	<b>Independent Learning</b>
	50	10	140	135	15	90	10

#### **Aim:**

The aim of this subject is to equip students with knowledge on the classification internal and external medicine, detoxification of ingredients in preparing Siddha medicines, handling equipment and application of external medicines to indoor patients.

#### **Intended Learning Outcomes:**

- Prepare diverse Siddha medicines using different raw materials
- Relate medicinal plant raw materials to prepare Siddha medicines
- Utilize traditional and modernized equipment for preparing medicines
- Evaluate methods for gathering and storing raw materials, including secretory materials, for preparing Siddha medicines
- Correlate fundamental concepts to industrial practices
- Apply learned knowledge and skills to prepare Siddha medicines
- Demonstrate clinical application of external Siddha preparations
- Analyze and evaluate pharmacy models
- Classify and explain the importance of pharmacy utensils for preparing Siddha medicines
- Create and implement a plan to detoxify raw materials medicinal plant for high-quality medicines
- Recommend best practices for raw material collection and storage
- Connect with industries for classification of medicines, detoxification techniques and equipment handling
- Demonstrate ability to prepare quality of Siddha medicines

**Subject Content:**

Establishment and maintenance of model Siddha pharmacy- (*Vasthu* and modern method). Traditional, modern equipments and their usage. Detail study on Internal and External Siddha Medicines (32+32 according to *Theriyar* quotation) and, its sub divisions, detoxification of raw drugs, ingredients, dosage, curable disease, adjuvant, *pathiyam*, *abathiyam*, indication of disease, contraindication of disease and side effects. Detail study on weight and measures based on tradition and modern. Traditional measurements – *milagu*, *ulunthedai*, *pasipayaredai*, *kundri*, *manjadi*, *varaganedai*, *thola*, *thooku*, *aalakku*, *ulakku*, *ulli*, *naali*, *kuruni*, *pathakku*, *thoni*, *padi*. Modern measurements- kilogram, gram, milligram, microgram, litre, milliliter. Seasonal measurements- *mukoortham*, *saamam*, *padcham*, *mandalam*, *paruvakalam*, *ayanam*, *vaikarai*, *vidiyal*, *nanpagal*. Measurement of length: *viralkadai*, *saan muzham*, *pagam*. Detail study of identification of ingredients of medicinal plant raw materials based on synonyms mentioned in Siddha text and detail study of ingredients based on quotations. Detail study of juice extraction from medicinal plants through traditional method. Detail study of Internal and External medicines: preparation methods – *pakkuva nilai* – duration of medicine preparation (*araippu*, *erippu*, *idippu*) – measurement of *agni* (*theepa*, *kamala*, *kadakkini*). Detail study of Collection and storage of medicinal plants and its raw materials which are used in Internal and External medicine preparation. Detail study of Quality control of raw materials, Internal and External medicines. Detail study of derivation of salt content from medicinal herbs. Study of *Marunthugalai pazhaga vaithal* (Accustom). Study of Glossary of ingredients of medicines which are mentioned in ancient siddha text (*Maruthuva kalai sottkal*). Study of application of external medicines to indoor patients in hospital.

**Practical:**

Preparation of pharmacy model according to traditional *Theriyar vasthu murai* and modern method. Handling of traditional and modern equipments for the preparation of internal and external medicines. Identification of raw materials needed for the medicine preparation, collection, preservation, detoxification, medicine preparation, preserving prepared medicines, packing, labelling, selection of equipments needed for internal medicine preparation. Preparation and application of external medicines like *kattuthal*, *otttadam*, *vethu*, *thokanam*, *mai*, *kalikam*, *oothal*, *kalimbu*, *neer*, *suttigai*, *pasai*, *podu*, *keeral*, *attaivaldal*, *kombukattal*, *kuruthivangal*, *pattu*, *pochu*, *pottanam*, *pugai*, *podithimirthal*, *nasiam*, *nasikaparanam*, *seelai*, *varthi*, *salagai*, *kali*, *murichchal*, *kaaram*, *aruvai*, *urinjal*, *peechu*. Report submission on government and non-government industrial visit during vacation (3 weeks)

### Teaching- Learning Methods:

Lectures, practical, tutorials and small group discussions. Students are guided in a sequence to follow tutorials and self-learning is encouraged to learn more medicines. Students are encouraged to participate actively in medicine preparation during practical and to apply external medicines to indoor patients in hospital. During vacation, training program to visit pharmaceutical industry in government Sri Lanka and at the end of the visit students should submit the report regarding the visit.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations		Qualifying pass marks
01	<b>In course Assessment – During the Term</b>					
	Term V	30%	100 Marks	Written –Three structured essay questions- one hour		Not Applicable (NA)
	Term VI		100 Marks	Detoxification of three herbal raw materials per student – one hour		
	Term VII		100 Marks	Preparation of an internal and external medicine per student - one hour		
	Term VIII		100 Marks	Application of external medicines to the patient - 30 minutes per student		
	Term IX		100 Marks	Presentation and Report submission – Industrial visit		
02	<b>End of the Phase II Examination</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False) – 01 hour	45 %
	Paper II - SEQ	30 %	40%	1000 Marks	10 structured essay questions – 3 hours	
	Viva	10 %	10%	100 Marks	06 Minutes per student	NA
Practical	20%	40%	100 Marks	Three Practicals - 3 Hours per student	45 %	
03	<b>Over all pass Marks</b>					<b>50 %</b>
<i>*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.</i>						

## Reference books

1. *Siddha vaithiya thirattu*, Kuppusami muthaliyar K.N. Uththamarayan.K.S. Chennai, Indian Medicine, Homeopathy Department. 1998
2. *Siddha Owdatha seimurai*. Ponnaiya.S.M. Sabapathippillai.I. Ayurveda Laka. Department of Ayurveda 1980
3. *Chikitsa Rathnatheepam*. Kannusamipillai.S.Rathna Nayakan and Sons. 1941
4. *Therayar Yamaha venpa* (part I-III). Thiyagarajan.S. Poomathevi Printers, 1976
5. *Pararasasegaram* (Part I-VII). Ponnayappillai.I. (Publisher), Jaffna Saivaprakasa Iyanthirasalai, 1932
6. *Suthesa vaithya Owdathathirattu*, Jaffna Vayavilan, Aananthakumara Printer, 1945
7. **"Formulary of Siddha Medicines"** (part 1-3). Indian Medical Practitioners Corporative Pharmacy and Stores (IMPCOPS), madras, 1993.

### 3.2.2. Mooligaieyal

<b>Subject</b>	<i>Mooligaieyal</i> - Pharmacology						
<b>No. of Hours</b>	270			450 Notional Hours			
<b>Level</b>	Phase II – Para Clinical						
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Practical</b>		<b>Field</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>	<b>Guided Time</b>	<b>Independent Learning</b>
	<b>50</b>	<b>10</b>	<b>140</b>	<b>30</b>	<b>20</b>	<b>180</b>	<b>20</b>

#### Aim

The aim of this subject is to equip students with the knowledge to identify medicinal plants, organoleptic characters, pharmacological actions, biodiversity of medicinal plants and skill to identify and prepare plants specimens from the field collections.

#### Intended Learning Outcomes

- Categorize medicinal plants by family
- Explain the medicinal properties of plants based on quotations
- Demonstrate collection and preservation techniques for medicinal plant specimens
- Create herbarium sheets and nurseries from collected specimens
- Discuss conservation and sustainable practices for medicinal plants
- Analyze the pharmacological effects of medicinal plants on different systems of the human body
- Identify medicinal plant diversity in Northern and Eastern provinces through field visits
- Maintain regional medicinal plants in nurseries

#### Subject Content:

Brief study on medicinal plant- (100) Families. Detail study of medicinal plants identified regionally - Botanical name, Parts used, colloquial name of the identified species, medicinal preparation and uses in treatment. Importance of non-flowering (Gymnosperm) plants which are used in Siddha Medicine. Description of medicinal plants (100) according to Siddha quotations. Synonyms of medicinal plants mentioned in different Siddha text books. Brief study of medicinal plants according to siddha pharmacological actions used in different system of human body (gastro-intestinal system, nervous system, circulatory system, respiratory system, urinary and reproductive system)- *pothugunam*, parts used, medicinal uses, action, curative property in diseases. Brief study on economically important medicinal plants which earn foreign exchange in SriLanka.

#### Practical:

Identification of diversity of medicinal plants in different regions of Northern and Eastern province including regions near sea-shore, forest and bushes, fields and field related region, (*Neithal, mullai, marutham*) and mangrove regions. Conservation of the nurseries of rare medicinal plants collected from

field visits. Visiting National Government Herbal Gardens (05) during vacation and submitting the report. Preparing Herbarium sheets. Submitting report, after visiting National herbarium, Royal Botanical Garden during vacation.

**Teaching- Learning Methods:**

Lectures, Field visits & demonstrations, Practical, assignments, Presentations, Small group discussions, seminars and tutorial classes. Field visit includes identification and biodiversity of medicinal plants in Northern and Eastern provinces of Sri Lanka. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
<b>01</b>	<b>In course Assessment – During the Term</b>					
	Term V	30%	100 Marks	Written –Three Structured essay question- one hour	Not Applicable (NA)	
	Term VI		100 Marks	Preparation of herbarium sheets - Ten per student		
	Term VII		100 Marks	Preparation of Nurseries from Filed visit – Five nurseries per student		
	Term VIII		100 Marks	Spots (10x5 Herbs) – 30 minutes per student		
Term IX	100 Marks		Presentation and Submission of field visit report			
<b>02</b>	<b>Phase II Examination (End of IX term)</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False) – 1hour.	45%
	Paper II - SEQ	30 %	40%	1000 Marks	10 structured essay questions – 3 hours	
	Viva	10 %	10%	100 Marks	06 Minutes per student	NA
Spots	20%	40%	100 Marks	20X5 herbs - one hour per student	45%	
<b>Over all pass Marks</b>					<b>50%</b>	
<i>*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.</i>						

### Reference books

1. ***Gunapadam (porutpanpu nool)***. Murugesumuthaliyar, Indian Medicine, Homeopathy Department, 2000
2. ***Patharthaguna Vilakkam***. Kannusamipillai M.P. Jeyam Printers, 2003
3. ***Patharthaguna Sinnthamani Mooligaivakuppu***. Kasim Mohaideen Ravudh, Raththinayakan and sons , 1952
4. ***Aanjiospomgalin vakaippadu***. Somasuntharam. S. Ilango Publish, Palayankotai, 2015
5. **Medicinal plants used in Ceylon**. Jeyaweera D.M.A.. National science publication, vol I-V (2006).
6. **Wealth of India**. Krishnan Marg K. S, National Institute of science communication. vol I-XIII, 2000.
7. **Indian Medicinal plants**. Basu K.D, Periodical Expert book agency, vol I-IV, (2012).

### 3.2.3. Samooganala Maruthuvam

<b>Subject</b>	<b>Samooganala Maruthuvam - Community Medicine</b>				
<b>No. of Hours</b>	<b>150</b>			<b>300 Notional Hours</b>	
<b>Level</b>	<b>Phase II – Para Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clerkship</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	<b>50</b>	<b>10</b>	<b>130</b>	<b>90</b>	<b>10</b>

#### **Aim**

The aim of this subject is to equip students with the knowledge, skills, and attitudes necessary to promote and enhance individual, family, and community health while preventing disease.

#### **Intended Learning Outcomes**

1. Describe Siddha Philosophy for promoting aarogyam
2. Apply scientific water purification techniques
3. Develop yoga therapy plan using updated research for disease management and prevention
4. Use evidence-based strategies to manage stress-induced diseases
5. Synthesize health statistics and demographic data using advanced research methods
6. Formulate effective measures for prevention, cure, and rehabilitation based on recent research
7. Evaluate environment-human health interdependence and impact on disease spread
8. Design interventions based on current evidence for factors affecting reproductive health
9. Analyze global health systems using contemporary frameworks

#### **Subject Content**

Aarokiyam, thinasarikai, kaala ozhukkam, influence of five elements water, air and fire in aarokiyam. Diseases spread by air. Types of water and air. Prevent the water pollution. Methods of purification of water. 14 vegankal. Harmful effects due to suppression of vegankal. Kaayakatpam in long life, yogakatpam. Influences of 6 chakkaras in aarokiyam. Correlation between the five elements, 6 chakkaras and functions of the body. Meditation, yogasanam and cure the diseases. Methods of vaccination (0-15 age, pregnancy). Primary prevention, Secondary prevention and Tertiary prevention, mother and child care, benefits of breast milk, weaning foods for children, STD disease structure of health system.

#### **Clerk ship**

1. Public Health Inspector (Hotels, Bakery)/Water Sannitery/Waste management.
2. School Medical Inspection - Dental
3. Notifiable diseases
4. Malaria control Programme
5. Immunization Programme
6. ANC visit- PHM
7. Health Education
8. Birth and Death Register.

9. STD clinics
10. Councilling
11. Jaipoor
12. Differently able home
13. Naffled School Kaithady
14. Yoga training.

### Teaching- Learning Methods

Lectures, visual aids, SGD, PBL, assignments, clerkship appointments, Health education, tutorials, yoga and thiyanam performed by individual students, field activities and visit to community health institutions. The practical classes include experiments performed by. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the term</b>					
	Term V	30 %	100 Marks	Written – Three structured essay questions – one hour	Not Applicable (NA)	
	Term VI		100 Marks	Presentation and Report submission of Clerkship (15 minutes per student)		
	Term VII		100 Marks	Two Yoga performances - 10 Minutes per student		
	Term VIII		100 Marks	MCQ- 20 questions (True or False) – one hour		
	Term IX		100 Marks	One Yoga performance - 5 Minutes per student and Presentation and Report submission of Clerkship (15 minutes per student)		
02	<b>End of the Phase II Examination – End of IX Term</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I - *MCQ	10 %	10%	100 Marks	20 questions (True/ False) – one hour	45 %
	Paper II - SEQ	50 %	80%	1000 Marks	10 structured questions – 3 hour	
	Viva	10 %	10%	100 Marks	06 Minutes per student	
03	<b>Over all pass Marks</b>				<b>50 %</b>	
*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.						

### Reference books

1. *Noi illanery*.Thurairasan.K , H.P.I.M. Indian Medicine Homeopathy Department, 1993
- 2.*Munivargal Aruliseitha Aputhasinthamani ennum patharthaguna sinthamani moolamum uraiyum*. Kalaimaathuvillakka Printer India, 1891
- 3.*Kaayakatpam*. M.K.Anparasu, Poopathy Printers, Thiruchchirappalli, 2002
- 4.*Thirumanthiram*, Thirumoolar
- 5.**Park's Textbook of preventive and social Medicine**. Park. K.. Jabalpur BanarsidasBhanot, 19<sup>th</sup> edition 2007.
- 6.**Statistics at Square one**. Swinscow. TDV. London: British Medical Association, 1978.
- 7.**Survey Methods in Community Medicine**. Abrahamson. J.H.; Epidemiological Studies, Program evaluation, Clinical trials. 4<sup>th</sup> edition. Edinburg: Churchill Livingstone, 1990.

### 3.2.4. Paarampariya Unavum Aarokiyamum

<b>Subject</b>	<i>Paarampariya Unavum Aarokiyamum</i> - Traditional Food and Wellness				
<b>No. of Hours</b>	<b>90</b>			<b>200 Notional Hours</b>	
<b>Level</b>	<b>Phase II – Para Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical and practical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	<b>40</b>	<b>05</b>	<b>105</b>	<b>45</b>	<b>05</b>
<b>Aim</b>					
The aim of this subject is to equip students with the necessary knowledge, skills, and attitudes to improve individual, family, and community health, and prevent diseases through proper dietary practices					
<b>Intended Learning Outcomes</b>					
<ul style="list-style-type: none"> <li>• Explain the concept of aarogyam in Siddha Philosophy</li> <li>• Identify factors that affect aarogyam</li> <li>• Classify thaniyangal and rice according to Siddha literature</li> <li>• Describe various types of Panangal milk products, fruit juices, kanji, and Kool</li> <li>• Develop skills to identify nutritional values in Thaniyangal, rice, fruits, and vegetables</li> <li>• Explain appropriate foods for different age groups</li> <li>• Identify preventive, curative, and rehabilitative measures through food</li> <li>• Describe appropriate food and nutrition for different life stages and disease conditions</li> </ul>					
<b>Subject Content</b>					
Aarokiyam – Definition, influencing factors – doshas, dhathus, malangal, climate. Diet – types of rice, types of millets, small millets –saamai, thinai, kurakkan, kampu, varagu, kuthiraivaali, perunthaniyangal, navathaniyangal. Paanangal – milk and dairy products – butter milk, curd, butter, gee, varieties of porridge, traditional foods, medicinally important fruits, leavy vegetables, varieties of yams and vegetables, meats, healthy diets for different age groups and sexes. Macronutrients and Micronutrients. Diet pattern for thinasariyai and kaal ozhungu. Millets influences in non-communicable diseases.					
<b>Institutional Visits</b>					
<ul style="list-style-type: none"> <li>• Slaughter house</li> <li>• Dairy Farm – Milk Boar</li> <li>• Elder’s home</li> <li>• Bakeries</li> <li>• Food industries in Northern province</li> </ul>					

## Practical

Proximate analysis of food product

## Teaching- Learning Methods

Lectures, visual aids, SGD, PBL, assignments, clerkship appointments, Practical, Health education, tutorial classes, field activities and visit to food industries. The practical classes include experiments performed by individual students. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment</b>					
	Term V	30%	100 Marks	Written – three structured essay questions – one hour	Not Applicable (NA)	
	Term VI		100 Marks	Practical- One traditional food product preparation – one hour per student		
	Term VII		100 Marks	Written – three structured essay questions – one hour		
	Term VIII		100 Marks	Presentation and Report submission of food industrial visit		
Term IX	100 Marks		One presentation and proximate test for the prepared traditional food product – 45 minutes per student			
02	<b>End of the phase II Examination – End of the IX Term</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True/ False) – one hour	45 %
	Paper II - SEQ	50 %	80%	1000 Marks	10 structured questions – 3 hour	
Viva	10 %	10%	100 Marks	06 Minutes per student	NA	
<b>Over all pass Marks</b>					<b>50 %</b>	

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

### Reference books

1. *Sowmiyasaakaram*. Rajan.M.S. Saraswathy Mahal Library and Research center, 3<sup>rd</sup> Edition, 2014
2. *Ragunaathasri Iyatriyapojana kuthugalam*. Publisher S.N.Ragavan. Thanjavur Saraswathy Mahal, 4<sup>th</sup> Edition , 2019
3. *Sripallapenthirarin vaithiyasinthamani (Peshakalpan)* Thanjavur. Director Saraswathy Mahal Library, 3<sup>rd</sup> Edition, 2014
4. *Munivargal aruliseitha atputha sinthamani ennum patharthaguna sinthamani moolamum uraiyum* Sanmugasuvamigal, Kanagarayamuthaliyar, Kalaimaathuvilakka Printer. 1891
5. *Noi illaneri*. Thurairasan.K. H.P.I.M. Indian Medicine Homeopathy Department, 1993
6. **Indian Medicine**, Susuruthasamhiruthai M.P.1991

### 3.2.5. Nanchieyalum Neethi Maruthuvamum

<b>Subject</b>	<i>Nanchieyalum Neethi Maruthuvamum</i> - Toxicology & Forensic Medicine				
<b>No. of Hours</b>	<b>150</b>			<b>300 Notional Hours</b>	
<b>Level</b>	<b>Phase II – Para Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical + Practical</b>	
	<b>Lecture</b>	<b>Tutorial</b>		<b>Guided Time</b>	<b>Independent Learning</b>
<i>Nanchieyal</i>	<b>25</b>	<b>05</b>	<b>70</b>	<b>90</b>	<b>10</b>
<i>Neethi Maruthuvam</i>	<b>25</b>	<b>05</b>	<b>70</b>	<b>-</b>	<b>-</b>
<b>Aim:</b>					
The aim of this subject is to provide students with the knowledge and skills required to identify and manage toxicological hazards associated with plants, metals, and minerals and identify and manage death, injuries, and asphyxial conditions while providing an understanding of relevant ethical and legal considerations in medical practice					
<b>Intended Learning Outcomes:</b>					
<ul style="list-style-type: none"> <li>• Classify poisons and their characteristics</li> <li>• Define the dose, route of administration and symptoms of toxic substances</li> <li>• Identify acute and chronic toxicity based on symptoms</li> <li>• Discuss treatment and management of patients</li> <li>• Demonstrate removal of snake venom using <i>Vidakkal</i></li> <li>• Relate patients for specialized care when necessary</li> <li>• Apply medical ethics in daily practices</li> <li>• Describe death, injuries, and asphyxial conditions</li> <li>• Explain the legal procedures for issuing medical certificates and medico-legal reports</li> <li>• Discuss medical ethics and legal considerations in practice</li> <li>• Explain sexual offenses, criminal abortions and infanticide</li> </ul>					
<b>Subject Content</b>					
Introduction of poison – plant poison, mineral, metal and animal poison. Classification, route of administration, poisonous dose, signs & symptoms, management and antitode of plant, mineral, metal and animal poisons. Acute and chronic poisonous due to the administration of poisons and their management for the patients. Duties of medical officer for managing patients who take poisonous materials. Food poisoning, insecticide, alcohol, drugs abuse, addiction and hydro carbon poisoning.					

Introduction of Forensic Medicine- Definition Scope, Role of the Doctor, Death - Changes after death, Rigor mortis, Putrefaction, Adipocere formation, Mummification, Estimation of time of death.

Injuries- Abrasions, Lacerations, Contusions, Incised wounds, stabs, Fractures, Head injuries. Injuries caused by physical agents, Medico Legal aspect of injuries, Grievous Hurt, Non Grievous hurt. Asphyxia- Hanging, Strangulation, Throttling, Smothering, Suffocation. Sexual offences, Criminal Abortion, Infanticide.

Legal Procedure - Declaration of Death certificates, Cause of Death, Dying declaration, Medical Certificate, Medico Legal Reports, Medical report submitted to the courts,

Ethic & law in the conduct of Medical Practice – Sri Lanka Medical Council, Professional Secrecy, Malpractice, Responsibility of doctor

### **Clinical training**

Diagnosis and treatment for patients who ingest poisonous materials in hospitals. Training for the students to rehabilitation and management of patients who addict with alchahol and drugs in Siddha Teaching Hospital. Postmortem observation

### **Practical – Toxicology medicine**

Identification of poisonous snakes, insects, mineral, metals.

### **Teaching -Learning Methods:**

Lectures, Clinical demonstration including traditional practices, Case presentation, SGD, PBL, Assignments, Tutorials and Postmortem observation

## Evaluation

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the Term</b>					
	Term V	30%	100 Marks	MCQ – 10 questions – 30 minutes (Toxicology)	Not Applicable (NA)	
	Term VI		100 Marks	Case sheet presentation – 02 per Student (Toxicology)		
	Term VII		100 Marks	Viva (Toxicology) – 06 minutes per student		
	Term VIII		100 Marks	Case sheet presentation – 02 per Student (Toxicology)		
				Viva – 06 minutes per student or SEQ – 02 questions – 30 minutes (Forensic)		
Term IX	100 Marks		Written – SEQ- three questions – one hour (Toxicology) Specimen identification - 02 (Forensic) – 10 minutes per student			
02	<b>End of the Phase II Examination – End of the IX Term</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False) – 1 Hour A- Toxicology – 12q B- Forensic – 08q	45 %
	Paper II- SEQ	30 %	40%	1000 Marks	10 structured essay questions – 3 hours. A- Toxicology – 6q B- Forensic – 04q	
	Viva	10 %	10%	100 Marks	06 Minutes per student	
	Practical	10%	20%	100 Marks	Spots (10x3 Minutes) (Jeevananjukal-06, Specimens (forensic)- 04)	45 %
	Clinical	10%	20%	100 Marks	Case presentation – 01 (Nanchiyal) – one hour	
<b>Over all pass Marks</b>					<b>50 %</b>	

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

### **Reference books**

1. *Pathinen Siddharkal Thiruvai Malarthaluliya Vishavaithya Maanthreega nine visha aarudam*, Pathmanaayar.S. Saraswathy Bookshop, Settiyar Road, Colomo, 2009
2. *Vishavaithya Sinthamani*, Munisam Muthaliyar, South India Book shop, 1931
3. *Visha kadi Mooligaimaruththuvangal*. Velupillai.S.S. Vinayagar Tharumanithiyam. Theniyamman Road, Puloli West, Pointpetro, 1995
4. *Paambutheenduthal thaduppumuraigalum muthaluthavium*, Colombo 1994
5. *Siththarudam (eattusuvadi)*. J.Kristober. Easten Graphics, Batticaloa, 1999
6. *Sarapendra vaithya muraigal, viroga chikitsai*, Venkadarajan.S. Saraswathy Mahal Library, Chennai, 1956
7. *Nanchu murivu nool*. Murukesumuthaliyar.K.S. 2000
8. **Forensic Medicine and Medical Law**. Hemal Jayawardena (2004)
9. **Medico Legal Aspects of Injuries**. N. Saravanapavananthan, (1982)

### 3.2.6. *Chikitsai Adippadai Thathuvangal*

<b>Subject</b>	<b><i>Chikitsai Adippadai Thathuvangal</i> - Fundamentals of Therapeutics</b>				
<b>No. of Hours</b>	120			200 Notional Hours	
<b>Level</b>	Phase II – Para Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Practical &amp; Clinical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	25	5	70	90	10

#### **Aim**

The aim of this subject is to equip students with the knowledge, skills, and attitudes necessary to design an effective treatment plan.

#### **Intended Learning Outcomes**

1. Acquire knowledge in therapeutic methods
2. Demonstrate *Chikitchai Kiramangal* (Line of treatment) treatment protocol
3. Conduct effective patient and family history interviews
4. Analyse the vitiated doshas to determine line of treatment.
5. Implement therapeutic methods and treatments
6. Line out the actions of medicine according to the vitiated doshas.
7. Explain the *Panchavatkiriyai*

#### **Subject Content**

Definition of *Chikitchai*, Classification of *Chikitchai*, Detail study of Line of treatment, Oileation therapy, Perspiration therapy, Treatment methods which are increasing and decreasing the body strength, Drugs and actions according to the each system of the body, *Panchavatkiriyai* (Vomiting, purgative, bloodletting, enema, nasal drops), Internal treatment, external treatment – *Thokkanam*, *Marthanam*, *Ennaiseelai*, *Ottadam*, *Podithimirththal*, *Thoomapanam*, *Puravalaiyam*, *Naatpaadam* (Patient, Doctor, Pharmacist, Medicine)

#### **Clinical training**

1. Obtain training on internal and external treatment procedures
2. Obtain knowledge regarding the drugs which are using in hospital
3. Attending the medical camps and submit the report
4. Obtain skill on *Panchavatkiriyai* and massaging techniques
5. Maintain log book

### Teaching – Learning Methods:

Lectures, Clinical, Case presentation, Visual aids, Small Group Discussion, Problem Based Learning, Assignments, Presentation, Clinical appointments with physicians, Tutorial classes and Case sheet.

The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment – During the Term</b>					
	Term V	30 %	100 Marks	Written – Three structured essay questions – One hour	Not Applicable (NA)	
	Term VI		100 Marks	Designing the line of treatments - 15 minutes per student		
	Term VII		100 Marks	handling the treatment procedures		
	Term VIII		100 Marks	Case presentation		
	Term IX		100 Marks	Logbook evaluation and Viva		
02	<b>End of phase II clinical examination - End of clinical appointment</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Clinical	30%	40%	100 Marks	Clinical application based on <i>doshas</i> (04) – 15min x 4 per student	45 %
	<b>End of phase II examination - End of IX term</b>					
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False) – 1 hour	45 %
	Paper II - SEQ	20 %	40%	1000 Marks	10 structured essay questions – 3 hours	
Viva	10 %	10%	100 Marks	06 Minutes per student	NA	
<b>Over all pass Marks</b>					<b>50 %</b>	

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

### Refernce books

1. *Siddha Maruthuvankasurukkam*, Uthamarayan. K.S, Indian Medicine and Homeopathy, (2010)
2. *Pararasasekarm* (All volumes), Ponnaiya.I, Thirugnanasampanthar press, Elalai, (1936)
3. *Akasthiyar 2000*, Venkatrajan.S, Thanjai Saraswathi Mahal, Thanjavoor, (2002)
4. *Noikalukana Siddha Parikaaram – I,II,III*, Sanmugavelu.M, (1993)
5. *Siddha Maruthuvam (Pothu)*, Kuppusamay.M.V, Indian Medicine and Homeopathy, (2009)
6. **Treatise on Ayurveda**. Sri Arunachalam, Vijitha Jaypee publication, (2004)

### 3.2.7. Noi Naadal

<b>Subject</b>	<i>Noi Naadal - Pathology</i>				
<b>No of Hours</b>	150			300 Notional Hours	
<b>Level</b>	Phase II – Para Clinical				
<b>Hourly Breakdown</b>	Direct Contact		Independent Learning	Clinical	
	Lecture	Tutorial or Small group discussion		Guided Time	Independent Learning
	50	10	140	90	10

**Aim:**

The aim of this subject is to enhance understanding of disease pathogenesis and pathology based on doshas and develop skills in diagnosing patients using appropriate methods and understanding the importance of modern aspect of pathology.

**Intended Learning Outcomes:**

- Discuss *Aarokiyam* and *Piniyanugavithi*
- Illustrate different types of *Noi Pareetchi Muraigal*
- Conduct effective patient interviews to obtain medical history
- Interpret vitiated doshas based on *kaaranankal*, *Mukutraviyal*, *Pirakiruthi*, and *Vikirathi*
- Discuss *Sothidam* and *Pancha padsi Saasthiram* based on doshas
- Explain the phases of *Dosha* and *Viyadhi avasthai*
- Demonstrate *Naadi pareetchai* skill to determine patient prognosis
- Explain *Saravoddam* and *Thasa Naadi*
- Determine relevant laboratory investigations
- Discuss the importance of general pathology
- Illustrate pathogenesis of infections and microorganisms
- Describe the haematological disorders
- Explain parasites and its related disorders

**Subject Content**

Definition of *Aarokiyam*, *Piniyanukaa vithi*, *Dosha avasthai*, Details of *Noi*, *Noi avasthai*, *Noi nilaikal*, Definition, causes, types, premonitory symptoms, Siddha pathology, clinical features, *Thasaprakaranam*, *Noiutpathi*, Prognosis of the *Noi*, Classification of *Noi*, Clinical features of *thodam*, The importance of *Naadi* in spreading of *Noi*, *Uyiranal*, *Vaalnaal vibaram*, Role of *Panchapootha*, *Suvaikal*, *Udatthee*, *14 vekankal*, *Iynthu vaakai nilam* and *96 principles in Noiutpathi*, *Thoothuvan ilakkanam*, *Asathiyakurikunankal* and *maranakurikunankal*, *Saram*, *Thasanaadi*, *Panchapadchi*, *Sothidam*, *Prakruthi*, *Vikiruthi*, *Oddunoi*, *Kirumi*, *Piniyarimurai*, Details study on Eight fold examination, Importance of *Manikadainool*, *Noiyali pareetchai muraikal* (*Poriyaal arithal*, *Pulanaal arithal*, *Vinaavuthal*, *Kanaal paarthal*, *Thoddu paarthal*, *Thaddipaarthal*, *Karuvimoolam pareetchai*, *Suvaithal*, *Manathal* and other *Noiyali pareetchai muraikal*.

Introduction of pathology, Cell injury, Cellular adaptation, Necrosis, Hemodynamic changes, Infection, Cellular inflammation, Healing, Neoplasia, Definition and introduction of parasites, Identification, life cycle, pathogenesis, clinical features, laboratory investigation of the parasites (*Amoeba*, *Malaria*, *Flagellates*, *Balantidium coli*), Intestinal worms, Lymphatic filariasis, Diseases related to blood cells, Coagulation disorders, Identification and classification of micro-organisms, Details of important micro-organism, Sterilization and Disinfectant, Culture media and culture methods, Immunology

The modern aspect of pathology will be taught by western medical human resources.

### Clinical training and Practical

History taking from the patient, Physical examination methods, Eight fold examination, *Neerkuri*, *Neikuri*, Maintain log book, Blood investigation, urine examination, X-ray, ECG, Lipid profile

#### Teaching – Learning Methods:

Lectures, Practicals, Clinical, Case presentation, Visual aids, SGD, PBL, Assignments, Presentation, Clinical appointments with physicians, Tutorial classes and case sheets.

The clinical examination include history taking, physical examination and investigations. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks
01	<b>In course Assessment – During the Term</b>				
	Term V	30%	100 Marks	Clinical Examination – one case - 15 minutes per student	Not Applicable (NA)
	Term VI		100 Marks	Written – Three structured essay questions – one hour	
	Term VII		100 Marks	Bed side Case presentation -one case – 20 minutes per student	
	Term VIII		100 Marks	MCQ – 20 questions (True/False) – one hour	
Term IX	100 Marks		Logbook evaluation and Viva – 10 minutes per student		
02	<b>End of phase II clinical examination - End of clinical appointment</b>				
		<b>Examination</b>			
		1 <sup>st</sup>	2 <sup>nd</sup>		
	Clinical	30%	40%	100 Marks Clinical examination (04 cases) – 4x15min per student	45 %
03	<b>End of phase II examination - End of IX term</b>				
		<b>Examination</b>			
		1 <sup>st</sup>	2 <sup>nd</sup>		
	Paper I - *MCQ	10 %	10%	100 Marks 20 questions (True or False)– 1 hour	45 %
	Paper II – SEQ	20%	40%	1000 Marks 10 structured essay questions – 3 hours (Siddha 9 que. + Western 1 que)	
Viva	10 %	10%	100 Marks 06 Minutes per student	NA	
<b>Over all pass Marks</b>					<b>50%</b>

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

## Reference books

1. *Noi Naadal Noi muthal Naadal*. Sanmugavelu.M. Indian Medicine – Homeopathy Department. Part I, II, 2009
2. *Maruththuvamum Sothidamum*, Sivashanmugaraja.S. Jaffna Siddha Medical Valarchchikkalagam 2006
3. *Pathinen Siddhargal Aruliseitha Naadisaasthiram*. Pathinen Siddharkal, Chennai, Keltan Electric Private, 1922
4. *Vaalayarul Pathinensiddhargal Panjapatchisasthiram*, Pulippani Suntharavarathachariyar, Sarasvathy Mahal & Research Center, Thanchavoor. (1936)
5. *Pararajasekaram Muluppakam*. Ponnaiah, I. (1936)
6. *Yoogivaithyasinthamani*. Yoogimunivar, Indian Medicine, Homeopathy Department, 2005
7. *Agathiyar Irandayiram*, Venkadarajan.S. Thanjavur: Thanjai Saraswathy Library Printer (Part I,II,III), 2002
8. *Therar aruliseitha neernirakkurineikuri saasthiram*, therar, Srinivasa Printer, 1961
9. R.Alagappan (2<sup>nd</sup>Edition, reprinted 2003) Manual &practical medicine, Jaypee Brohers Medical publisher Ltd, New Delhi.
10. **Text book of Pathology** –The Health science publishers. Harsh Mohan, 7<sup>th</sup> edition. (2005)
11. **Textbook of Microbiology**, Ananthanarayan R. and JeyaramPanikar.C.K. India: Orient Longman Ltd. 6<sup>th</sup> edition. (2000).
12. **Textbook of Medical Parasitology**. Jeyaram Panikar C.K, Jaypee brothers medical publishers (P) LTD, (2013).
13. **Textbook of Medical Laboratory Technology**. Praful B Godkar, Darshan. P.Godkar, Bhalani publishing House Mumbai.(2004).

### 3.2.8. Research Project

Each student fulfil the Phase II (Para Clinical) curriculum must undertake a Research Project as a mandatory component. To ensure the Research proposal is conducted appropriately, students will be assigned with Supervisors to guide and assist in selecting a suitable Research Problem and Topic. The Research Project should be prepared following the guidelines approved by the Unit, which are available on the Unit Website. Upon the advice of the Supervisors, the students must obtain Ethical Clearance from the Ethical Review Committee of the University of Jaffna before commencing the Research Project. The students are required to submit the Research Project Report on or before the submission date, after which a Viva -Voce Examination will be held to evaluate the Research Project.

**Table XII:** The Evaluation of the Research Project

<b>Details of Research Project</b>	<b>Distribution of marks</b>	<b>In-Charge</b>
Proposal Writing and Presentation	10%	Supervisors
Research Project Evaluation	60%	Examiners
Submission of Final Report and Presentation	30%	Three Evaluators
<b>Total</b>	<b>100%</b>	

#### Reference books

- 1) Andrew Friedland, Carol L Folt, Writing Successful Science Proposals, 2<sup>nd</sup> Edition, 2009.
- 2) Aczel, A.D. (1995) Statistics: Concepts and application. Irwin, Chicago.
- 3) Rohlf, F.J (2011) Biometry. W. H. Freeman
- 4) Sokal, R.R. (2012) Statistical Tables. Chapman and Hall.
- 5) Everitt, B.S. And Der, G. (1997) A Handbook of Statistical Analysis's Using SAS. Chapman & Hall.
- 6) Johnson,R. (1996) Elementary Statistics. 7<sup>th</sup> edition. Duxbury Press.
- 7) Middleton, (1995) Data Analysis Using Microsoft Excel 5.0. Duxbury press.
- 8) Pasewark, (2002) Course Technology, Microsoft Office XP Introductory. Thomson learning.

### 3.3. Phase III – Clinical Subjects

#### 3.3.1. *Siroroga Maruthuvam*

<b>Subject</b>	<i>Siroroga Maruthuvam</i> - Ear, Nose, Throat Medicine, Ophthalmology & Dentistry				
<b>No of Hours</b>	285		350 Notional Hours		
<b>Level</b>	Phase III - Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical</b>	
	<b>Lecture</b>	<b>Tutorial / small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	12	3	35	270	30

#### **Aim**

The aim of this subject is to develop the knowledge, skills, and attitudes required for the diagnosis and treatment of Ear, Nose, Throat, eye, dental, head, and neck-related diseases and to prepare them for professional practice in this field.

#### **Intended Learning Outcomes:**

- Conduct a thorough physical examination of the diseases related to neck and above by using *ennvakai thervu*.
- Interpret the signs and symptoms and make to diagnose or differential diagnosis of diseases related to neck and above.
- Perform therapeutic procedure competently for *Kathu Mooku Thondai* and *kaabala* diseases.
- Develop effective treatment plans and manage patients, referring to specialized care when needed.
- Provide appropriate advice and counseling during patient's stay and upon discharge, and ensure appropriate follow-up care.
- Motivate the students in research publication and presentation.
- Apply medical ethics and principles of professional conduct in daily practice.

#### **Subject Content**

Ear disease – causes, classification and its sign and symptoms, examination methods of ear diseases, diagnosis of diseases, treatment, *Siddha* drugs and management, diseases related to external, middle and internal ear. *Norse* and *paranasal sinuses* – diseases - causes from different literatures, classification of *mookku noikal* and its signs and symptoms, line of treatment, management of nasal diseases – *nasiyam*, special medicines – *pottani*, *vethu*, *pugai*, *thiri*, *kaarakkaraisal*, *nasiya ennaigal*, Diseases related to Nose and *paranasal sinuses*. *Thondai noikal* – causes, classification and its signs and symptoms. Examination of throat, diagnosis of *thondai noikal*, special medicines, line of treatment, Diseases related to Throat. Eye – *mandalangal*, five elements, causes for eye diseases and its classification and signs and symptoms, treatment and management for eye diseases, preventive measures of eye diseases – *aachchiyothana anjanam*, *thatpana pudapaaga murai* (*anjana maathirai*, *thiripalagirutham*, *ennaigal*). Causes, classification, signs and symptoms and treatment of disease of *vaai*, *pal*, *eeru*, *uthadu*, *naakku*, special medicines and management. *Unnakku valarthal* – signs and symptoms, treatment, special medicine. *Amutha noikal*, causes, classification, signs and symptoms,

treatment and management. Kapalarogam – causes, types, signs and symptoms, line of treatment methods.

### Clinical Lectures

History taking

Physical examination – envagai thervu

Diagnosis – using siddha methods

Line of treatment and management

Special treatment methods – Thokkanam – sirasu, mugam

Sirothara, sirolepa, sirovasthy, nasiyam

**Teaching –Learning Methods:** Teaching and learning activities include lectures, clinical lectures, case presentations and case discussions, SGD, PBL, assignments and tutorial classes. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation -** The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks	Details of Evaluations	Qualifying pass marks		
01	<b>In course Assessment – During the Term</b>					
	Term X	30%	100 Marks	Two case presentations		
	Term XI		100 Marks	Assessment of log book and viva		
	Term XII		100 Marks	Clinical examination – 05 minutes per student		
	Term XIII		100 Marks	Two case Presentations		
	Term XIV		100 Marks	Assessment of log book and viva		
	Term XV		100 Marks	Clinical examination – 05 minutes per student		
				Not Applicable (NA)		
02	<b>End of phase III examination - End of the completion of the clinical appointments</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Clinical examination	40%	60%	100 Marks	Four short cases- 15x4 minutes per student – At Hospital including assessment of skills of clinical examination & Communication	45 %
	<b>End of phase III examination - End of XV term</b>					
Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False)- 1 hour.	45 %	
Paper II - SEQ	20 %	30%	1000 Marks	10 structured essay questions – 3 hours		
<b>Over all pass Marks</b>				<b>50 %</b>		
<i>*For each among responses will be given negative marks and the negative marks of a question shall not be carried forward to other marks of the other question.</i>						

### Reference books

1. *Pararasasegaram, Siroroganithanam*, Ponnaiya.I. Thirujnanasampanthar Printers, Ezhalai, 1<sup>st</sup> edition Part –I, 1936
2. *Nayanavithy Nagamunivar* – Agathiyar 1976
3. *Agathiyar Gunavagadam*, Sami.S.P. Sami Printer Palani, 2<sup>nd</sup> Edition. 1973
4. *Sarapenthiravaithiya muraigal Siroroga chikitsai*. Vengadarasan.S. Amiruthalingampillai.T. S. Nayanarogachikitsai, Saraswathy Mahal Library Thanjavur, 1959
5. *Thanvanthiri vaithiyam*. Srirangam SriVanavil Printer, Dr.S.Vengadaraj , Part I, II, 1966
6. *Kan vaithiyam ennum thirineththirasinthamani sirumanavur* Munuswamy muthaliyar. B. Rathnanayakar and Sons Thirumagal Printer, 1993
7. **Lecturer Notes on Diseases of the Ear, Nose and Throat** Peter Bull. Ray Clarke Blackwell publication, 10<sup>th</sup> Edition. (2017).

### 3.3.2. *Aruwai Maruththuvam*

<b>Subject</b>	<i>Aruwai Maruththuvam</i> - Surgery				
<b>No of Hours</b>	300			400 Notional Hours	
<b>Level</b>	Phase III - Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical Lectures</b>	
	<b>Lecture</b>	<b>Tutorial/ small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	25	5	70	270	30
<b>Aim:</b>					
The aim of this subject is to develop knowledge, skills, and attitude to identify, diagnose, manage, and treat the simple surgical problems using Siddha procedures and refer to appropriate surgical Institution.					
<b>Intended Learning Outcomes:</b>					
<ul style="list-style-type: none"> <li>• Apply the knowledge, skills and attitude to identify the surgical conditions by Siddha methods</li> <li>• Define problems; understand the underlying imbalances of humors and to formulate a diagnosis or differential diagnosis based on history and Siddha medical examination</li> <li>• Create treatment plan for minor surgical diseases using surgical procedures</li> <li>• Demonstrate the surgical skills of certain minor surgical procedures</li> <li>• Discuss the investigation report for proper diagnose of the patient</li> <li>• Identify non - operative and operative conditions and refer to appropriate surgical Institution</li> </ul>					
<b>Subject Content</b>					
Origin and Development of the <i>Aruwai Maruththuvam</i> in Ancient period, contribution of Dhanvanthiri, Susuruthar and Theraiyar in <i>Aruwai Maruththuvam</i> , classification of <i>Aruwai Maruththuvam</i> – introduction of <i>kaaram</i> , <i>akni</i> and <i>Aruwai</i> , classification and its details, condition of disease, application and preparation methods, details of <i>yanthirankal</i> and <i>sasthirankal</i> using in <i>Aruwai Maruththuvam</i> , stages of <i>Aruwai Maruththuvam</i> : <i>poorvakarmam</i> , <i>prathanakarmam</i> and <i>udharakarmam</i> . <i>Santhipakkanam</i> , <i>kaandapakknam</i> and its management, <i>panthanam</i> , <i>punkal</i> (wounds), <i>atpaviranam</i> , <i>naatpatta punkal</i> (chronic wounds), <i>Naalapuddaippu/ narambu silanthi</i> (varicose vein), <i>attaivaldal</i> (leech application), <i>kaalaani</i> (corn), <i>suttikai</i> (cauterization), <i>paunthiram</i> (fistula), <i>kaaraththiri</i> , <i>eruvai mullai noi</i> (haemorrhoids), <i>theevira thottrukkanal</i> (chronic infections), <i>kattikal</i> (tumours), <i>visharppam</i> , <i>virana sothai</i> , <i>mega kattikal</i> , <i>vidhai noi or vidhai veekkam</i> (scrotal disease or scrotal swelling), <i>kudal vidhai noi</i> (hernia), <i>kalladaippu noi</i> (renal calculi).					

Introduction of Surgery - Pre-operative assessment, post-operative care and post-operative complications. Acute Abdomen - Acute abdominal conditions – Acute appendicitis, Gallstone disease, Acute Pancreatitis, Intestinal Obstruction, Peritonitis, Diverticulitis, Ruptured spleen and liver (Abdominal Trauma), Perforated Peptic Ulcer, NG tube and Colostomy. Bleeding per Rectum – Colorectal cancer, Haemorrhoids, Fissure and inflammatory conditions. Infective anal conditions like Abscess and Fistula. Breast lump and Thyroid swellings. Head Injuries and Shock. Acute infections- Abscess, Chronic wounds, Cellulitis, Gangrene, Carbuncle & Tetanus. Skin conditions like Sebaceous cyst, Lipoma, Dermoid cyst, Melanoma and Skin cancers. Wound suturing. Urinary calculi, Haematuria, Scrotal swelling, Hernia, Catheterization. Fracture – Type of Fractures, Clinical features, Examinations, Complications and their Management, Fracture in different bones and their management, Application of bandage.

Identify the following acute surgical conditions and refer to the suitable clinical units at the proper time by the appropriate allopathic physicians.

Acute abdomen – 10 hrs.

Genito Urinary surgery – 05 hrs.

Orthopedic – 05 hrs.

### **Clinical Training**

History taking from the patient

Examination methods in patient

Diagnose the disease

Treatment and management for the patient

Maintain the logbook

**Teaching -Learning Methods:** Lectures, Tutorial, Clinical, Case presentation, Visual aids, SGD, PBL, Assignments and Presentation. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks	Details of Evaluations	Qualifying pass marks		
01.	<b>In course Assessment – During the Term</b>					
	Term X	30%	100 Marks	Two Case presentation	Not Applicable (NA)	
	Term XI		100 Marks	Assessment of log book and viva		
	Term XII		100 Marks	Clinical exam (One treatment procedure) -15 Minutes per student		
	Term XIII		100 Marks	Two Case presentation		
	Term XIV		100 Marks	Assessment of logbook and viva		
	Term XV		100 Marks	Clinical exam (One treatment procedure) -15 Minutes per student		
02.	<b>Phase III examination – End of the completion of the clinical appointments</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Clinical	40%	50%	100 Marks	Long case – 1 Hour per student	45 %
	<b>End of phase III examination - End of XV term</b>					
	Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False)– 1 hour	45 %
	Paper II - SEQ	20 %	40%	1000 Marks	10 Structured Essay Questions – 3 hours (Siddha 8 que. + Western 2 que.)	
	<b>Over all Pass Marks</b>				<b>50 %</b>	

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

#### Reference books

1. **Pararasasekaram. Ponnaiappillai. I. (Part V)** reprint, Ezhalai, Thirugnanasampanthar printer, 2016
2. **Agasthiyar ranavaithyam.** Suntharam.V.R. Thiruvallikkeni, Chennai, Noble Achchianthirasalai, 1927
3. **Siddhar Aruwai Maruthuvam.** Uththamarayan.K.S. Chennai 6001006, Indian Medicine, Homeopathy Department, 2005
4. **Agathiyar Maruthuvam.** Aanaivaari Ananthan (Pathi), Chennai, Indian Medicine, Homeopathy Department, 2009
5. **Sarapenthiravaithya muraikal,** Venkatrajan.S. (Pathi), Viranakarappan Rogachikitsai, 4<sup>th</sup> Edition, Thanjavur, Saraswathy Mahal Library, 2014
6. **Jeevaratsamirtham.** Supramaniyapandithar (Translate). Muththiyalu Nayakarathuvani nikethana achchukoodam, 2<sup>nd</sup> Edition
7. **Susuruthasamkithai.** Sriramathesikan.S.N. Chennai 6001006, Indian Maruthuva Iyakkunagaram Anna Hospital, Part I, 1992
8. **Astanga Hrdayam.** Sri kantha Murthy. K.R. Varanasi: Kirishnadas academy,. 4<sup>th</sup> edition Vol 1. 1999.
9. **Text book of Surgery.** David. A. Mac Farlant. Lewis. P. Thomas. Edinburgh: Churchill Livingstone, 5<sup>th</sup> edition. 1985.

### 3.3.3. Mahalir Maruthuvamum Mahapetieyalum

<b>Subject</b>	<i>Mahalir Maruthuvamum Mahapetieyalum</i> - Gynaecology and Obstetrics				
<b>No. of Hours</b>	345			450 Notional Hours	
<b>Level</b>	Phase III – Clinical				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Clinical</b>	<b>Independent Learning</b>
	25	05	70		
<b>Aim:</b> The aim of this subject is to provide and develop students’ knowledge and skills in the diagnosis and treatment related to the diseases affecting women across different age groups and management of Karpakalam and prevent the disease during the pregnancy.					
<b>Intended Learning Outcomes:</b>					
<ul style="list-style-type: none"> <li>• Perform accurate examinations to diagnose women's diseases using Siddha principles</li> <li>• Analyze patient signs and symptoms to diagnose Mahalir Noikal</li> <li>• Explain principles of Marunthu, Unavu, and Nadaththai for diagnosis and treatment of Mahalir diseases</li> <li>• Conduct investigations for diagnosing Mahalir diseases using Siddha principles</li> <li>• Provide specialized treatment for female diseases</li> <li>• Apply medical ethics and principles of professional conduct in daily practice</li> <li>• Define <i>Karppam</i> &amp; <i>Karu Utpaththi</i> according to the Siddha texts</li> <li>• Identify the risk conditions in pregnant mothers</li> <li>• Apply appropriate Siddha preventive measures in <i>Karppa kalam</i> to promote maternal and fetal health.</li> <li>• Evaluate the risk conditions in pregnant mothers to refer them to relevant institutions for specialized care</li> </ul>					

## **Subject Content**

### Mahalir Marutuvam (Gynaecology)

Introduction - Women's health and importance, violence against women, *Penkalin Paruvankal*, food and care according to *Penkalin Paruvankal*, *Pooppum udal ula mattankalum*, History taking and examination of the Female patients, Diseases of *Mahalir noikal*, causes, clinical features, diagnosis and treatment. *Katpavayu*, *Soothaka kaddu*, *Perumpadu*, *Yoni rogankal*, *Vellaichaithal*, *Enpurukki*, *Katpavitpuruthi*, *Katpakkirumi*, *Sinaipai neerkkaddi*, *Maladdu rogam*, *Marpakam – Suya marpu parisothnai*, *Mulai putrunoi*, *kazhalai*, *Putrunoikal – Karuppai putrunoi*, *Karuppai kazhunthu putrunoi*, *Yoni putrunoi*, *Lingapputrunoi*, *Mukasingi putrunoi* *Mekarogankal*, *vellai*, *veddai*, *paranki noi*, *Manaseeka rogankal*, *Paliyal noikal*, *Pooppu mudivum Udal Ula mattrankaum*, *Pooppu mudivin pin Etpadum noikalum chikichchaium*

### Mahappetiyal (Obstetrics)

*Katpam*, *Katpa nirnayam* - *katpanaadi*, *katpakuri*, *Katpa kalam*, *Karuuthpathium valarchchium*, *Katparachchani*, *Katpakala saatharana upaththiravankalum chikichchaium*, *Katpakala asaatharana upaththiravankalum chikichchaium* - *Suronitha Katpavavu*, *Suraththin Mel Katparogam*, *Katpasoolai*, *Katpakirumi*, *Katpapunarchchi*, *Katpa Vanchanai*, *Katpa Marutheedu*, *Katpasoolam*, *Katpa Makothram*, *Katpaneeramai*, *Nithampaneeramai*, *Kayasuvatham*, *Kuthirai Vali*, *Raththasoolai*, *Nithampasoolai*, *Paandurogam*, *Neerilivu*, *Piramekam*, *Apanavayu*, *Soosikavayu Pirasavam – Sukap pirasavam*, *Sukathethap pirasavam*, *Pirasava pitkaalam* - *Unavu*, *paramarippu*, *Thaai paluddal*, *Pirasava pitkaala Upaththiravankal – pirasavaperumpadu*, *petraival Suram*, *petraival veekkam*, *Suvasa kaasam*, *pirasavapaithiyam*, *Mantha vali*, *Athimanthavali*, *Marpaka thotru.*, *Neerilivu*, *Vayitru vali*, *Vayitru porumal*, *Vayitru pun*, *Kaikal erivu*, *Vatharogam*, *Mayakkam*, *Velaisaithal*. Explaining Antenatal care, Diagnose the pregnancy, physiological changes during pregnancy, minor and major disorders during pregnancy, normal labour, Identifying complication during antenatal, natal and post natal period.

### **Clinical training**

- History taking from the female patient
- Examination methods in female patient
- Diagnose the female disease
- Treatment and management for the female patient
- Maintain the logbook
- Attend the ANC clinic.
- Identify the risk mother and refer them to specialized hospitals.

### **Teaching-Learning Methods:**

Lectures, Clinical Demonstration (OPD/Ward), Small Group Discussions, Case discussion and Tutorial classes. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are

designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks		
01	<b>In course Assessment - During the Term</b>						
	Term X	30%		100 Marks	MCQ – 20 questions (True or False) – one hour	Not Applicable (NA)	
	Term XI			100 Marks	Written – Three structured essay questions - one hour		
	Term XII			100 Marks	Two short cases – 30 minutes per student		
	Term XIII			100 Marks	One long case– 30 minutes per student and Logbook		
	Term XIV			100 Marks	Two short cases – 30 minutes per student		
	Term XV			100 Marks	Examination of pregnant mother – one hour per student		
02	<b>End of phase III examination -End of the completion of the clinical appointments</b>						
			<b>Examination</b>				
			<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Clinical	Long case	30%	40%	100 Marks	One long case -One hour per student.	45%
	<b>Phase III examination- End of XV term</b>						
	Paper I – *MCQ		10%	20%	100 Marks	20 questions (Siddha) (True or False) - One hour	45%
	Paper II- SEQ Part – A Part – B		30%	40%	1000 Marks (Part A -800 and Part B-200)	10 structured essay questions (Siddha -08 and Western 2) – 3 Hours	
<b>Overall pass Marks</b>					<b>50 %</b>		

*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.*

## Reference books

1. ***Pararasasekaram(karparogam)***, Ponnaiya.I, Elalai, Thirugnanasampanthar achuchyantirasaalai, 1932.
2. ***Mahappettiyalum Mahalir maruthuvamum***. Anaimukan.S., Pamashtan achchuyanthirasaalai, 1<sup>st</sup> edition (2003)
3. ***pararajaseekaran-Ankathipatham***, Ponnaiya.I, Elalai, Thirugnanasampanthar Achuyantirasaalai, 1935
4. ***Pirasava Vaithiyam***. Subramaniampillai.C.W., Achchuveeli Gnanapirakasa yanthirasalai, 1892
5. ***Thirumanthiram- karu uthpaththy***. Thirumoolar , Thiruppananthal srikaasimadam, 2014
6. ***Obstetrics and Gynaecology*** – by Ten Teachers. New York: CRC Press Taylor & Francis Group Boca Raton London, 2011.
7. ***Dutta's Text book of Gynaecology***. Konar Hiralal. DC JAYPEE Bros, Medical Publishers Pvt. Ltd, 7<sup>th</sup> edition, 2017

### 3.3.4. Kuzhanthai Maruthuvam

<b>Subject</b>	<b>Kuzhanthai Maruthuvam – Paediatrics</b>				
<b>No. of Hours</b>	<b>300</b>			<b>400 Notional Hours</b>	
<b>Level</b>	<b>Phase III – Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Direct Contact</b>	<b>Independent Learning</b>
	<b>25</b>	<b>5</b>	<b>70</b>	<b>270</b>	<b>30</b>
<b>Aim:</b>					
The aim of the subject is to develop knowledge, skills and attitude of the student to prevent, diagnose and manage the diseases related to the children.					
<b>Intended Learning outcomes:</b>					
<ul style="list-style-type: none"> <li>• Interpret Siddha terminology related to paediatric diseases.</li> <li>• Discuss the various stages of <i>Pillai Paruvangal</i>.</li> <li>• Outline principles of care for healthy and sick children.</li> <li>• Discuss the predisposing factors, clinical features, and management of common and less common diseases affecting children.</li> <li>• Identify the children with special needs and manage them.</li> <li>• Explain to parents their role in maintaining the health of their children.</li> <li>• Refer patients to relevant institutions for specialized treatment when necessary</li> <li>• Apply medical ethics in daily practice.</li> </ul>					
<b>Subject Content</b>					
Introduction, History taking and Management, Growth and development, <i>Pillai Paruvankal</i> , Mile stones, New born baby, Full- term baby, Pre Mature baby, Care of new born baby, Diseases caused by internal and external factors, Diseases of new born baby, Breast feeding, Supplementary food, Nutritional deficiency diseases, Prevention of the diseases of children through traditional methods, <i>Karuvil thontrum Noikal- Kiranthy, Karappan, Thodam, Balar Giraka thodam, Mantham, Kanai, Akkaram-</i> Etiology , signs and symptoms and common treatments of the above diseases. Important of special care for children. <i>Sura rogam, Balar Sura Sanni, Ammai Noi, Valippu Noi, Sopai, Paandu. Suvaasaasaya noikal - Erumal Noi, Eraippirumal, Kakkuvan Erumal, Peeni Rogam (Kural Noi), Pirappu vaasiyaka etpadum thamaraka Noikal, Sarma Noikal- Sirangu, Kalanchakapadai, Padar thamarai, Akki. Sala Erivu, Siru neeraka kal. Ottuvaroddi Noikal. Balar Vatha diseases, Ezhugnajiru, Padugnayiru, Thasai soompu Vatham, Moolai urai thabitham, Moolai kaichchal, Moolai Vatham( Sirathampa Vatham), Neerthalai Noi, Moolai valarchi kuraivu, Balar Pakka Vatham, Aruna Vatham, Special need Children, Psychological problems in children, Balar Pitha Noikal, Balar Setpana Noikal, Balar Enpu Murivu Maruthuvan, Eyan Maruthuvam, Panchavat kirikai, Special therapies for children, Sivappu noi, Poopu Noi, Kulikan, Pirali Noi, Echchi Noi, Nadukka Noi, Mannun Noi, Thaka Noi,</i>					

*Namul Noi, Karnika Noikal, Theerai Noi, Ponni Noi, Kulirchchai Noi, Vialchchulian Noi, Karal Noi, Ullu Rogam, Singu Rogam, Azhukural nidanam, Role of traditional games in child health.*

### Clinical training

- History taking from the patient
- Examination methods in patient
- Diagnose the disease
- Treatment and management for the patient
- Logbook should be maintained by each student.
- In addition to this - A student should attend minimum of five medical camps.

### Teaching and Learning Methods:

Lectures, Clinical Demonstration (OPD/Ward), Small Group Discussions, Case discussion and Tutorial classes. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments.

No	Term	Distribution of Marks		Details of Evaluations		Qualifying pass marks	
01	<b>In course Assessment- During the Term</b>						
	Term X	30%	100 Marks		MCQ – 20 questions (True or False) – one hour	Not Applicable	
	Term XI		100 Marks		Written - four structured essay questions – one hour and 30 minutes		
	Term XII		100 Marks		Log Book and Case presentation.		
	Term XIII		100 Marks		Two short cases – 30 Minutes per student		
	Term XIV		100 Marks		Log Book and Viva		
Term XV	100 Marks		Two short case – 30 Minutes per student				
02	<b>End of phase - III examination -End of the completion of the clinical appointments</b>						
		<b>Examination</b>					
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>				
	Clinical	10%	20%	Long case	100 Marks	One long case - One hour per student.	45%
		30%	40%	Short case	100 Marks	Three short case – 45 Minutes per student.	
	<b>Phase - III examination- End of XV term</b>						
Paper I – *MCQ	10 %	10%	100 Marks	20 questions (True or False) – 01 Hour	45 %		
Paper II - SEQ	20 %	30%	1000 Marks	10 structured essay questions – 3 hours			
03	<b>Over all pass Marks</b>					<b>50 %</b>	
<i>*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.</i>							

### Reference books

1. **Balavagadam.** Murugesamuthaliyar, Gurusironmani, Government of Tamil Nadu Printers, 4<sup>th</sup> Edition, 2017.
2. **Pararasasegaram Balaroga Nidhanam.** Ponnaiah I, Ezhaalai: Thirugnanasambanthar Printers, 1932.
3. **Mathalai Noi thoguthi.** Mohanaraj T, Kanniyakumari District, Tamil Nadu (Part I, II, III) 2008.
4. **KuzhantaiMaruthuvamSirappuMaruthuvaSikitchaigal.**Sounthararajan D.K., Shyamala K., -Govt.Siddha Medical College & Hospital. Palayamkottai, 2023
5. **Text Book of Pediatrics.**Parthasarathy.A. IAP New Delhi: Japee Brothers, Second edition, 2002.
6. **Ghai Essential Pediatrics.** Paul. Vinod. &Aravind Bagga. New Delhi: CBS Publishers & Distributors, 9<sup>th</sup> edition. 2019.

### 3.3.5. Maruththuvam

<b>Subject</b>	<b>Maruththuvam - Medicine</b>				
<b>No. of hours</b>	810			<b>1000 Notional Hours</b>	
<b>Level</b>	<b>Phase III - Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical</b>	
	<b>Lectur e</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	<b>38</b>	<b>7</b>	<b>105</b>	<b>765</b>	<b>85</b>
<b>Aim:</b>					
The aim of the subject is to provide the required knowledge, skills and attitudes to practice as a Siddha doctor in the community.					
<b>Intended Learning Outcomes:</b>					
At the end of the course, the student should be able to;					
<ul style="list-style-type: none"> <li>• Discuss the knowledge about the diseases in Siddha Medicine.</li> <li>• Illustrate the causes, clinical features, pathogenesis, prognosis, therapeutic procedures and management of the diseases.</li> <li>• Classify the diseases based on the Siddha authentic texts.</li> <li>• Exhibit excellence in history taking</li> <li>• Demonstrate the skill of physical examination methods to diagnose the diseases.</li> <li>• Interpret the signs and symptoms of diseases for the differential diagnosis.</li> <li>• Identify medical emergencies for the referral purpose.</li> <li>• Choose the <i>Pathyapathyam</i> according to the diseases and treatment.</li> <li>• Build the awareness for diseases in the prevention aspect.</li> <li>• Adhere to medico legal ethics in the day to day practice and assist the legal system in the administration of justice</li> <li>• Communicate effectively with patients, family members, peers and others stakeholders.</li> </ul>					
<b>Teaching and Learning Methods:</b>					
Lectures, Clinical Demonstration (OPD/Ward), Small Group Discussions, Case discussion and Tutorial classes. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Materials shall upload in LMS.					

Name of the specific Subject	<i>Vatharoga Maruthuvam</i>
Aim	The aim of the specific subject is to develop the knowledge and skills in diagnosing and managing the <i>Vatha</i> diseases.
Intended Learning Outcomes	<ul style="list-style-type: none"> <li>• Define the characteristic features of <i>Vatha</i>.</li> <li>• Illustrate the causes, pathogenesis, clinical features, prognosis and management of the <i>Vatha</i> diseases.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Vatha</i> diseases.</li> <li>• Create treatment plan for the <i>Vatha</i> diseases.</li> <li>• Demonstrate the therapeutic procedures and management of the <i>Vatha</i> diseases.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> for the <i>Vatha</i> diseases and treatment.</li> <li>• Build awareness for <i>Vatha</i> diseases in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice.</li> <li>• Identify medical emergencies for the referral purpose.</li> <li>• Build awareness for <i>Vatha</i> diseases in the prevention aspect.</li> </ul>
<b>Subject Contents:</b>	<p>Description of <i>Vatham</i>, Seasonal changes of <i>Vatham</i>, Vitiation of <i>Vatham</i>, Causes for vitiating of <i>Vatham</i>, Common characteristic features of <i>Vatham</i>, Classification and details of <i>Vatha</i> diseases, Prognosis of <i>Vatha</i> diseases, <i>Vatha</i> disease based on body structure, <i>Valippu Noi</i>, <i>Pakkavaayu</i>, <i>Keel vaayu</i>, Synonyms, definition, causes, etiopathogenesis, types, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based on disease condition, dosage, vehicle, adjuvant), regimen (<i>Pathiyapathyam</i>), diet and life style modifications for prevention of <i>Vatha</i> diseases.</p> <ul style="list-style-type: none"> <li>• History taking from patient</li> <li>• Physical examination</li> <li>• Diagnose the disease</li> <li>• Treatment and management</li> </ul>

<b>Clinical:</b>	<ul style="list-style-type: none"> <li>• Special treatment methods</li> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> </ul>
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Name of the specific Subject	<i>Pitharoga Maruthuvam</i>
Aim	The aim of the specific subject is to develop the knowledge and skills in diagnosing and managing the <i>Pitha</i> diseases.
Intended Learning Outcomes	<ul style="list-style-type: none"> <li>• Define the characteristic features of <i>Pitha</i>.</li> <li>• Illustrate the Causes, Pathogenesis, Clinical features, Prognosis and Management of the <i>Pitha</i> diseases.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Pitha</i> diseases.</li> <li>• Create treatment plan for the <i>Pitha</i> diseases.</li> <li>• Demonstrate the therapeutic procedures and management of the <i>Pitha</i> diseases.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> for the <i>Pitha</i> diseases and treatment.</li> <li>• Build awareness for <i>Pitha</i> diseases in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice.</li> <li>• Identify medical emergencies for the referral purpose.</li> </ul>
<b>Subject Contents:</b>	Description of <i>Pitham</i> , Seasonal changes of <i>Pitham</i> , Vitiating of <i>Pitham</i> , Causes for vitiating of <i>Pitham</i> , Common characteristic features of <i>Pitham</i> , Classification and details of <i>Pitha</i> disease, Prognosis of <i>Pitha</i> disease, Other diseases due to vitiating <i>Pitha dosha</i> , <i>Thamaraga noi</i> , <i>Kuruthiazhal noi</i> , <i>Rathakkothippu</i> , Synonyms, definition, causes, types, etiopathogenesis, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based

<b>Clinical:</b>	<p>on disease condition, dosage, vehicle, adjuvent), regimen (<i>Pathiyapathiyam</i>), diet and lifestyle modifications for prevention of <i>Pitha</i> diseases.</p> <ul style="list-style-type: none"> <li>• History taking from patient</li> <li>• Physical examination</li> <li>• Diagnose the disease</li> <li>• Treatment and management</li> <li>• Special treatment methods</li> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> </ul>
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Name of the specific Subject	<i>Kapharoga Maruthuvam</i>
Aim	The aim of the specific subject is to develop the knowledge and skills in diagnosing and managing the <i>Kapha</i> diseases.
Intended Learning Outcomes	<ul style="list-style-type: none"> <li>• Define the characteristic features of <i>Kapha</i>.</li> <li>• Illustrate the causes, pathogenesis, clinical features, prognosis and management of the <i>Kapha</i> diseases.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Kapha</i> diseases.</li> <li>• Create treatment plan for the <i>Kapha</i> diseases.</li> <li>• Demonstrate the therapeutic procedures and management of the <i>Kapha</i> diseases.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> for the <i>Kapha</i> diseases and treatment.</li> <li>• Build awareness for <i>Kapha</i> diseases in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice.</li> </ul>

	<ul style="list-style-type: none"> <li>Identify medical emergencies for the referral purpose.</li> </ul>
<b>Subject</b> <b>Contents:</b>	<p>Description of <i>Kapham</i>, Seasonal changes of <i>Kapham</i>, Vitiation of <i>Kapham</i>, Causes for vitiation of <i>Kapham</i>, Common characteristic features of <i>Pitham</i>, Classification and details of <i>Kapha</i> disease, Prognosis of <i>Kapha</i> disease, <i>Irumal</i>, <i>Ilaippu</i>, <i>Maanthai</i>, <i>Ulaimaanthai</i>, <i>Iraippuu</i>, <i>Mookadaippu</i>, <i>Kuralkammal</i>, <i>Neerinai perukkum noikal – Meganeer</i>, <i>Inippuneer</i>, <i>Thelineer</i>, <i>Venneer</i>, <i>Neerinai arukkum noikal – Kalladaippu</i>, <i>Neerkaddu</i>, <i>Sodduneer</i>, <i>Neersurukku</i>, <i>Vellai</i>, <i>Piramiyam</i>, <i>Neeradaippu</i>, Synonyms, definition, causes, types, etiopathogenesis, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based on disease condition, dosage, vehicle, adjuvent), regimen (<i>Pathiyapathiyam</i>), diet and lifestyle modification for prevention of <i>Kapha</i> diseases.</p>
<b>Clinical:</b>	<ul style="list-style-type: none"> <li>History taking from patient</li> <li>Physical examination</li> <li>Diagnose the disease</li> <li>Treatment and management</li> <li>Special treatment methods</li> <li>Case sheets recording</li> <li>Maintain the logbook</li> <li>Attending medical camps</li> </ul>

Name of the specific Subject	<i>Suraroga Maruthuvam</i>
Aim	The aim of the specific subject is to develop the knowledge and skills in diagnosing and managing the <i>Suram</i> .

<p>Intended Learning Outcomes</p>	<ul style="list-style-type: none"> <li>• Define the characteristic features of <i>Suram</i>.</li> <li>• Illustrate the causes, pathogenesis, clinical features, prognosis and management of the <i>Suram</i>.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Suram</i>.</li> <li>• Create treatment plan for the different types of <i>Suram</i>.</li> <li>• Demonstrate the therapeutic procedures and management of the <i>Suram</i>.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> for the <i>Suram</i> and treatment.</li> <li>• Build awareness for <i>Suram</i> in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice.</li> <li>• Identify medical emergencies for the referral purpose.</li> </ul>
<p><b>Subject Contents:</b></p> <p><b>Clinical:</b></p>	<p><i>Suram, Surakkol, Surasetpanam, Moorchai, Mayakkam, Sanni</i></p> <p>Synonyms, definition, causes, types, etiopathogenesis, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based on disease condition, dosage, vehicle, adjuvent), regimen (<i>Pathiyapathyam</i>), diet and lifestyle modification for prevention of <i>Sura</i> disease.</p> <ul style="list-style-type: none"> <li>• History taking from patient</li> <li>• Physical examination</li> <li>• Diagnose the disease</li> <li>• Treatment and management</li> <li>• Special treatment methods</li> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> </ul>

<p>Name of the specific Subject</p>	<p><i>Uthararoga Maruthuvam</i></p>
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	<ul style="list-style-type: none"> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> </ul>
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Name of the specific Subject	<i>Ularoga Maruthuvam</i>
Aim	The aim of the subject is to develop the knowledge and skills in diagnosing and managing <i>Ula</i> diseases.
Intended Learning Outcomes	<ul style="list-style-type: none"> <li>• Define the terminology of <i>Maanaseekarogam</i>, <i>kudiveri</i>, <i>mayakkam</i> and <i>serukku</i>.</li> <li>• Illustrate the causes, pathogenesis, clinical features, prognosis and management of the <i>Ula</i> diseases.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Ula</i> diseases.</li> <li>• Create treatment plan for the <i>Ula</i> diseases.</li> <li>• Demonstrate the therapeutic procedures and management of <i>Ula</i> diseases.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> for <i>Ula</i> diseases and treatment.</li> <li>• Build awareness for <i>Ula</i> diseases in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice.</li> <li>• Identify medical emergencies for the referral purpose.</li> </ul>
<b>Subject Contents:</b>	<p>Description and details of <i>Ula</i> diseases, Prognosis of <i>Ula</i> disease, <i>Kiriyai noi</i>, <i>Matha noi</i>, <i>Kudiveri noi</i>, <i>Serukku noi</i>, <i>Unmaatham</i>, <i>Piramai</i>, <i>Paithiyam</i> and other <i>ula noikal</i>, Synonyms, definition, causes, types, etiopathogenesis, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based on disease condition, dosage, vehicle, adjuvent), regimen (<i>Pathiyapathyam</i>), diet and lifestyle modification for prevention of <i>Ula</i> disease.</p> <ul style="list-style-type: none"> <li>• History taking from patient</li> </ul>

<b>Clinical:</b>	<ul style="list-style-type: none"> <li>• Physical examination</li> <li>• Diagnose the disease</li> <li>• Treatment and management</li> <li>• Special treatment methods</li> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> <li>• Geriatric clinic at Kaithady Siddha Teaching Hospital</li> </ul>
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Name of the specific Subject	<i>Sarumaroga Maruthuvam</i>
Aim	The aim of the specific subject is to develop the knowledge and skills in diagnosing and managing the <i>Saruma</i> diseases.
Intended Learning Outcomes	<ul style="list-style-type: none"> <li>• Discuss the knowledge about the <i>Saruma</i> diseases.</li> <li>• Illustrate the causes, pathogenesis, clinical features, prognosis and management of the <i>Saruma</i> diseases.</li> <li>• Formulate diagnosis or differential diagnosis based on history and Siddha medical examination and investigations.</li> <li>• Interpret the signs and symptoms for the differential diagnosis of the <i>Saruma</i> diseases.</li> <li>• Create treatment plan for the <i>Saruma</i> diseases</li> <li>• Demonstrate the therapeutic procedures and management of the <i>Saruma</i> diseases.</li> <li>• Choose the diet chart of <i>Pathyapathyam</i> to the <i>Saruma</i> diseases and treatment.</li> <li>• Build the awareness for <i>Saruma</i> diseases in the preventive aspect.</li> <li>• Practice medical ethics in day to day practice</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify medical emergencies for the referral purpose</li> <li>• Build the awareness for <i>Saruma</i> diseases in the prevention aspect.</li> </ul>
<b>Subject</b> <b>Contents:</b>	<p>Description and details of <i>Saruma</i> diseases, Prognosis of <i>Saruma</i> disease, <i>Kuddam</i>, <i>Venkuddam</i>, <i>Tholu noi</i>, <i>Karappan</i>, <i>Siranku</i>, <i>Kaalanchukapadai</i>, <i>Puttru noi</i>, <i>Padarthamarai</i> and other <i>Saruma</i> diseases, Synonyms, definition, causes, types, etiopathogenesis, premonitory symptoms, clinical features, pulse reading in particular disease, diagnosis, prognosis, complications, line of treatment, treatment (drugs based on disease condition, dosage, vehicle, adjuvent), regimen (<i>Pathiyapathiyam</i>), diet and lifestyle modification for prevention of <i>Saruma</i> disease.</p>
<b>Clinical:</b>	<ul style="list-style-type: none"> <li>• History taking from patient</li> <li>• Physical examination</li> <li>• Diagnose the disease</li> <li>• Treatment and management</li> <li>• Special treatment methods</li> <li>• Case sheets recording</li> <li>• Maintain the logbook</li> <li>• Attending medical camps</li> </ul>

The modern medical basic knowledge shall be obtained from the suitable resource persons in the following medical clinics.

- TB unit – Health village, Pannai, Jaffna – 05 hours
- Oncology unit – Cancer Trial Hospital, Base Hospital, Tellipalai, Jaffna – 05 hours
- Psychiatric Unit, Base Hospital, Tellipalai / National Psychiatric Institute, Angoda – 05 hours
- Leprosy unit – Colombo – 05 hours
- Cardiology unit – Teaching Hospital, Jaffna – 05 hours
- Infectious diseases – IDH, Angoda – 10 hours

**Table XIII: Allocated Hours for specific Subjects in Terms of Phase III:**

Phase III Term	Name of the specific Subject	Credits for Lecture	Lecture Hours		Credits for clinics	Clinics (Hours)	Total Hours
			Lecture	Tutorial			
Term X	Vatharoga Maruththuvam	0.8	9	2	4.2	190	201
Term XI	Pitharoga Maruththuvam	0.5	7	1	2.5	110	118
Term XII	Suraroga Maruththuvam	0.3	3	1	1.7	75	79
	Ularoga Maruththuvam	0.1	2	-	0.9	40	42
Term XIII	Kapharoga Maruththuvam	0.5	7	1	2.5	110	118
Term XIV	Sarumaroga Maruththuvam	0.4	5	1	2.6	120	126
Term XV	Udhararoga Maruththuvam	0.4	5	1	2.6	120	126
<b>Total</b>		<b>0.1</b>	<b>38</b>	<b>07</b>	<b>17</b>	<b>765</b>	<b>810</b>

**Evaluation** - The assessment methods include In-Course and End of Course Assessments

Term	Distribution of Marks		Details of Evaluations		Qualifying pass marks
<b>In course Assessment - During the Term</b>					
Term X	30 %	200 Marks (100+100)	<i>Vatharoga Maruthuvam</i> 1. One long case (one hour per student) 2. Two short cases (15x2=30 minutes per student)		Not Applicable (NA)
Term XI		200 Marks (100+100)	<i>Pitharoga Maruthuvam</i> 1. One long case (one hour per student) 2. Two short cases (15x2=30 minutes per student)		
Term XII		100 Marks	<i>Suraroga or Ularoga Maruthuvam</i> 1. One long case (one hour per student)		
Term XIII		200 Marks (100+100)	<i>Kapharoga Maruthuvam</i> 1. One long case (one hour per student) 2. Two short cases (15x2=30 minutes per student)		
Term XIV		150 Marks (100+50)	<i>Sarumaroga Maruthuvam</i> 1. One long case (one hour per student) 2. One short case (15 minutes per student)		
Term XV		150 Marks (100+50)	<i>Uthararoga Maruthuvam</i> 1. One long case (one hour per student) 2. One short case (15 minutes per student)		
<b>End of phase - III Examination -End of the completion of the clinical appointments</b>					
	<b>Examination</b>				
	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
Clinical	*30%	60%	100 Marks	*Long case-01 (one hour) and Short cases – 07 (one hour and 45 minutes)	
<b>Phase - III Examination- End of XV term</b>					
Paper I – **MCQ	20 %	20 %	100 Marks	20 True/False - 1 hour (VM-4, PM-3, KM-3, SaM-4, UtM-3, SuM-1, UIM-1)	45%
			300 Marks	30 Single Best Answer (SBA) - 1 hour (VM-6, PM-5, KM-5, SaM-5, UtM-4, SuM-3, UIM-2)	
Paper II - SEQ	20 %	20 %	1000 Marks	10 Structured essay questions - 3 hours (VM-2, PM-2, KM-2, SaM-1, UtM-1, SuM-1, UIM-1)	
<b>Overall pass marks</b>					<b>50%</b>

VM- Vatharoga Maruthuvam, PM-Pitharoga Maruthuvam, KM-Kapharoga Maruthuvam, SuM- Suraroga Maruthuvam, UIM- Ularoga Maruthuvam, SaM-Sarumaroga Maruthuvam, UtM- Uthararoga Maruthuvam

\* Long cases should be selected from each of seven specific subject for the end of clinical examination of Phase III. A student should select one Long case among this seven based on lottery method.

\*\*For each wrong responses negative marks will be given and the negative marks of a question shall not be carried forward to the marks of the other question.

### Reference books

1. *Yugi Vaidhya Chinthamani*, Indian Medicine and Homeopathy, Chennai, (2005).
2. *Pararasasekaram (Vatha, Pitha, Siletpana roga nithanam, Uthara roga nithanam, Moolaroga nithanam, Suraroga nithanam, Kiranthi, Kuddam)*, Ponnaiya. I , Elalai, Thirugnanasampanthar achuchuyantirasaalai, (1928-1936).
3. *Sekarasasekaram*, Ponnaiyapillai. I , Department of Indigenous Medicine - North and East province, (2000).
4. *Akasthiyar 2000 – Part I, II, III*, Venkatrajan.S, Thanjai Saraswathi Mahal, Thanjavoor, (2018).
5. *Siddha Maruthuvam (Pothu)*, Kuppusamimuthaliyaar. M.V, Indian Medicine and Homeopathy, Chennai (2009).
6. *Siddha Maruthuvam (Sirappu)*, Sanmugavelu.M, Indian Medicine and Homeopathy, Chennai (2010).

### 3.3.6. Paramparai Maruthuvam

<b>Subject</b>	<i>Paramparai Maruthuvam - Traditional Medicine</i>				
<b>No. of Hours</b>	<b>300</b>			<b>400 Notional Hours</b>	
<b>Level</b>	<b>Phase III - Clinical</b>				
<b>Hourly Breakdown</b>	<b>Direct Contact</b>		<b>Independent Learning</b>	<b>Clinical</b>	
	<b>Lecture</b>	<b>Tutorial or Small group discussion</b>		<b>Guided Time</b>	<b>Independent Learning</b>
	<b>25</b>	<b>5</b>	<b>70</b>	<b>270</b>	<b>30</b>
<b>Aim:</b>					
To develop the knowledge and skills in preparation of medicines, diagnostic methods, diagnosis and management the specific field related diseases based on the traditional aspects.					
<b>Intended Learning Outcomes:</b>					
At the end of the course, the student should be able to,					
<ul style="list-style-type: none"> <li>• Discuss the knowledge about the ingredients and purification methods of Siddha drugs.</li> <li>• Demonstrate the skills to prepare medicines according to the traditional physician's method.</li> <li>• Discuss the knowledge about the causes, clinical features and diagnose the diseases based on doshas.</li> <li>• Discuss the knowledge of special treatment methods.</li> <li>• Demonstrate the skills regarding the special treatment procedures.</li> <li>• List the <i>Pathyapathyam</i> according to the diseases and treatment.</li> </ul>					
<b>Subject Content</b>					
Skin diseases ( <i>Saruma rogam</i> ), <i>Sarvaanka rogam</i> , Fracture ( <i>Murivunerivu</i> ), Sprain ( <i>Sullukku</i> ), <i>Kadduvaidhyam</i> , Toxic bites ( <i>Vishakadi</i> ), Pulse, <i>Varmam</i> , Diseases of children ( <i>Paalarrogam</i> ), Diseases of women ( <i>Sthirirogam</i> ), Infertility ( <i>Maladdurogam</i> ), Eye diseases ( <i>Kanvaidhyam</i> ), <i>Vaidhyasothidam</i> , <i>Thoda nivarthi</i> , <i>Paarvai</i> , <i>Akaravithai</i>					
<b>Clinical:</b>					
<ul style="list-style-type: none"> <li>• Traditional clinical training on above mentioned diseases.</li> <li>• Report shall be submitted based on special clinical techniques which are practicing by traditional physicians.</li> <li>• Observe the drug preparation procedures by the traditional physicians.</li> </ul>					

**Teaching – Learning Methods:**

Lectures, Clinical, Case presentation, Visual aids, SGD, PBL, Assignments, Presentation, Clinical appointments with traditional physicians, Tutorial classes and case sheets

The practical lectures include medicine preparation performed by individual students. The clinical examination include history taking, physical examination, designing line of treatment and handling the treatment procedures. All teaching-learning activities are designed to stimulate student participation and promote individual and group learning. Teaching Material Shall uploaded in LMS.

**Evaluation** - The assessment methods include In-Course and End of Course Assessments

No	Term	Distribution of Marks		Details of Evaluations	Qualifying pass marks	
01	<b>In course Assessment (During the Term)</b>					
	Term X	30%	100 Marks	Assignment related to drug preparation	Not Applicable (NA)	
	Term XI		100 Marks	03 Case reports with a presentation ( <i>Sarmarogangal, Sarvaangarogankal, Murivunerivum sulukkum, kattuvaithiyam</i> )		
	Term XII		100 Marks	Report submission related to the special treatment procedure		
	Term XIII		100 Marks	03 Case reports with a presentation ( <i>Vishakkadi, paampukkadi, naadi maanaseekarogam</i> )		
	Term XIV		100 Marks	03 Case reports with a presentation ( <i>Paalarrogam, sthreerogam, malatturogam, kanrogam</i> )		
Term XV	100 Marks		02 Case reports with a presentation ( <i>vaihyasothidam, thodanivarthi, paarvai, akaaraviththai</i> )			
02	<b>End of phase III examination - End of the completion of the clinical appointments</b>					
		<b>Examination</b>				
		<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
	Clinical	20 %	50%	100 Marks	15 minutes / student (Assessment of skill of clinical techniques)	45 %
	<b>End of phase III examination - End of XV term</b>					
Paper I - SEQ	40 %	40%	1000 Marks	10 structured essay questions – 3 hours	45 %	
Viva	10%	10%	100 Marks	12 Minutes / student	NA	
<b>Over all pass Marks</b>					<b>50 %</b>	

## 4.0 List of Contributors for BSMS Revised Curriculum 2023

SN	Name	Affiliation
<b>Consultant for Revised Curriculum</b>		
1.	Snr. Prof. (Ms.) V. Arasaratnam	Biochemistry, Faculty of Medicine, UoJ
<b>Advisers</b>		
2.	Prof.G.Mikunthan	Former Chairman, Board of Management, USM
3.	Prof.K.Velauthamurty	Former Chairman, Board of Management, USM
4.	Dr.S.Mohanadas	Former Virtual Dean, USM
5.	Prof.P.Pratheepkanth	Accounting, Faculty of Management Studies and Commerce
6.	Prof.S.Raguram	Dean, Faculty of Arts
<b>Prepared By:</b>		
7.	Dr.(Ms.)V.Sathiyaseelan	Head, Unit of Siddha Medicine
8.	Dr.(Ms.)T.Thileepan	Chairman, Curriculum Subcommittee, Unit of Siddha Medicine
9.	Dr. (Ms.)S.Pancharajah	Unit of Siddha Medicine
10.	Dr.(Ms.)T.Kumutharanjan	Unit of Siddha Medicine
11.	Dr.S.Sivashanmugarajah	Unit of Siddha Medicine
12.	Dr.(Ms.)A.Sritharan	Unit of Siddha Medicine
13.	Dr.(Ms.)V.Sanmugarajah	Unit of Siddha Medicine
14.	Dr.(Ms.)K.Sounthararajan	Unit of Siddha Medicine
15.	Dr.(Ms.)S.Sivarajah	Unit of Siddha Medicine
16.	Dr.(Ms.)N.Nithiakumar	Unit of Siddha Medicine
17.	Dr.(Ms.)S.Sivagnanam	Unit of Siddha Medicine
18.	Dr.T.Vijayakumar	Unit of Siddha Medicine
19.	Dr.(Ms.)R.Sugeevan	Unit of Siddha Medicine
20.	Dr.(Ms.)S.Krishna	Unit of Siddha Medicine
21.	Dr.(Ms.)V.M.Prasad	Unit of Siddha Medicine
22.	Dr.(Ms.)N.Sivaram	Unit of Siddha Medicine
23.	Late Prof.S.Balakumar	Faculty of Medicine
24.	Mr. K. Ananthakrishnan	Head, Computer Unit
25.	Dr.K.Shanmuganathan	Head, DELT
26.	Dr.Ms.K.Sivaji	Former Head, DELT
27.	Dr.S. Muhunthan	Faculty of Hindu Studies
28.	Dr.K.Thabotharan	Senior Lecturer, Dept. of Computer Science
29.	Mr.M.Ganeshalingam	Deputy Registrar, Unit of Siddha Medicine
30.	Ms.K.Gowsika	Management Assistant, Unit of Siddha Medicine
31.	Ms.S.Laxsitha	Management Assistant, Unit of Siddha Medicine
32.	Ms.K.Thadshajini	Management Assistant, Unit of Siddha Medicine