



**UNIVERSITY OF JAFFNA  
UNIT OF SIDDHA MEDICINE**

**STRUCTURE & SYLLABI  
OF THE  
BACHELOR OF SIDDHA MEDICINE AND SURGERY  
DEGREE PROGRAMME**

*(Applicable to students commencing their First Year studies in the academic year 2006/2007 and to the students who have already commenced the academic year 2005/2006)*

*Submitted to the University Senate in August 2008*



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# **University of Jaffna**

## **Unit of Siddha Medicine**

### **Structure of the Bachelor of Siddha Medicine and Surgery**

*(Applicable to students commencing their First year studies in the academic year 2006/2007 and to the students who have already commenced the academic year 2005/2006)*

#### **A) Introduction**

The Siddha System of Medicine is the cultural heritage of the Tamils. This is intermingled with the religion and culture of the Tamils. This System of Medicine was established in Sri Lanka along with Ayurveda and Unani in 1929 at the College of Indigenous Medicine in Colombo. The College of Indigenous Medicine was upgraded to the status of University in 1977. The syllabus for the degree course was formulated in 1982 with the assistance of the WHO advisor. This syllabus was implemented with the approval of the Senate of the University of Colombo in 1983.

The Department of Siddha Medicine was transferred to the University of Jaffna in 2<sup>nd</sup> July 1984 and placed as a Department under the Faculty of Arts. Since 1993 the Department of Siddha Medicine was brought directly under the Vice Chancellor as a Unit. The syllabus which was prepared in 1982 had been followed by the Unit. To rectify some shortcomings of this syllabus a workshop was conducted to revise the syllabus in 2004 with the assistance of two eminent Siddha Professors from India, and Lecturers from Institute of Indigenous Medicine University of Colombo. With their views the present syllabus was revised and submitted for the approval of the Senate.

#### **B) Curriculum for the Degree Course in Siddha Medicine.**

- 1. Name of the Degree - B.S.M.S (Bachelor of Siddha Medicine and Surgery).**
- 2. Objectives of the Degree Course in Siddha Medicine.**
  - 2.1. To produce physicians fully competent to fulfill the needs of the Health services in the community.  
They should be,
    - 2.1.1 Motivated to deliver Primary health care to the needy population.

- 2.1.2 Skilled to deal with the health challenges of the community.
  - 2.1.3 Motivated the community to identify the Herbs and give advice in establishing home herbal garden.
  - 2.1.4 Able to prepare the Medicine themselves.
  - 2.1.5 Able to apply Yoga and Meditation to improve the Health.
  - 2.1.6 Knowledgeable in traditional method of Medicine.
  - 2.1.7 Disciplined and maintain high ethical standard in their relationship with patients.
  - 2.1.8 Able to cultivate proper attitudes and ethics of the medical system.
- 2.2. To produce Scholars for taking up intensive research programmes in indigenous medicine for adding new knowledge in the field of Medicine.
- 2.3 To produce competent teachers with profound and critical knowledge in the basic principles of Indigenous System of Medicine and a comparative knowledge of allied sciences, who will be able to take up the responsibility of training the future generation of practitioners of Indigenous Medicine.

### **3. Admission to the Degree Course.**

The University Grants Commission of Sri Lanka selects the students on the basis of their performance in the G.C.E (A/L) examination held by the Department of Examination, Sri Lanka.  
About 50 students are admitted each year.

### **4. Medium of Instruction.**

Tamil

### **5. Duration of the course.**

Duration of this course is 5 years.

After the successful completion of the fifth year examination, the BSMS Degree is awarded to the students. Following which they must do one year Internship in the Ayurvedic Hospitals and with eminent traditional practitioners to obtain their registration in the Ayurvedic Medical Council.

### **6. Degree to be awarded after the completion of the course.**

Bachelor of Siddha Medicine and Surgery (BSMS).

### **7. Teaching Programme.**

Teaching and learning in all subjects take the form of lectures, tutorials, practicals, bed side clinicals, seminars, field work and assessment as given in the syllabus.

## 8. The Subjects for the BSMS Degree Course

S.No	Terms in Tamil	Terms in English
	<b>FIRST YEAR</b>	
1.	Siddha Maruthuva moola thathuvam	Basic Principle of Siddha Medicine
2.	Gunapadam-I (Mooligaieyal) (Part I)	Materia Medica I – Vegetable Kingdom (Part I)
3.	Udatkootiyal (Part I)	Anatomy (Part I)
4.	Udattholiliyal (Part I)	Physiology (Part I)
5.	Uyir Rasayanum	Biochemistry
6.	English	English
7.	Thagaval Tholil Nutpam	Information Technology
	<b>SECOND YEAR</b>	
1.	Gunapadam-I (Mooligaieyal) (Part II)	Materia Medica I - Vegetable Kingdom (Part II)
2.	Gunapadam-II (Thaathu, Jeeva vakuppu)	Materia Medica II – Minerals & Animal Kingdom
3.	Udatkootiyal (Part II)	Anatomy (Part II)
4.	Udattholiliyal (Part II)	Physiology (Part II)
5.	English	English
	<b>THIRD YEAR</b>	
1.	Gunapadam-III (Siddha Marunthu Seimuraieyal)	Materia Medica III – Preparation of Siddha Drugs
2.	Noi Nadal Chikitsai (Adipadaith thathuvangal)	Basic Principle of Diagnosis & Treatment
3.	Nanchiyalum Neethi Maruthuvamum	Forensic Medicine & Toxicology
4.	Pinieyal	Pathology (Includes Parasitology & Microbiology)
5.	English	English
	<b>FOURTH YEAR</b>	
1.	Noi Nadal Chikitsai (Part I)	Diagnosis & Treatment (Part I)
2.	Kuzhanthai Maruthuvam	Paediatrics
3.	Sero Roga Maruthuvam	E.N.T & Eye
4.	Samooga Nala Maruthuvam	Community Health Medicine
5.	Paramparai Maruthuavam	Traditional Medicine
	<b>FINAL YEAR</b>	
1.	Noi Nadal Chikitsai (Part II)	Diagnosis & Treatment (Part II)
2.	Aruwai Maruthuvam	Surgery
3.	Mahalir Maruthuvam	Gynaecology
4.	Mahapetiyal	Obstetrics



## 9. The scheme of lectures, Tutorials and Practicals

S.No	Subject	Lectures (Hours)	Tutorials (Hours)	Practicals/ Ward clinics (Hours)	Total (Hours)
	<b>FIRST YEAR</b>				
1.	Siddha Maruthuva Moola Thathuvam	90	30		
2.	Gunapadam-I (Mooligaieyal) (Part I)	90	10	120	
3.	Udatkootiyal (Part I)	75	15	120	
4.	Udattholiliyal (Part I)	60	15	40	
5.	Uyir Rasayanum	65	15		
6.	English	90			
7.	Thagaval Tholil Nutpam	20		20	
	<b>Total</b>	<b>490</b>	<b>85</b>	<b>300</b>	<b>875</b>
	<b>SECOND YEAR</b>				
1.	Gunapadam-I (Mooligaieyal) (Part II)	90	10	120	
2.	Gunapadam-II (Thaathu Jeeva vakuppu)	90	10	180	
3.	Udatkootiyal (Part II)	75	15	120	
4.	Udattholiliyal (Part II)	75	15	30	
5.	English;	90			
	<b>Total</b>	<b>420</b>	<b>50</b>	<b>450</b>	<b>920</b>
	<b>THIRD YEAR</b>				
1	Gunapadam-III (Siddha Marunthu Seimuraieyal)	90	10	180	
2.	Noi Nadal Chikitsai (Adipadaith thathuvangal)	80	10	120	
3.	Nanchiyalum Neethi Maruthuvamum	60	15		
4.	Pinieyal	60	15	100	
5.	English	90			
	<b>Total</b>	<b>380</b>	<b>50</b>	<b>400</b>	<b>830</b>
	<b>FOURTH YEAR</b>				
1.	Noi Nadal Chikitsai (Part I)	90	30	180	
2.	Kuzhanthai Maruthuvam	75	15	120	
3.	Sero Roga Maruthuvam	75	15	60	
4.	Samooga Nala Maruthuvam	75	15	120	
5.	Paramparai Maruthuavam	45		60	
	<b>Total</b>	<b>360</b>	<b>75</b>	<b>540</b>	<b>975</b>

	<b>FINAL YEAR</b>				
1.	Noi Nadal Chikitsai (Part II)	90	30	180	
2.	Aruwai Maruthuvam	75	15	120	
3.	Mahalir Maruthuvam	60	15	60	
4.	Mahapetiyal	75	15	120	
	<b>Total</b>	<b>300</b>	<b>75</b>	<b>480</b>	<b>855</b>

## 9.1 Special Training

1. Field work in Family Health in Community Health Medicine
2. Every student should be trained in minimum 20 deliveries.

## 9.2. Duration of Hospital Training

1. Treatment (including Panchakarma) - 6 Months
2. Surgery - 3 Months
3. E.N.T & Eye - 3 Months
4. Obstetrics - 3 Months
5. Paediatrics - 1 Month
6. Psychiatrics - 1 Month
7. Infectious Disease - 1 Month

## 10. Examination and Evaluation Procedures

The course shall be evaluated by means of

- (a) In – Course Assessments

It consist continuous assessment, assignments, presentations, spots and in-course assessment examination etc.

- (b) An end of course examination.

The method of evaluation of each subject is given along with the syllabus.

### 10.1 In- Course Assessments:-

- All in-course assessments shall be carried out during the course period.
- In course assessments will be announced and conducted by the relevant lecturer concerned. During each academic year two continuous assessments will be conducted on each subject. The first in course assessment will be carried out during the course of the 2<sup>nd</sup> term and the second in course assessment during the 3<sup>rd</sup> term. A total of 10 marks will be added to the final marks of the examinations conducted at the end of each academic year.

- The marks scored by a student in various components of the in course assessment of any subject shall be displayed on the Notice Board by the Head of the Department and a copy sent to the SAR/Examination.

## **10.2 End of Course Examination**

- ❖ An End of Course Examination shall be conducted for each year on each and every subject at the end of the Academic year, named as First, Second, Third, Fourth and Final BSMS Examination.
- ❖ There will be written, oral, practical and continuous assessments on each and every subject as prescribed and all the components of the examination are compulsory.
- ❖ Viva voce Examination will be conducted by a panel consisting of 3 examiners for each subject in 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> BSMS examination. The Viva voce examination for the final BSMS will be conducted by a panel consisting of 4 examiners. The fourth shall be an external examiner selected from outside the University. Each of these examiners evaluates and gives marks separately.
- ❖ The End of Course Examination shall be conducted by the Examination Branch of the University. The date and time of the end of course examinations shall be decided by the Head in consultation with the Staff of the Department.
- ❖ The list of First and Second / External examiners of all End of Course Examinations shall have the recommendation of the Staff of Unit of Siddha Medicine, Board of Management and the approval of the Senate.
- ❖ Students should re-appear for all the subjects if they fail in 3 subjects in the annual examination.

## **10.3 Attendance**

- ❖ A minimum of 80% of the attendance for the lectures, practical, tutorials and clinical classes in each and every subject is compulsory to appear the annual examination of a relevant academic year.
- ❖ Absence on medical grounds must have the recommendation of the University Medical Officer. Absence due to medical grounds or any other valid reason should be approved by the Senate.

## **10.4 Repeat Examination.**

- ❖ A repeat examination will be held on 4<sup>th</sup> week from the date of release of results of proper examination, for those candidates who have referred in the proper examination and to those who have not

appeared for the proper examination due to sickness or for some valid reason.

- ❖ The students who are unable to appear the examination due to medical reasons should produce medical certificates within seven days of the commencement of the examination. Such students should appear the repeat examination, only for written, practical or viva examination of the particular subject or subjects.
- ❖ The marks obtained previously for continuous assessments will be added to the final marks.
- ❖ Absence on medical grounds must have the recommendation of University Medical Officer. Absence due to medical grounds or any other valid reason should be approved by the Senate. They are eligible for class. It shall be considered as first attempt
- ❖ A candidate is permitted to carry over 1<sup>st</sup> BSMS failed subjects and appear along with the 2<sup>nd</sup> BSMS Examination.
- ❖ A candidate will be permitted to undergo the 3<sup>rd</sup> BSMS course only he/she has passed all the subjects including English and Information Tecnology in 1<sup>st</sup> and 2<sup>nd</sup> BSMS examinations.
- ❖ A candidate is permitted to carry over the failed subjects in 3<sup>rd</sup> BSMS and appear along with the 4<sup>th</sup> BSMS examination.
- ❖ A candidate will be permitted to undergo the Final BSMS course, only he/she has passed all the subjects including English in 3<sup>rd</sup> and 4<sup>th</sup> BSMS examinations.
- ❖ Appearing for even one subject at an examination is treated/ counted as a sitting of the examination.
- ❖ A maximum of only four consecutive attempts will be permitted to complete each of the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> academic year (of the Degree) and five attempts in the final academic year. The registration will be cancelled if a student fails all the attempts. The maximum period of time granted to complete the degree programme will be 10 years

### Allocation of marks at examinations on each subject

SUBJECT	CON. ASSESS	ESSAY	VIVA	PRACT/CLINI -CAL/RESEA. PROJECT.	TOTAL
Siddha Maruthuva Moola thathuvam	10	80	10	-	100
Gunapadam-I (Mooligaieyal)	10	40	10	40	100
Udatkootiyal (Anatomy)	10	40	10	40	100
Udattholiliyal (Physiology)	10	40	10	40	100
Uyir Rasayanam (Bio Chemistry)	10	80	10	-	100
Gunapadam – II (Thathu Jeeva Vakuppu)	10	40	10	40	100

Gunapadam –III (Siddha Marunthu seimuraieyal)	10	40	10	40	100
Noinadal Chikitsai (Adippadai Thathuvangal)	10	80	10	-	100
(Forensic Medicine & Toxicology)	10	80	10	-	100
Pinieyal (Pathology)	10	80	10	-	100
Noinadal Chikitsai (Part I)	10	40	10	40	100
Kuzhanthai Maruthuvam (Paediatrics)	10	40	10	40	100
Siro roga Maruthuvam (E.N.T & Eye)	10	70	10	10	100
Samooga Nala Maruthuvam (Community Health Medicine)	10	70	10	10	100
Paramparai Maruthuvam		80	10	10	100
Noinadal Chikitsai (Part II)	10	40	10	40	100
Aruvai Maruthuvam(E.N.T & Surgery)	10	70	10	10	100
Mahalir Maruthuvam (Gynaecology)	10	70	10	10	100
Mahapetiyal (Obstetrics)	10	40	10	40	100
English	25	75			100
Information Technology	40	30		30	100

### 10.5 Criteria for Pass.

- ❖ A minimum of 50% should be obtained to pass each and every subject.
- ❖ A minimum of 40% should be obtained for written, viva and practical components of the examination in each subject.

### 10.6 Conditions for Pass in Subjects.

- ❖ The minimum mark for a pass in a subject \* in each examination will be 50% and following will be the grades awarded for subjects in each examination.
- ❖ Marks will be graded at each academic year as shown below.

<u>Range of Marks</u>	<u>Grade</u>
75% and above	Distintion
70 - 74%	A
60 – 69%	B
50 - 59 %	C
45 - 49%	D
44% and below.	E

## **10.7 Ordinary Pass**

Pass in five/six subjects and an over all average of 50% - 59%. ( Except English & Information Technology)

## **10.8 Award of Classes.**

Award classes in every Academic year based on the performance in the every end course examination.

### **FIRST CLASS HONOURS**

Passes in all subjects and an overall average of 70% and over with a minimum of three (03) "A"s.

### **SECOND CLASS HONOURS (UPPER)**

Passes in all subjects and an overall average of 65%- 69% and over with a minimum of three (03) "A"s or "B"s.

### **SECOND CLASS HONOURS (LOWER)**

Passes in all subjects and an overall average of 60% -64% and over with a minimum of three (03) "A"s or "B"s.

## **C) Annexures**

### **Annexure A: Objectives, Syllabi and Method of Evaluation of First BSMS Course**

#### **Annexure A- 1 - Siddha Maruthuva Moola Thathuvam (Basic Principle of Siddha Medicine)**

##### **OBJECTIVES**

1. Understand the philosophical approaches of Siddha Medicine.
2. Provide historical knowledge related to Siddha Medicine.
3. Know the administrative set up of the Indigenous system of Medicine in Sri Lanka.

##### **Benefits**

1. Should be provide required basic knowledge and skill
2. It will help to interpret and understand the meaning of stanzas mentioned in the text.
3. It will provide required basic knowledge to understand the related Siddha subjects which will be taught in subsequent years.

##### **Number of Hours Spent in Teaching**

- |              |          |
|--------------|----------|
| 1. Lectures  | - 90 hrs |
| 2. Tutorials | - 30 hrs |

##### **Course Contents**

1. History of Medicine – Origin and development of Siddha Medicine.
  - 1.1. Medical knowledge of ancient people.
  - 1.2. Various civilization of the world.
  - 1.3. Kumari Kandam
  - 1.4. Sinthu civilization
  - 1.5. History of Tamil Medicine and development of Siddha and Ayurvedic Medicine.
  - 1.6. Development of Siddha Medicine in Elam
  - 1.7. Participation of Sri Lankan Government in the development of Indigenous Medicine.
    - 1.7.1. Details of the following  
Ministry of Indigenous Medicine – Dept. of Ayurveda – Government Drug Co-operation – Teaching Hospital – Herbal Garden – National Institute of Traditional Medicine.
    - 1.7.2. Institutions of Indigenous Medicine under the Northern and Eastern Province.
    - 1.7.3. Institutions of Indigenous Medicine under the Universities.
    - 1.7.4. Administrative setup of Ayurvedic Medical Council and Education and Hospital Board.

10 Hrs

2. Introduction of Siddhas
  - 2.1 Detail study of Siddhas
  - 2.2 Classification of Siddhas
  - 2.3 Period of Siddhas
  - 2.4 History of Eighteen Siddhas and their participation in Siddha Medicine
  - 2.5 Speciality of Siddhas
    - 2.5.1 Attanga Yogam
    - 2.5.2 Attama sidthy
    - 2.5.3 Philosaphy of Nadi
    - 2.5.4 Sara Palakkam (Breathing Exercise)
    - 2.5.5 Rasa vatham
    - 2.5.6 Kayakalpam
    - 2.5.7 Muppu
  - 2.6 Characters of Siddha Physicians
  - 2.7 Philosophical meanings of Siddha poems
  - 2.8 Medical facts in Tamil literatures

12 hrs
3. Thottakiramam
  - 3.1 Christy and its purpose
  - 3.2 Devlopment of Panchapoothas
  - 3.3 Anda and Pinda
  - 3.4 Panchapoothas in the body
  - 3.5 96 Philosophy and details study of six Atharangal
  - 3.6 Atomic policy of Siddhars and the concept of Saiva siddhantha regarding the truth of Mupporul
  - 3.7 Evaluation theory of Siddhars

15 hrs
4. Philosophy
  - 4.1. Description of Philosophy
  - 4.2. Detsils of importance of Philosophy
  - 4.3. Indian and Hindu Philosophy
  - 4.4. Medicinal aspect of Alavaieyal

08 hrs
5. Porud Panpu
  - 5.1. Porul (Draviya)
  - 5.2. Panpu (Gunam)
  - 5.3. Seyal (Karmam)
  - 5.4. Pothumai (Samaniyam)
  - 5.5. Sirappu (Visheda)
  - 5.6. Inmai (Abava)
  - 5.7. Ullarntha thanmai (Samavaya)
  - 5.8. Kaalam
  - 5.9. Veli (Thikku)
  - 5.10. Manam
  - 5.11. Athma

05 hrs



6. Introduction of Dhosha Thathu Mala
  - 6.1. Thirithaathus and Thirithoshas
  - 6.2. Comparison between Thirithoshas and Human cells
  - 6.3. Common features and their sites Thirithoshas, relationship between Thirikunas and Thirithaathus.
  - 6.4. Vali (Vaatham)
    - 6.4.1. Synonyms, Divisions, Shape, Site, Natural feature and Action in the body
    - 6.4.2. Increasing time and its features, Decreasing features, Thannilai, Thannilaiviruththi, Vettunilai viruththi
  - 6.5. Alal (Pitham)
    - 6.5.1. Synonyms, Divisions, Shape, Site, Natural feature and Action in the body
    - 6.5.2. Increasing time and its features, Decreasing features, Thannilai, Thannilaiviruththi, Vettunilai viruththi.
  - 6.6. Iyam (Kapham)
    - 6.6.1. Synonyms, Divisions, Shape, Site, Natural feature and Action in the body
    - 6.6.2. Increasing time and its features, Decreasing features, Thannilai, Thannilaiviruththi, Vettunilai viruththi.

15 hrs
7. Yakayin Elakanam (Pirakiruthi)  
Types and its features
 

04 hrs
8. Surothas  
Details study of classification and functions
 

02 hrs
9. Udal Kaddukal (Sapthathathu)
  - 9.1. Utilization of food (Parinamam)
  - 9.2. Change of Annarasa into seven Sapthathathus
  - 9.3. Detail study of Sapthathathus
  - 9.4. Natural features of Sapthathathus
  - 9.5. Increasing and decreasing features of Sapthathathus
  - 9.6. Upa Thaathukkal

10 hrs
10. Thirimalas (Faeces, Urine, Sweat)
  - 10.1. Natural features
  - 10.2. Increasing and decreasing features
  - 10.3. Malas of Udatthathukkal

03 hrs
11. Udal Vanmai (Ojas)
  - 11.1. Types – Sahaja, Kala, Ukthi
  - 11.2. Increasing and decreasing features of Udal vanmai
  - 11.3. Special foods that increasing the Udal vanmai

02 hrs
12. Udal Thee (Akni)
  - 12.1. Type, Classification, Action
  - 12.2. Increasing and decreasing features

02 hrs

13. Relationship between the Panchapoothas, Thirithosas and Sapthathathus 01 hr
14. Details study of Health and Diseases 01 hr

### **EVALUATION**

<b>Type of Examination.</b>	<b>Distribution of Marks.</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks.</b>
1. In course assessment 1.1. Essay /Viva	10%		
2. End of course 2.1 Essay 2.2. Viva	80% 10%	5 Structured questions - 3hrs 10 min/ student	40 % 40 %
3..Over all Pass Marks 4 .Distinction Marks			50 % 75 %

### **Text books**

- 01) Udatthathuvam - Dr P.M Venugopal
- 02) Thottakkirama Arachchium Siddha Maruthuva Varalarum - Dr.R.Thiyagarajan
- 03) Siddha Maruththuvanga Surukkam - Dr.S.Uthamarajan

## **Annexure A- 2 - Gunapadam I (Mooligaieyal)**

### **OBJECTIVES**

1. Obtained knowledge in different categorization of Medicinal plants.
2. Acquir complete knowledge in terminology used in Gunapadam.
3. Acquir knowledge and skill in the identification of medicinal plants and detection of adulteration. .
4. Obtained knowledge to promote and design a herbal garden and home gardens.
5. Acquir knowledge to prepare herbarium sheets.
6. Acquir complete knowledge in getting information's/ data by observing, their flowering seasons, fruit ripping season, harvesting season, Gum secreting and preservation process.
7. Obtained knowledge on the Bio – diversity of the medicinal plants.

This subject is spread over a period of two academic years.

### **Gunapadam – I (Mooligaieyal) – Part I** **(Materia Medica I – Vegetable Kingdom – Part I)**

#### **FIRST B.S.M.S**

Number of hours spent in teaching,

Lectures	-	90 hours
Tutorials	-	10 hours
Practicals	-	120 hours

#### **Course Contents**

1. 1.1 Introduction of the subject.  
1.2 The importance of Gunapadam in Siddha Medicine.  
1.3 Classification of Gunapadam.  
03 hrs
2. 2.1 Definition Classification and Characteristics of Porul, Suvai, Gunam, Thanmai and Privu.  
2.2 The interaction of Suvai, Gunam, Muthathukal, Udalthaathukal  
2.3 Definition of prabakam (makimai) and its importance characteristics  
14 hrs
3. The relation between Suvai, Gunam, Thanmai and Privu.  
04hrs
4. Definition of Saikaikal (Karma or action)  
Nimirthal(Prasaranam), Elumbal(Utsubanam), Oodukam(Aakurjanam),  
Vezlthal(Avasubanam), Edappeyarchi (Kamanam)  
05 hrs

5. 5.1. Definition, Classification and Importance of Kayakalpa mooligaikal
- 5.2. Definition, Classification and characteristics of herbs which contain minerals  
05 hrs
6. 6.1. Definition of Herbarium.
- 6.2. Importance of Herbarium.
- 6.3. Describe the Preparation method of Herbarium  
05 hrs
7. 7.1 The factors influence in changing the efficacy of the herbs.
- 7.2 The factors influence in herbal absorption.
- 7.3 The ways of administering the herbal medicine.  
04 hrs
8. Classification of herbs according to the parts used in medicine. Their Botanical name, Family, synonyms, morphology, chemical composition, actions, swai, Thanmai, Privu and prepared medicines of mooligaikal
  - 8.1 Roots  
Aruku, Akarakaram, Athimathuram, Athividayam, Awuri, Alingil, Aakasakarudan, Amanaku, Kotam, Kadukurokini, Koraikilangu, Milakaranai, Erukku, Nilakumil, Nilakadambu, Paathiri, Pampukala, Parankikilangu, Perumarunthu, Jadamangil, Sathavari, Sevanarvembu, Sitamuddy, Thippali moolam, Vadchanabi, Venkodiveli, Vettiveer, Vilamichai veer, Iyangu, vilvai, Kuthukkalsammaddi, Saranai, Mookaradai.
  - 8.2 Rhizomes , Bulb  
Enji, Sitarathai, Perarathai, Vasambu, Kasthurimanjal, Karunai kilangu, Manjal, Velaipundu, Katsolam, Kichchili kilangu, Venkayam.
  - 8.3 Wood  
Akil, Santhanam, Sensanathanam, Maramanjal, Seenthil, Thevatharu
  - 8.4 Barks  
Arasu, Aththi, Arottu, Aal, Aayel, Iththi, Naval, Kudasapalai pattai, Kadalranji, Karunkali, Karuvelem, Vellilothiram, Mavilanku, Othe, Vembu, Poovarsu, Elavankam, Semanathi.
  - 8.5 Leaves  
Aruku , Avuri , Adathodai, Katpuravalli, Iruvelli, Kuppaimani, Kupilai, Nanjarupan, Nochi, Ponankani, Sirukurinja, Thalipathiri, Vallarai, Vandukolli, Vathamadaki, Vetilai, Vetpalai, Pavlamali, Vaviloddi, Thuradimul, Vembu.
  - 8.6 Galls  
Mayakai – Katkadakasingi – Kadukai - Komparaku
  - 8.7 Buts ans Flowers  
Katathepoo – Sembarathampoo - Kumkumapoo – Mathenakamiyapoo – Sirunagampoo - Panneerpoo – Pavallamalikaipoo - Rosapoo – Vasuvasi – Thumbaipoo – Senbakampoo – Karampoo – Nanthiaveddaipoo

- 8.8 Fruits  
Koththamalli – Milaku - Nelli – Omam – Annasi - Pereenthu - Sathakupai – Natseerakam - Perunseerakam - Senkotai - Thantri - Kadukkai – Thippili – Thirachai – Vellari – Vaividankam – Venpusani – Vilvampalam – Tharpusani - Panichchai
- 8.9 Seeds  
Kaduku – Ellu – Kalachi - Etti - Karbogarisi - Kattujeerakam - Karunjeerakam - Neeradimuththu – Kurosaniomam - Nervalam - Nilakadalai – Palasu – Poonakali – Sooriyakanthi – Theata – Valuluvai – Vempu – Alingil – Aamanaku - Ulunthu
- 30 hrs
9. Basic study of the following phytochemical which are used in medicines  
Alkaloids - Resins – Fattyacids – Glucosides - Glycosides – Gums - Saponins - Steroids – Tannins – Turpentine
- 08 hrs
10. Definition, Methods of adulterating and Detection of adulteration
- 04 hrs
11. Detailed study of the following group of drugs  
Thirikaduku – Thiripalai – Thirijathi - Irukurinja – Irunerunji – Iruserakam – Irumaddi – Iruvel – Muchseer – Panchajaathi – Panchathiththam – Panchakarpam – Panchanimpam - Panchavarkkam - Panchakani – Panchakaviam – Panchavilvam – Thasankam – Nalankuma – Ilakupanchamulam – Mahapanchamoolam – Attamoolam – Attakajam – Aynthenai – Aynkajam – Attavarkam - Dashamoolam – Aruvakaiarisi – Iruanthanam – Iynthuveri - Irupavaddai.
- 08 hrs
12. Determin the efficacy of the Herbs in relations of the followings.  
Anupanam – Pathiam - Apathiam
- 03 hrs

## Practicals

- 1) Draw the Herbs based on Record book with brief description.
- 2) Each student should be submitted 25 herbarium sheets in the Academic Year.
- 3) Field Project
- 4) Submit a project work on bio diversity of the plant, by observing the morphological changes of the Herbs occurs due to the seasonal variation and relevant facts of medicinal importance of Herbs in the particular Divisional Secretariat area of the Jaffna District.
- 5) Collection of facts by visiting to the different Herbal garden in Sri Lanka during the vacation.
- 6) Collection and storage of the parts of the important medicinal herbs according to the seasonal variation.

120 hrs

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assesement			
1.1 Essay/ Viva & spots	05%		
1.2 Maintain Record Book, Dry herb album, Field Project	05 %		
2. End of course			
2.1 Essay	40 %	5 structured questions – 3 hrs	40 %
2.2 Practical - (spots)	40 %	20 x 04 minutes	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text books**

1. Gunapadam (Muligaieyal) - Murugesamuthaliyar
2. Patharthakuna vilakkam
3. Natkarni Materia Medica Vol I
4. Medicinal Plants - D.M.A Jayaweera

## **Annexure A - 3 - Udatkootiyal (Anatomy)**

### **OBJECTIVES**

1. Understand the structure of the body
2. Identify the structures and their locations during dissection
3. Able to surface mark the organs in the body wall.

**It spreads out over a period of two Academic years**

#### **Udatkootiyal (Anatomy) - Part –I** **FIRST BSMS**

Upper limb  
Thorax  
Abdomen

#### **Udatkootiyal (Anatomy) – Part-II** **SECOND BSMS**

Pelvis  
Lower limb  
Head and Neck

#### **Udatkootiyal (Anatomy) - Part –I**

#### **FIRST BSMS**

#### **NO. OF HOURS SPENT IN TEACHING**

- |               |          |
|---------------|----------|
| 1. Lectures   | - 75 hrs |
| 2. Tutorials  | - 15 hrs |
| 3. Dissection | -120 hrs |

#### **Course contents**

- |  |        |
|--|--------|
| 1. Definition and development of the Body and its use in Medicine  | 01 hrs |
| 2. Introduction of Embryo which is formed by the fertilization of ovum and sperm, congenital abnormalities.                    | 04 hrs |
| 3. UPPER LIMB<br>Bones – Joints – Muscles – Arteries – Veins – Nerves – Lymph vessels  | 30 hrs |
| 4. THORAX<br>Bones – Joints – Muscles – Arteries – Veins – Nerves – Lymph vessels<br>- Hearts – Lungs – Diaphragm – Oesophagus | 20 hrs |

## 5. ABDOMEN

Vertebral bones – Stomach - small intestine - large intestine – Liver – Spleen  
- Pancreas - Gall bladder – Kidney - Muscles – Arteries – Veins – Nerves – Lymph  
vessels – Testis – Scrotum.

20 hrs

### EVALUATION

Type of Examination.	Distribution of Marks	Details of evaluation (No. of hrs. No. of questions)	Qualifying pass marks.
1. In course Assessment.			
1.1. Practical - Spots	05 %	10 Groups x 3min	
1.2. Essay / Viva	05 %	3 Questions - 1 hr	
2. End course Assessment.			
2.1. Essay	40 %	5 structured questions – 3 hrs.	40 %
2.2. Practical - Spots	40 %	20 Groups x 3 min	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction Marks			75 %

### Text book

1. Angathipatham – I.Ponnaiah
2. Text book of Anatomy (Regional, Functional and Clinical)  
By R.Kanagasuntharam  
P.Sivanathasingham  
A.Krishnamoorthi
3. Last's Anatomy - R.M.H Maninn.
4. Clinical Anatomy for medical students. By Richard Snell.
5. A New approach to Dissection of the Human body. By R.Kanagasuntharam.
6. Udatkooru – Dr.R.Thiagarajah



## **Annexture A - 4 - Udattholiliyal (Physiology)**

### **OBJECTIVES**

1. Acquir knowledge in function of the systems of the body.
2. Understand the mechanisms that regulate these functions.
3. Know the effects that caust by these altered functions.

It spreads out over a period of two Academic years

### **Udattholiliyal (Physiology) – Part-I**

#### **FIRST BSMS**

1. Body fluid
2. Blood
3. Nerves, Muscles
4. Autonomic nervous system
5. Gastro intestinal system
6. Cardio Vascular system
7. Urinary system

### **Udattholiliyal (Physiology) – Part-II**

#### **SECOND BSMS**

1. Respiratory system
2. Energy metabolism
3. Endocrines system
4. Nervous system
5. Special senses
6. Reproductive system

### **Udattholiliyal (Physiology)– Part-I**

#### **FIRST BSMS**

#### **Number of Hours Spent in Teaching**

- |              |   |        |
|--------------|---|--------|
| 1. Lectures  | - | 60 hrs |
| 2. Tutorials | - | 10 hrs |
| 3. Practical | - | 40 hrs |

#### **Course contents**

- |   |        |
|---|--------|
| 1. Body Fluids:   | 06 hrs |
| 2. Blood - Composition of Blood - Blood groups                          | 10 hrs |
| 3. Nerve – Muscle - Muscle contraction - Nerve conduction<br>- Synapses | 05 hrs |

- |  |        |
|--|--------|
| 4. Autonomic Nervous System  | 04 hrs |
| 5. Gastro-Intestinal System<br>Digestion – Functions of Pancreas and Liver                   | 10 hrs |
| 6. Cardio Vascular Systems<br>Cardiac cycle, Heart sounds, Circulation, Blood pressure       | 15 hrs |
| 7. Urinary System<br>Glomerular Filtration, Absorption, Secretion, Mechanism of Micturition. | 10 hrs |

## **Practical**

- |  |        |
|--|--------|
| 1. Body Weight, Height, Surface area, Body fat                       | 08 hrs |
| 2. Blood   | 22 hrs |
| 3. Cardiovascular System   | 05 hrs |
| 4. Urinary System – Sugar, Albumin and Specific gravity of the Urine | 05 hrs |

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No of hrs.No.of questions)</b>	<b>Qualifying passmarks</b>
1. In course assessment 1.1. Practical 1.2. Essay /Viva	05% 05%	3 Essay Questions – 1 hrs	
2. End of Course 2.1 Essay 2.2 Practical 2.3 Viva	40% 40% 10%	5 Structured questions – 3hrs. Assessment of skills – 4X30 minutes. 10min/student	40% 40% 40%
3. Over all pass Marks			50%
4. Distinction marks			75%

## **Text Books**

1. Introduction to Human Physiology – Samuel Green
2. Review of Physiology – William F.Ganong

## **Annexture A - 5 - Uyirrasayanaviyal (Biochemistry)**

### **FIRST BSMS**

### **OBJECTIVES**

1. Understand the chemical composition of carbohydrates, Proteins and Fats.
2. Obtain knowledge in nutritional components of food.
3. Provide basic knowledge to carry out research activities in plant and Siddha drugs.

### **Number of hours spent in teaching.**

1. Lectures - 65 hours.
2. Tutorials - 15 hours.

### **Course Contents**

1. CHEMISTRY OF CARBOHYDRATES.
  - 1.1. Classification of Carbohydrates.
  - 1.2. The importance of Chemistry and Physiology of Monosaccharides, Disaccharides, Polysaccharides06 hrs
2. CHEMISTRY OF LIPIDS.
  - 2.1. Classification of lipids
  - 2.2. Steroids
  - 2.3. Lipoproteins.06 hrs
3. CHEMISTRY OF PROTEINS.
  - 3.1. Classification of Proteins
  - 3.2. Classification of Amino acids
  - 3.3. Classification of Peptides
  - 3.4. Physiological importance of peptides06 hrs
4. CHEMISTRY OF NUCLEIC ACIDS.
  - Importance of Nucleotides and Nucleosides
  - Composition and structure of Nucleic acids04 hrs
5. ENZYMES. 04 hrs

6. Extraction, Identification of Chemical compounds, Structure and Functions of the followings;  
Alkaloids - Resins – Fattyacids – Glucosides - Glycosides – Gums - Sapponins - Steroids – Tannins – Turpentine 12 hrs
7. Vitamins  
7.1. Chemistry  
7.2. Physiological role  
7.3. Sources and quantity of requirements  
7.4. Fat soluble and water soluble vitamins  
7.5. Clinical Manifestation of Deficiency 06 hrs
8. Minerals  
Understand the nutritional character of the following minerals.  
Sodium – Potassium – Calcium – Phosphorus – Magnesium - Sulphur  
Chloride – Iron - Iodine - Copper - Zine - Manganese - Cobalt 04 hrs
9. Digestion, Absorption and transportation of Food 02 hrs
10. Food and Nutrition 15 hrs

## EVALUATION

Type of Examination.	Distribution of Marks.	Details of evaluation (No. of hrs. No. of questions)	Qualifying pass marks.
1. In course assessment 1.1. Essay/ Viva	10%		
2. End of course. assessment 1.1. Essay 1.2. Viva	80 % 10 %	5 structured questions - 3 hrs. 10 min / student	40 % 40 %
2. Over all pass Marks			50 %
3. Distinction marks			75 %

### Text Books.

- Harpers review of Bio Chemistry.
- Biochemistry by Stayier
- Biochemistry by Lehninger
- Fundamental of Biochemistry for Medical students by Ambika Shanmugam

## **Annexture A- 6 English Language course (E.S.L – Level I)**

### **FIRST BSMS**

#### **OBJECTIVES**

1. To develop Proficiency in English for specific purposes.
2. To develop reading skills and to understand authentic materials.
3. To develop the ability to communicate in writing from controlled to free.
4. To encourage students to speak with reasonable accuracy and to prepare them in oral presentation skills.
5. To gain professional training in English for BSMS.

#### **Number of hours spent in teaching.**

Lecture - 90 hours

#### **Course Components**

1. Reading
    - 1.1. Basic Reading skills.
    - 1.2. Skimming.
    - 1.3. Scanning.
    - 1.4. Identifying main Points.
    - 1.5. Understanding vocabulary in context and their usage.
    - 1.6. Understanding sequencing.
    - 1.7. Reading for comprehension.
    - 1.8. Expansion of Vocabulary, Synonyms and antonyms of basic word in text.
    - 1.9. Intensive reading.
  2. Writing
    - 2.1. Introducing the Mechanics of writing.
    - 2.2. Introducing vocabulary in the fields of Siddha and Ayurvedic Medicine.
    - 2.3. Transferring graphic, statistical, pictorial information into writing.
    - 2.4. Sequencing.
    - 2.5. Form filling.
    - 2.6. Writing notes.
    - 2.7. Preparing to write a project.
- a) Grammar
1. Tenses (more advanced) subject verb agreement.
  2. Question and negative forms.
  3. Active Passive voice (elementary)
  4. Direct – Indirect speeches (elementary)
  5. Expansion of sentences and usage
  6. Expansion of vocabulary usage
- b) **Controlled writing based on note taking, transferring graphic information, writing description about place and people using kinship terms.**

3. Speaking
  - 3.1. Introducing.
  - 3.2. Describing people / events/ pictures.
  - 3.3. Interviewing at an elementary stage.
  - 3.4. Giving instructions / directions.
  - 3.5. Making short speeches on a previously prepared topic.
  - 3.6. Developing normal conversation in classroom with friends and lecturers.
  - 3.7. Preparing themselves to answer formal question in a form interview using appropriate language.
  - 3.8. Developing informal conversation skills in an informal situation.
  - 3.9. Describing maps pictures and diagrams.
4. Listening
  - 4.1. Listening to discriminative sounds.
  - 4.2. Listening for specific information.
  - 4.3. Listening for the gist.
  - 4.4. Listening and responding to telephone conversation.
  - 4.5. Listening and note – taking.
  - 4.6. Listening and comprehending.
  - 4.7. Listening to short lectures.
  - 4.8. Taking down notes while listening to lectures.
  - 4.9. Listening to telephone conversation and answering calls.
5. Communicative Grammar
  - 5.1. Introducing basic structures.
  - 5.2. Word – order
  - 5.3. Tense
  - 5.4. Negation
  - 5.5. Question formation
  - 5.6. Articles
  - 5.7. Prepositions
  - 5.8. Pronouns
  - 5.9. Quantifiers
  - 5.10. Word class
  - 5.11. Active / Passive
  - 5.12. Conjunction / relativization
6. Project

Topics to be selected from students' field of interest.

Submission of individual projects before the end of the year.

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessment			
1.1 Assignment writing	10 %		
1.2 Listening skills Test Comprehension	05 %		
1.3 Oral	10 %		
2. End of course			
2.1 Essay	75 %	structured questions – 3 hrs	
3. Pass marks			50 %
4. Distinction marks			75 %

### **Text Books.**

Developing Reading and writing skills in English.

By Mrs.S.Ravendran

## **Annexture A- 7 – Information Technology**

### **FIRST BSMS**

#### **Number of hours spent in teaching.**

1. Lectures - 20 hours.
2. Practicals - 20 hours.

#### **Course contents:**

##### 1. Theory

###### 1.1. Basic concepts of information technology:

Introduction, Promises of information Technology, Challenges of information Technology – Health, Ergonomics & environment, Ethical issues in computing. Threats to computers and communication systems. Security.

###### 1.2. Computer System:

Characteristics of Computer, Development of Computer and communication technologies. Functions of Computer and its devices – input devices, output devices, storage devices, and communication devices.

Software – system software, application software, functions and basic features of software.

###### 1.3. Computer Networks:

Introduction, use of Computer network, types of network and its components, topology of LAN, transmission medias: twisted – pair, coaxial and fiber optics cables, carriers and regulation. Connectivity devices, physical address, wireless network and its advantages, the impact of LAN, factors affecting communication.

###### 1.4. The Electronic Mail and Internet.

Introduction, web navigation, web searching, electronic mail, internet chatting, remote login, file transfer, E- Commerce, E-Learning.

##### 2. Practical

Spreadsheet:

Graphical user interface.

Start with Microsoft Excel: Navigating Excel sheet window, using tool bar buttons, getting help, creating, editing and saving simple sheet.

Data types, entering data, naming groups of data, checking and correcting data, formatting and editing, performing calculations on data, using functions, creating charts, printing – data lists, part of data list and chart. Focusing on specific data using filters, recording and summarizing data.



## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessement			
1.1 Tutorial based test	10%		
1.2 Assessment tests	10%		
1.3 Practical	20 %		
2. End of course			
2.1 Theory	30%		40 %
2.2 Practical	30%		40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Annexure B: Objectives, Syllabi and Method of Evaluation of Second BSMS Course.**

### **Annexure B - 1 Gunapadam – I (Mooligaieyal) – Part – II (Materia Medica I – Vegetable Kingdom – Part II)**

#### **SECOND BSMS**

##### **Number of hours spent in teaching,**

Lectures	-	90 hours
Tutorials	-	10 hours
Practicals	-	105 hours

#### **Course contents**

1. Classification of medicinal plants according to the family.

Botanical Name – Family – Regional Name – Synonyms – Habitats – Bio diversity – Reproduction – Morphology – Parts used in Medicine – Suvai – Thanmai – Pirivu – Chemical composition – Actions - Usages – Compound Drugs.

Details of the families which contains Herbs.

01. Acanthaceae	21. Celastraceae	41. Leguminosae	61. Punicaceae
02. Aizoaceae	22. Combretaceae	42. Loganiaceae	62. Piperaceae
03. Alangiaceae	23. Compositae	43. Lythraceae	63. Ranunculaceae
04. Amaranthaceae	24. Coniferae	44. Magnoliceae	64. Rubiaceae
05. Amaryllidaceae	25. Convolvulaceae	45. Malvaceae	65. Rutaceae
06. Anacardiaceae	26. Cruciferae	46. Marantaceae	66. Santalaceae
07. Annonaceae	27. Cucurbitaceae	47. Meliaceae	67. Sapindaceae
08. Apocynaceae	28. Cyperaceae	48. Menispermaceae	68. Sapotaceae
09. Araceae	29. Cycadaceae	49. Moraceae	69. Scrophulariaceae
10. Aristolichiaceae	30. Dipterocarpaceae	50. Moringaceae	70. Solanaceae
11. Asclepiadaceae	31. Euphorbiaceae	51. Myrtaceae	71. Sterculiaceae
12. Bambusaceae	32. Fagaceae	52. Nyctaginaceae	72. Symploceae
13. Basellaceae	33. Flacourtaceae	53. Nymphaeaceae	73. Ulmaceae
14. Bignoninaceae	34. Gentianaceae	54. Oxalidaceae	74. Umbelliferae
15. Boraginaceae	35. Giramineae	55. Palmaceae	75. Valerianaceae
16. Bromeliaceae	36. Guttiferae	56. Plantagiaceae	76. Verbenaceae
17. Burseraceae	37. Iridaceae	57. Papaveraceae	77. Vitaceae
18. Cannabinaceae	38. Labiatae	58. Pedaliaceae	78. Zingerberaceae
19. Cappariaceae	39. Lauraceae	59. Plumbaginaceae	79. Zygophyllaceae
20. Caricaceae	40. Liliaceae	60. Plantacineae	80. Erythroxylaceae

35 hrs

2. Classification of Medicinal Herbs according to the Siddha fundamental and Pharmacological Actions.
  - 2.1 Gastro Intestinal system  
Carminative - Purgative – Sialagogue - Anti - dysenteric - Anti sialagogue – Antibilious – Demulcent - Cholagogue – Vermifuge – Emetic – Stomachic - Anti – Emetic – Digestive - Antacids - Laxative
  - 2.2 Respiratory System  
Expectorant - Anti spasmodic - Anti tussive - Broncodilator - Anti histamine - Mucolytic -
  - 2.3 Cardio Vascular System  
Cardiac Stimulant - Cardiac tonic - Cardiac Depressant - Kurithi perikki - Kuruthi perikkadakki – Kuruthi Uramakki
  - 2.4 Nervous System  
Nervine Tonic – Hypnotics - Analgesics - Thathuvepakatty – Thuyarundakki - Moolaiuramakki
  - 2.5 Reproductive System  
  
Aphrodisiac – Emenagogue - Uterine tonic – Abortifacient – Lactagogue - Lactofuge - Parturifacient - Uterine relaxant
  - 2.6 Urinary System  
Diuretic - Anti – Diuretic - Lithorntriptic
  - 2.7 Rejuvenating Herbs  
Alterative – Tonic – Nutritive - Hepatotonic
  - 2.8 Herbs used in Loco motor System  
Anti – Inflammatory – Analgesics - Nervine Tonic - Thathuvepakatty
  - 2.9 Herbs used in following special conditions based on action.  
Skin disease – syphilis – leprosy – perunoi – tuberculosis – vathasuram malaria – diabetes - eye disorders - ear disorders - tooth disorders – kuruthyalalnoi – Haemorrhoids – Muthosa Samanam – Veri Noi – Obesities  
35 hrs
3. Identification and detail study of Poisonous Plants  
08 hrs
4. 4.1. Detail Study on recent research finding plants  
4.2. Derivatives derived from the medicinal plants which are used in Allopathy system of medicine.  
06 hrs
5. 5.1 Study of establishing Herbal garden  
5.2. Herbs which earn foreign exchange.  
06 hrs

## Practical

1. Field Project  
The Project consist Identification, bio diversity and the facts collection according to the Planing of Gunapada section in Divisional secretariat in North and East Provinces
2. Collection and storage of the parts of the plants in the various seasons
3. Each Student should be submitted 50 herbarium sheets in the Academic Year.
4. Collection of facts by visiting various herbal gardens in Sri Lanka during vacation.
5. Identify the herbs during the field work and records the details of the bio diversity of the herbs in the Jaffna district.

120 hrs

## EVALUATION

Type of Examination	Distribution of Marks	Details of evaluation (No. of hrs. No. of questions)	Qualifying pass marks
1. In course Assesement			
1.1 Essay/Viva & Spots	05%		
1.2 Maintain Record Book, Dry herb album & Field project	05 %		
2. End course Assesement			
2.1 Essay	40 %	5 structured questions – 3hrs	40 %
2.2 Spots	40 %	20 x 04 minutes	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## Text books

- 1) Gunapadam - Porudpanpu Nool - K.S.Murugesamuthaliyar
- 2) Patharththagunavilakkam
- 3) Patharththagunasinthamani
- 4) Indian materia medica by Nadkani part I & part II
- 5) Medicinal Plants - D.M.Jayawweera
- 6) Indian medicinal plants by Kirtikar K.D Basu S.D
- 7) Medicinal Botany - S.Somasundaram M.Sc, Ph.D (Botany)

**Annexture B - 2 - Gunapadam – II (Thaathujeevavargam)**  
**(Materia Medica II – Minerals & Animal Kingdom)**

**SECOND B.S.M.S**

**OBJECTIVES**

1. Gain knowledge in categorization of Metals, Karasarangal, Panchasoothangal, Padanangal and Uparasangal.
2. Identification of Metals, Karasarangal, Panchasoothangal, Padanangal, Uparasangal.
3. Obtain knowledge and skills in purification of Thathu jeeva materials.
4. Gain knowledge in methods of collection of Thathu jeeva materials.

**Number of hours spent in teaching,**

Lectures	-	90 hours
Tutorials	-	10 hours
Practicals	-	180 hours

**Course Contents**

1. Definition of Thaathu vargam
2. Details study of Equipment used in preparation of Medicine.  
  
Karuvigal – Moosai – Kugai – Eru – Kuli - Pudangal  
04 hrs
3. Instruments  
  - 3.1 Aviyanthiram
  - 3.2 Tholayanthiram
  - 3.3 Thupayanthiram
  - 3.4 Mezhuku Thaila Karuvi
  - 3.5 Kuli Thaila Karuvi
  - 3.6 Kuppip Puddi Thaila Karuvi
  - 3.7 Valukayanthiram
  - 3.8 Pukai Aduppu
  - 3.9 Oothuyanthiram
  - 3.10 Thiravayanthiram(Thee Neer)
  - 3.11 Madakkuvalai yanthiram
  - 3.12 Valai yanthiram
  - 3.13 Sudar Thaila Karuvi
  - 3.14 Senthuram Edukkum Karuvi
  - 3.15 Pathankak Karuvi06 hrs
4. Study of types of Pudangal  
06 hrs

## 5. Details study of Menerals and their classifications.

### 5.1 Metals

#### Naturals (8)

1. Gold
2. Silver
3. Cupper
4. Steel
5. Iron
6. Lead
7. Tin
8. Zinc

#### Artificial (3)

1. Vengalam
2. Brass
3. Tharaa

12 hrs

### 5.2 Karasarangal;(25)

#### Naturals (10)

1. Sudan
2. Seenakkaaram
3. Pooneeru
4. Valayal Uppu
5. Pachchai katpooram
6. Kalluppu
7. Kariuppu
8. Ponampar
9. Meenampar
10. Kadal Nurai

#### Artificial (15)

1. Inthuppu
2. Veddi Uppu
3. Venkaaram
4. Thurusu
5. Evachsaaram
6. Navachchaaram
7. Sakthichchaaram
8. Aekampachchaaram
9. Kenthiuppu
10. Elluppu
11. Kaachchulavanam
12. Pidalavanam
13. Sinthulavanam
14. Kaasiuppu
15. Kenthalavanam

15 hrs

### 5.3 Panchasoothangal (5)

1. Rasam (Mercury)
2. Rasakatpooram
3. Rasasenthuram
4. Saathilingam
5. Chevveeram

08 hrs

### 5.4 Padanangal (64)

#### Naturals (32)

Sootham – Sangu paadanam – Kuthiraipal paadanam – Chevveeram – Gowry paadanam – Palandunuka paadanam – Sathilingam – Kantham - Sarakanda paadanam – Miruthaarasingi – Manosilai – Avupal paadanam –

Kanthakam – Appiragam – Saalanga paadanam – Thaalakam – Katkadaga paadanam – Katpari paadanam – Thuththam – Koolagam – Katpaadanam – Anchanakkal – Vykiraantham – Kachchaalam – Vellai Paadanam – Thaalampam – Seethaankam – Kaarmugil – Amirtham – Silapatham – Thoddip paadanam – Sirupantham.

Artificial (32)

Sootham – Pavalaputtu – Panchapatri – Chevveeram – Puththooduththodi – Kunkumma paadanam – Saathilingam – Potroddy – Raththa paadanam – Mirutharasingi – Sepputhoddi – Rasitham – Kanthakam – Erumai nath thoddi – Thailapaadanam – Thalakam – Emasingi – Soarapaadanam – Thuththam – Eraththasingi – Kagapaadanam – Neelakkal – Koliththailakkanthagam – Elavanapadanam – Vellaipaadanam – Vaanakkanthagam – Nagapaadanam – Karumugil – Koodasoari – Inthirapaadanam – Theemurugal – Thurisu.

08 hrs

5.5. Upasarangal (120)

Appiragam – Annapethi – Kilinchal – Thurisu – Kulampukal – Thenaddai – Kulavikkoondur – Mayil – Amai – Komparakku – Man aalkaaddi padchi – Korosanai – Minminippuchchi – Inthirakopappuchchi – Koli – Musiru muddai – Eragugal – Komuththira silasaththu – Muddai oodukal – Udumbu – Sangu – Muththuchhippi – Erivandu – Saanam – Muthalai – Enpugal – Siruneer – Meluku – Oonaan – Sura – Moovagai – Katsunnam – Senkal – Palakarai – Kasthuri – Nandukkal – Pantri – Katpurachchila chaththu – Nandu paal thuththam – Kalnaar – Naththai – Paalum Paatporudkal – Kavikkal – Nimilai – Pitchi – Kaandamirugakkompu – Nei vagai – Punugu – Kaadikaaram – Thagir vagai – Poonagam – Kilinchal – Thantham – Vennai vagai.

10 hrs

5.6 Navamanigal

Komethagam – Neelamani – Pavalam – Pudparagam – Maragatham – Manikkam – Muththu – Vaiduriam – Vairam.

02 hrs

6. Study of Panchapothic concept of minerals.

7. Detail study of purification of Thaathujeeva materials

08 hrs

8. Detail study of Synonyms, scientific name, regional name, available places, Character, properties, Action, The diseases which cured by this medicine, Poisonous symptoms, Method of preparation, Dosage and vehicles of minerals

9. General Discription of compatible and incompatible of the minerals.

10. Understand the compatibility and incompatibility of the materials to all the minerals

11. Study of mineral, Vegetables and Animal kingdom and its drugs interactions during purification, preparation and administration.

06 hrs

12. Knowledge in Addaloga Maarana materials.

13. Explain the method of collection and collection of Pooneeru.

14. Explain about Muppoo.

04 hrs

## Practicals

1. The ingredients and preparation methods of the following specific Internal Medicines.

- 1.1. Pathangam  
Thirimoorthi Pathangam  
Sampiranip Pathangam

- 1.2. Senthuram

- |                          |                                    |
|--------------------------|------------------------------------|
| 1. Aya Senthuram         | 9. Gowry Sinthamani                |
| 2. Ayakantha Senthuram   | 10. Sandamarutha Senthuram         |
| 3. Appirakach Senthuram  | 11. Padikalinga Senthuram          |
| 4. Annapethich Senthuram | 12. Poongavich Senthuram           |
| 5. Ayaveera Senthuram    | 13. Poorana santhirodaya Senthuram |
| 6. Arumugach Senthuram   | 14. Moothandach Senthuram          |
| 7. Elingach Senthuram    | 15. Vediannapethi Senthuram        |
| 8. Kadikkarach Senthuram |                                    |

- 1.3. Patpam

- |                        |                         |
|------------------------|-------------------------|
| 1. Appiraka patpam     | 9. Pavala patpam        |
| 2. Amaioddupatpam      | 10. Palakarai patpam    |
| 3. Kungliappatpam      | 11. Panchalavanappatpam |
| 4. Sangu patpam        | 12. Padikarappatpam     |
| 5. Chilasaththuppattam | 13. Mankompuppatpam     |
| 6. Thalakappatpam      | 14. Muthuchhippi patpam |
| 7. Nandukkal patpam    | 15. Venkaarappatpam     |
| 8. Naga patpam         | 16. Velvangappatpam     |

- 1.4. Kaddu

Sathilingakkaddu  
Poorakkaddu

- 1.5. Sunnam

Vediuppu sunnam



- 1.6. The purification of important mercurial products (Panchasootham), Metals, Padanangal, Poisonous Plants uparasankal has to be demonstrated in the Pharmacy.

The changes and actions of the above drugs before and after purifications should be recorded in the student's record book.

180 hrs

2. Collecting of Pooneeru (During vacation)
3. The students should visit and verify the purification methods of minerals and animal products adopted by the Traditional Siddha Physicians in the North East Province which are mentioned in the syllabus by means of questionnaire. The students have to compare the purification methods mentioned in the books and practice by the physician and submit the project.

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assesement			
1.1 Essay/Viva & spots	05%		
1.2 Maintain Record Book & Field Project	05%		
2. End course Assesement			
2.1 Essay	40%	5 structured questions – 3 hrs	40 %
2.2 Practical – spots & Purification of drugs	40 %	20 x 04 minutes 2 drugs for each student	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Text Books**

1. Gunapadam – Thaathujeeva vakkuppu - Dr.Thiyagarajamuthaliyar
2. Chikitsarathna Theepam – S.Kannuchchamippillai
3. Pathartha kuna sinthamani
4. Pathartha kuna villakkam – Kannuchchamippillai

## **Annexture B – 3 - Udatkootiyal (Anatomy) – Part II**

### **SECOND BSMS**

#### **Number of hours spent in teaching,**

- |    |            |            |
|----|------------|------------|
| 1. | Lectures   | 75 Hours.  |
| 2. | Tutorials  | 15 Hours.  |
| 3. | Dissection | 120 Hours. |

#### **Course Contents**

##### **1. PELVIS**

Bones - Pelvic cavity – Uterus – Urinary bladder – Arteries – Veins – Lymph vessels - Nerves and Reproductive organs  
- 10 hours

##### **2. LOWER LIMB**

Bones - Joints – Muscles – Arteries – Veins – Nerves and Lymph vessels  
20 hours

##### **3. HEAD AND NECK**

Bones - Thyroid – Salivary gland – Muscles of the Head and Neck – Arteries, Veins, Lymph vessels and Nerves of the Head and Neck, Sense organs, Spinal cord.  
25 hours

##### **4. NEUROLOGY**

- 4.1. Brain and its Parts  
Cerebral Hemisphere, Mid brain, Pons, Medulla oblongata,
- 4.2. Meninges
- 4.3. Cerebellum
- 4.4. Cranial Nerves, Sympathetic, Para sympathetic, Sensory tracts, Motor tracts  
20 hours

## **EVALUATION**

<b>Type of Examination.</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks.</b>
1. In course Assessment. 1.1. Practical - Spots 1.2. Essay / Viva	05 05	Gross Anatomy – 10x 3min 3 Questions - 1 hr	
2. End of course. 2.1. Essay 2.2. Practical - Spots 2.3 Viva	40 40 10	5 Structured questions –3hrs. Gross Anatomy - 20 x 3 min 10 min / student	40 % 40 % 40 %
3. Over all pass Marks			50 %
4. Distinction Marks			75 %

### **Text Books**

1. Angathipatham - I. Ponniah
2. Text book of Anatomy (Regional, Functional and Clinical)  
By R.Kanagasuntharam  
P.Sivanathasingham  
A.Krishnamoorthi
3. Last's Anatomy - R.M.H Maninn.
4. Clinical Anatomy for medical students. By Richard Snell.
5. A New approach to Dissection of the Human body. By R.Kanagasuntharam.
6. Udatkooru - Dr.R.Thiagarajah

## **Annexture B – 4 - Udattholiliyal (Physiology)– Part-II**

### **SECOND BSMS**

#### **Number of hours spent in teaching**

1. Lectures	- 75 hrs
2. Tutorials	- 15 hrs
3. Practical	- 30 hrs

#### **Course Contents**

##### **1. Respiratory System**

Mechanism of Respiration – Gas exchange and Transport – Regulation of Mechanism of Respiration - Factors influencing the Respiration	15 hrs
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##### **2. Energy Metabolism**

Basal Metabolic rate - Energy Balance – Obesity - Temperature regulation	04 hrs
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##### **3. Endocrines**

Endocrine glands and its functions	15 hrs
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##### **4. Nervous System**

Motor nerve – Sensory nerve – Reflexes - Injuries of the spinal cord and its effects	20 hrs
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##### **5. Special Senses**

Physiological function of Eye, Ear, Nose and Tongue	08 hrs
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##### **6. Reproduction**

Reproductive functions of Male and Female	13 hrs
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#### **Practical**

A Respiratory system	11 hrs
B. Energy Metabolism	05 hrs
C. Nervous system	04 hrs
D. Special Senses	10 hrs

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No of hrs.No.of questions)</b>	<b>Qualifying pass marks</b>
1. In course assesement 1.1 Essay 1.2 Practical / Viva	05% 05%		
2. End of Course 2.1 Essay 2.2 Practical  2.3 Viva	40% 40%  10%	5 Structures questions – 3hrs. Assesement of skills – 4X30 minutes. 10min/student	40% 40%  40%
3 Over all pass Marks			50%
4 Distinction marks			75%

### **Text Books**

1. Introduction to Human Physiology – Samuel Green
2. Review of Physiology – William F.Ganong

## **Annexure B - 5 English Language course (E.S.L – Level II)**

### **SECOND BSMS**

#### **OBJECTIVES**

1. To develop Proficiency in English for specific purposes.
2. To develop reading skills and to understand authentic materials.
3. To develop the ability to communicate in writing from controlled to free.
4. To encourage students to speak with reasonable accuracy and to prepare them in oral presentation skills.
5. To gain professional training in English for BSMS.

#### **Number of hours spent in teaching,**

Lecture - 90 hours

#### **Course Components**

1. Reading
  - 1.1. Scanning.
  - 1.2. Skimming
  - 1.3. Reading for details
  - 1.4. Getting the main idea.
  - 1.5. Understanding a text by guessing meaning from contextual clues, grammatical clues.
  - 1.6. Reading & Comprehending.
  - 1.7. Understanding instructions.
  - 1.8. Book skills – index, contents, title, Bibliography
  - 1.9. Reading for Comprehension
  - 1.10. Information transfer
  - 1.11. Distinguishing between general and specific ideas.
  - 1.12. Understanding sequences.
2. Writing
  - 2.1 Word order
  - 2.2. Tenses
  - 2.3. Combining sentences
  - 2.4. Active/Passive voice
  - 2.5. Controlled composition
  - 2.6. Form filling
  - 2.7. Writing job application
  - 2.8. Preparing case history
  - 2.9. Notes and letters referring patients to specialists
  - 2.10. Revision of Tenses
  - 2.11. Revision of statements/questions, orders, suggestions
  - 2.12. Relativization
  - 2.13. Writing personal letters
  - 2.14. Writing short messages & memos
  - 2.15. Note taking
  - 2.16. Writing reports
  - 2.17. Maintaining record and inventory

3. Speaking
  - 3.1. Conversational practice – controlled
  - 3.2. Telephone conversation
  - 3.3. Picture talk
  - 3.4. Interviews, job interview, interviewing people
  - 3.5. Speeches, elementary
  - 3.6. Note taking

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessment			
1.1 Written assignments	10 %		
1.2 Test on Usage	05 %		
1.3 Oral	10 %		
2. End of course			
2.1 Essay	75 %	structured questions – 3 hrs	
3. Pass marks			50 %
4. Distinction marks			75 %

### **Text Books.**

Developing Reading and writing skills in English.  
By Mrs.S.Ravendran

### **Annexture C : Objectives, Syllabi and Method of Evaluation of Third BSMS Course.**

**Annexture C – 1 - Kunapadam III – (Siddha Marunthu Seimuraieyal)**  
**(Materia Medica III – Preparation of Siddha Drugs)**

#### **THIRD BSMS**

#### **OBJECTIVES**

1. Obtain knowledge in preparation of single and compound drugs by using Plants, Minerals and Animal Kingdoms according to the basic Siddha concept.
2. Understand the ingredients, indications, contra indications and side effects of commonly used drugs.

### **Number of hours spent in teaching**

Lectures : 90 hours

Tutorials : 10 hours

Practicals : 180 hours

### **Course Contents**

1. Definition of “Marunthu”
2. Planning and construction of Pharmacy
  - a) Small scale
  - b) Large scale
3. A detailed study of different weights and measures prevalent in ancient times and the present metric system.
4. Management of Pharmacy.
5. Definition and methods involved in quality control.
6. Action of Ayurvedic Medical Council on Pharmacy, quality control and poisonous drugs.
7. Classification of Medicine.
  - a) Internal Medicines - 32
  - b) External Medicines - 32
  - a) Internal Medicines.  
 Surasam - Saaru - Kudineer – Katkam - Udkazhi - Adai - Chooranam - Piddu – Vadakam - Vennai - Manapaahu – Nei – Rasayaanam – Lahiyam - Ennei - Maathirai – Kadugu – Pakkuvam – Thenooral – Theeneer – Mezhu – Kuzhambu – Pathangam – Senthooram - Patpam - Kaddu – Urukku – Kazhangu – Chunnam – Katpam – Saththu - Kurukuzhikai
8. The ingredients and method of preparations of the following internal medicines.
  - 8.1. Surasam  
Inchichchuram - Poduthalaichchuram
  - 8.2. Kudineer  
 Adathodaik kudineer – Nilavembuk kudineer – Iyaveppuk kudineer – Neermullik kudineer – Karukkuk kudineer – Prapangkilangathik kudineer – Chenkanmaarik kudineer – Piththaveppuk kudineer – Naakkup poochchik kudineer – Valiveppuk kudineer –



- 8.3. Sooranam  
Amukkirach chooranam – Thayirsundich chooranam – Aumuthusacaraich chooranam – Thaalisaathich chooranam – Adda chooranam – Thiripalaa chooranam – Inchich chooranam – Nilavaagaich chooranam – Elakuvirachchanach chooranam – Parankickilanguch chooranam – Ealathich chooranam – Panchatheepakkanich chooranam – Henthagarasajanach chooranam – Periya patpam – Cheethopalathich chooranam – Mathumegach chooranam – Sivathaich chooranam – Mudakkuch chooranam – Sukkuch chooranam – Vellarukup patpam – Thasamoolach chooranam.
- 8.4. Vadakam  
Thaalisaathi vadagam – Vaallaippoo vadagam – Pirandai vadagam – Impooral vadagam – Inchi vadagam – Kariveppilai vadagam.
- 8.5. Manappaaku  
Aadaathodai manappaaku – Nannaari manappaaku – Siddha jeevamirtham – Thurinji manappaaku.
- 8.6. Nei  
Thuthuvalai nei – Eaddi nei – Pirami nei – Vallarai nei.
- 8.7. Lehiyam  
Amukkiraa lehiyam – Nellikkai lehiyam – Aadathodai lehiyam – Kandangkaththari lehiyam – Piththasamana lehiyam – Impooral lehiyam – Vilvaathi lehiyam – Inchi lehiyam – Vellaivenkaya lehiyam – Karunaikkilangu lehiyam – Venpoosani lehiyam – Theataankoddai lehiyam
- 8.8. Thailam  
Arugankkoddai thailam – Thaalangai ennai – Andath thailam – Nayanavithi ennai – Ullunthuth thailam – Naasiroganaasath thailam – Oanaansudarth thailam – Pachchai ennai – Karappaan thailam – Paalarkiranthikkothi ennai – Kanthagasudarth thailam – Peenisath thailam – Kaathunoith thailam – Ponnangaani ennai – Keelgai nellith thailam – Mellukuth thailam – Siranguth thailam – Vaathakesarith thailam – Sukkuth thailam – Vidamuddith thailam – Semparaththampoo ennai – Vellai ennai(Vadi ennai).
- 8.9. Maaththirai  
Kasthuri maaththirai (Mukkooddu maaththirai) – Piramaanantha pyrava maaththirai – Punnaiver kuligai – Kapaada maaththirai – Pooranachchanthiraathi maaththirai (Irupaalaichcheddiyar vaiththiya villakkam) – Kalludaikudori maaththirai – Sinnachchivappuk kuligai – Periya korosanai maaththirai – Surapoopathi maaththirai – Periya vettivelautha maaththirai – Suvaasa kudori maaththirai – Mahaelaathi maaththirai – Thakkalichchaattu korosanai maaththirai – Murukkam viththu maaththirai – Thanka ealaathi maaththirai – Vaatharaadchathan maaththirai – Neerkkovai maaththirai – Viresanapoopathi maaththirai – Palavaayuk kuligai – Vishnusachara maaththirai – Paalasanseevi

maaththirai – Vellaivenkayak kuligai (Pararajasegaram ketparoga nithaanam)

8.10. Theeneer  
Omath theeneer – Sathkuppai theeneer – Veddiuppu jeyaneer – Sangaththiraavagam

8.11. Mezhugu - Kuzhambu  
Rasakenthi mezhuku – Edivallathi mezhuku – Kunmakuderi mezhuku – Jaathijambeera kuzhambu

8.12. Venei  
Kukkil venei

9. The ingredients and method of preparations of the following special internal medicines.  
Karuppu – Kasthuri karuppu – Thaalaka karuppu – Sivanaar amirtham

10. Definition and characteristics of an experimental Pharmacy.

11. Method of manufacturing medicines utilizing the modern machinery and technology  
Tablet making, Tablet coating, Pill polishing, Strip packing, Distillation

12. Definition and methods of preparation of Puramarunthugal (External medicines)  
Kadduthal - Paththu - Oththadam - Poochu - Vethu - Poddanam - Thokkanam - Puhai - Mai - Podithimirththal - Kalingam - Nashyam - Oothal - Nassikaparanam - Kazimbu - Seelai – Neer – Varththi – Suddijkai – Salaakai – Pasai – Kazhi – Podi - Murichchal – Keeral – Kaaram - Addaividal – Aruwai - Kombu Kaddal – Urinjal - Kuruthi Vaangal – Peechchal.

13. The ingredients and methods of preparations of the following puramarunthugal (External medicines).

External medicines

13.1. Kazimbu  
Vangavirana kazimbu – Sirangu kazimbu – Pachchaich chervai

13.2. Pasai  
Kaarpokippasai – Kuppilai elaipasai

13.3. Pattu  
Kavikkal pattu – Katkaduvan pattu – Pasalip pattu – Murungaathip pattu – Kariya pavala pattu – Vellulip pattu.

13.4. Poddanam  
Vaatha poddani

13.5. Poochchu  
Umaththaielai poochchu

- 13.6. Vennai  
Amirtha vennai – Kukkil vennai – Vanga vennai
- 13.7. Mezhuku  
Kilijan mezhuku – Vellai mezhuku
- 13.8 Other Medicines  
Venkaara mathu – Venkaarap podi – Padikap pannier – Poonduth thean  
– Tooth powder

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessement			
1.1 Essay/Viva	05%		
1.2 Maintain Record Book,	05%		
2. End of course			
2.1 Essay	40%	5 structured questions – 3 hrs	40 %
2.2 Practical	40 %	Preparation of drugs	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text Books**

1. Siddha Vidya thiraddu - Dr K.N.Kuppusamymuthaliyaar, Dr.K.S.Uthamarayan
2. Siddha oudatha seimurai - Publication of Dept.of Ayurveda.
3. Suthesa vidya oudatha thiraddu - I. Ponnaiahpillai

### **Annexture C – 2 Noi Nadal Chikitsai (Basic Principles)**

### **THIRD BSMS**

### **OBJECTIVES**

1. Details study of basic principles of diseases.
2. Details study of basic methods of treatment
3. Obtain knowledge in methods of examination in patients.

## **Number of hours spent in teaching**

Theory – 80 hours  
Tutorial – 10 hours  
Practical - 120 hours

## **Course Contents**

1. Introduction of Noi Nadal Chikitsai
2. Noi (Diseases)  
Classification of Noi, the role of Dosha in the destruction of Dhathukkal  
The importance of Naadi (Srotus) in the spread of diseases.
3. Pancha Lakshana Nithaanam  
Nithaanam - Poorvaroopam - Roopam – Upasayam - Samppirapti
4. Kriyakalangal.
5. Naadi
6. Methods of Examination of diseases.  
Thirivitha Pareekshai - Astavitha pareekshai - Sapthavitha pareekshai
7. Thasa Piraharanam.  
Kaarana – Karana – Kaaryayoni – Kaarya - Kaarya palam – Anubhandha -  
Desa - Kaala – Piravruthi - Upasaya.
8. Method of Examination of each system
9. Chikitsai (Treatment)  
Introduction – Classification – Viyathi samaththuvam
10. Naatpatham
11. Line of Treatment (Chikitsai Kiramam)  
Nidana Parivarchanam – Samsothanam - Samsamanam – Aharam – Aasaram –  
Santharpanam - Shad upakiramam - Viriththa Abematha Kriya - Ashaya  
Apakarsha - Aavaranam and anniyonya aavaranam
12. Various avasthaikal and its clinical importance.  
Dosha Vishamam - Dosha Vruththi - Dosha shayam - Dosha Sthithi - Uthlishda -  
Anuthlishda - Aama - Pakva Avasthaikal.
13. Points to observe in the administration of Drugs.  
13.1. Roga balam - Rogi balam - Audatha balam.  
13.2. Deha prakrithi - Vyaathi - Agni balam – Koshtam  
13.3. Kaalam - Thesam – Saathmiyam  
13.4. Maaththirai - Anupanam - duration of course

14. Panchakarmam  
 Poorvakarmam – Prathanakarmam – Pakshathkarmam

## **Practical**

1. Skill in methods of Panchakarma.
2. Marththanam (Massage)
3. Practical report should be submitted in diagnosis of disease.

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessement			
1.1. Essay/Viva	05 %		
1.2. Practical Project	05 %		
2. End course Assessement			
2.1 Essay	80%	5 structured questions – 3 hrs	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Text Books**

- 1) Noi nadal Noi muthal Nadal I & II by Dr.Shanmugavelan. HPIM
- 2) Yukimuni Sinthamani
- 3) Siddha Maruthuvanga Churukkam by Dr.Shanmugavelan. HPIM
- 4) Astanga Hridayam
- 5) Mathava Nidanam

## **Annexture C – 3 - Nanjiyalum Neethi Maruthuvamum (Forensic Medicine & Toxicology)**

### **THIRD BSMS**

### **OBJECTIVES**

1. Gain knowledge of poisonous effect of poisons and its treatment.
2. Obtain knowledge in medico legal aspects.

## **Number of hours spent in teaching**

Lectures – 60 hours

Tutorial – 15 hours

## **Course Contents**

1. Introduction.  
Definition of Poison  
Mode of administration of Poison – Poisonous dose – Acute Poisoning – Chronic Poisoning – Responsibility of Doctor towards the person who had taken poison.
2. Poisons of Mineral Kingdom and its antidotes  
Signs and symptoms of the following poisons;  
Rasa (Mercury) - Weeram(Corrosive sublimate) - Pooram(Calomel) -  
Lingam(Cinnabar/Virmilion) - Kanthakam(Sulphur) - Thalakam(Arsenic) -  
Vellai Pashanam(White Arsenic) - Gowri Pashanam - Mirutharasingi(Leadore) -  
Uppu(Salt) - Sudan(Camphor) - Sempu(Copper) - Thurisu(Copper Sulphate) -  
Vangam - Appirakam(Mica) - Lime(Calcium carbonate) - Kannadi(Glass)
3. Poisonous plants and its Antidote  
Indian hemp Kodat kilangu – Sivanar kilangu – Makilam pinchu – Galotropis  
gigantia – Milky juice of Execumia gallocha – Neervalam – Siththira moolam –  
Marking nut tree – Stretchous nuxbomica – Opium – Cannabis – Indian aconite –  
Tobacco – Olender – Ginger – Manioc.
4. Poisons of Animal Kingdom & its Antidote
  - 4.1. Snake – Types of snakes – Bites – Severity of poison – Time influencing  
the poisoning – Treatment
  - 4.2. Rat – Types – Signs and symptoms – Treatment
  - 4.3. Sign & symptoms and treatment of following bites.  
Musk rat, Gunine pig, Squirrel.
  - 4.4. Red venomous centipede bites and its treatment
  - 4.5. Centipede, Spider, Tarantula – bites sign and symptoms, treatment.
  - 4.6. Chameleon – Frog – Lizard – Wasp – Beetle – Leach - bites sign and  
symptoms, treatment
  - 4.7. Scorpion – Types - sign and symptoms, treatment
  - 4.8. Black Scorpion – Types - sign and symptoms, treatment
  - 4.9. Animal bites - Dog – Human – Monkey – Fox – Cat – Bites
5. Poisons effects of Insective sides.
6. Substance Abuse.
7. Introduction to Forensic Medicine
  - 7.1 Definition Scope
  - 7.2 Role of the Doctor
8. Death

- 8.1 Changes after death.
- 8.2 Rigor mortis, Putrefaction, Adipocere formation, Mummification.
9. Estimation of time of death.
10. Injuries.
  - 10.1 Abrasions, Lacerations, Contusions, Incised wounds, Stabs, Fractures.
  - 10.2 Head injuries.
  - 10.3 Injuries caused by physical agents
  - 10.4 Medico Legal aspect of injuries.
  - 10.5 Grievous Hurt., Non Grievous Hurt
11. Asphyxia.  
Hanging, Strangulation, Throttling, Smothering, Suffocation.
12. Sexual offences.
13. Criminal Abortion.
14. Infanticide.
15. Legal Procedure.  
Declaration of Death Certificates.  
Cause of Death.  
Dying declaration.  
Medical Certificates.  
Medico-Legal Reports.  
Medical report to be submitted to the courts.
16. Ethics and Law in the conduct of Medical Practice.
  1. Sri Lanka Medical Council.
  2. Ayurvedic Medical Council.
  3. Registration.
  4. Professional Secrecy.
  5. Malpractice.
  6. Responsibility of Doctor

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation(No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessement 1.1 Essay/Viva	10%		

2. End of course			
2.1 Essay	80%	5 structured questions – 3 hrs	40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Text Books**

1. Nanchu Murivu Nool, - K.S Murugesu muthaliyar
2. Sattam sarntha Maruththuvamum Nanchu maruththuvamum -  
Dr. P.A.Mohamathu Igpal M.D (S).
2. Forensic Medicine and Medical Law. - Hemal Jayawardena.
3. Medico Legal Aspects of Injuries. - Prof.N.Saravanapavananthan

## **Annexture C – 4 Pinieyal - Pathology**

### **THIRD BSMS**

### **OBJECTIVES**

1. Provide knowledge in Pathological aspect of the disease.
2. Provide knowledge and skill in Laboratory investigations.



## **Number of hours spent in teaching**

Lectures	-	60 hrs
Tutorials	-	15 hrs
Practical	-	100 hrs

## **Course Contents**

Definition and brief description of the following;

1. General Pathology
  - 1.1. Introduction of Pathology
  - 1.2. Cell injury and cellular adaptations
  - 1.3. Infection, Inflammation and Healing
  - 1.4. Immunity
  - 1.5. Neoplasia, Cyst, Sinus and Fistula
  - 1.6. Haemodynamic changes
2. Systemic Pathology
  - 2.1. Cardio vascular system  
Diseases of the Arteries and veins, Diseases of the Heart.
  - 2.2. Respiratory system  
Diseases of the Respiratory tract, Diseases of the Lungs
  - 2.3. Alimentary system  
Diseases of the Stomach, Small intestine and Large intestine  
Diseases of the Liver and Pancreas.  
Appendicitis, Peritonitis
  - 2.4. Renal system  
Diseases related to renal system
  - 2.5. Central Nervous system  
Diseases related to central nervous system
  - 2.6. Haemopoietic and Lympho – reticular system  
Diseases of the cells in blood  
Diseases of the bone marrow  
Coagulation deficiency diseases
  - 2.7. Locomotor system  
Diseases related to Joints
3. Medical Microbiology
  - 3.1. Introduction of Micro organisms
  - 3.2. Classification, Structure and functions of Micro organisms
  - 3.3. Sterilization and disinfection
  - 3.4. Culture Media
  - 3.5. Identification of Bacteria

- 3.6. Brief description of important micro organisms
- 3.7. AIDS
4. Medical Parasitology
  - 4.1. Introduction
  - 4.2. Protozoan Parasites
  - 4.3. Helminths

## **Practical**

1. Examination of Slides for identification of various organisms
2. Complete Examination of Blood, Urine, Stools, Sputum and Cerebro spinal fluid and Examination of Vaginal secretion for specific organisms.
3. Demonstration of the process involved in blood culture, Urine culture and Sputum culture.
4. Prepare the slides for staining procedure
5. Visits to relevant institution to observe the above investigation.

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assesment			
1.1 Essay/Viva / Practical	05 %		
1.2. Maintain Record book	05 %		
2. End of course assessment			
2.1 Essay	40 %		40 %
2.2 Practical	40 %	5 structured questions – 3 hrs Assesment of skills – 4X30 minutes.	40 %
2.3. Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Text Books**

- Robbins Basic Pathology
- Text book of Pathology - Harshmohan
- Text book of Microbiology - Anantha Narayanan
- Text book of Medical Paracitology - C.K.Jayaram Paniker

## **Annexure C - 5 - English Language course (E.S.L – Level III)**

### **THIRD BSMS**

#### **OBJECTIVES**

1. To develop Proficiency in English for specific purposes.
2. To develop reading skills and to understand authentic materials.
3. To develop the ability to communicate in writing from controlled to free.

4. To encourage students to speak with reasonable accuracy and to prepare them in oral presentation skills.
5. To gain professional training in English for BSMS.

**At the end of the of the course the student should be able to –**

1. Read and comprehend medical text books in English.
2. Converse freely on set topics.
3. Able to write a project on a given topic.

**Number of hours spent in teaching**

Lecture - 90 hours

**Course Components:**

1. Reading

- 1.1. Previewing the text
- 1.2. Reading & comprehending advanced authentic material
- 1.3. Focusing attention on vocabulary
- 1.4. Information transfer
- 1.5. Intensive reading
- 1.6. Reading & comprehending advanced authentic material
- 1.7. Using the text to find meaning of new words/concepts
- 1.8. Making inference
- 1.9. Reading critically
- 1.10. Note taking

2. Writing

- 2.1. Revision of tenses
- 2.2. Revision of relativization
- 2.3. Phrasal verbs/compound verbs
- 2.4. Using modals
- 2.5. Reported speech
- 2.6. Elementary official correspondence – letters of invitation / acceptance / refusal / request
- 2.7. Writing Notes
- 2.8. Writing composition from notes / graphic information
- 2.9. Writing proposals and different types of reports
- 2.10. Revision of all grammatical items
- 2.11. Revision of letter writing
- 2.12. Writing reports
- 2.13. Note taking
- 2.14. Writing composition using notes
- 2.15. Writing memos / messages

3. Speaking

- 3.1. Interviews
- 3.2. Short speeches on given topics

- 3.3. Discussion
- 3.4. Role play
- 3.5. Dialogues using given situations
- 3.6. Discussions

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessment			
1.1 Written assignments	10 %		
1.2 Test on Usage	05 %		
1.3 Oral	10 %		
2. End of course			
2.1 Essay	75 %	structured questions – 3 hrs	
3. Pass marks			50 %
4. Distinction marks			75 %

### **Text Books.**

Developing Reading and writing skills in English.  
By Mrs.S.Ravendran

## **Annexture D: Objectives, Syllabi and Method of Evaluation of Fourth BSMS Course.**

### **Annexture D – 1 - Noi Nadal Chkitsai**

### **OBJECTIVES**

1. Detail study of diseases.
2. Motivation to develop the skills in diagnosing the diseases.
3. Training in Diagnosing and managing the diseases.

**This subject is spread out for two academic years (Fourth & Final year).**

## **Noi Nadal Chkitsai – Part I**

### **Fourth BSMS**

#### **Number of hours spent in teaching**

Lectures	-	90 Hour
Tutorials	-	30 Hours
Practical (Clinicals)	-	120 Hours

#### **Course Contents**

During lectures the followings will be taught in detail about Diseases  
Aetiology, Signs and symptoms, Prognosis, Complications, Methods of Diagnosis, Line of treatment, Compatible and incompatible diet in diseased conditions and advices..  
Modern concept of signs and symptoms of the diseases will be taught in order to diagnosis the diseases and to refer the patients to the hospital.

1. Surakkol
2. Eighty types of Vatha rogam and detail study of important Vatha rogangal.  
25 hrs
3. Keelvayu-Joint diseases  
05 hrs
4. Piththa rogam – 40 types and detail study of important Piththa rogangal.  
10 hrs
5. Kapha rogangal – 20 types  
10 hrs
6. Suram – 64 types and detail study of important sura rogangal.  
15 hrs
7. Sanni rogam (Coma)  
05 hrs
8. Suvai inmai – Neervedkai – Seriyamai – Vikkal – Vanthi – Mantha noi – Gunmam  
– Soolai – Perunkalichchal – Nunakalichchal – Ooli noi - Kaduppuk kalichchal  
10 hrs
9. Maneeral noi – Kaleeral noi – Kamalai – Moola rogam – Malakkaddu  
10 hrs

#### **Training in the Teaching Hospital**

1. Practical training in examination of patients.
2. Training to diagnosis of diseases.
3. Skills in management of patients.
4. Each student should be submitted 25 case sheets.
5. Attending the Medical camps and to submit reports.

Training on the above matters will be provided at the Kaithady Teaching Hospital and various Medical Institutions.

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course assessment			
1.1. Case sheets	05%		
1.2. Case examination and viva	05%		
2. End Course assessment			
2.1. Essay	40 %	5 questions – 3 hrs	40 %
2.2. Clinical	40 %	Short case 4 -1hour.	40 %
2.3. Viva	10 %	10min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text Books**

1. Siddha maruththuva Noinadal, Noimuthal nadal Part I & II - Dr. M. Shanmugavel
2. Siddha Maruththuvam - K N. Kuppusamy muthaliyar
3. Yugi vaiththiya sinthamany
4. Pararajasegaram
5. Segarajasegaram

### **Annexure D – 2 Kuzhanthai Maruthuvam - (Paediatrics)**

### **FOURTH BSMS**

### **OBJECTIVES**

1. Obtain knowledge in Diagnosing the common “Kuzhanthai Noikal” (Paediatric disorders)
2. Gain wide knowledge in Siddha therapeutic methods in prevention.
3. Understand to give an advice to the parents regarding their role in the maintenance of health in children.
4. Obtain knowledge to refer the cases to relevant institutions if required.

## **Number of hours spent in teaching**

Theory – 75 hours

Tutorial – 15 hours

Clinics – 120 hours

## **Course contents**

1. Introduction  
History taking & physical examination 2 hrs.
2. Growth & development before birth (Karu utpaththi)  
Growth & development and its problems  
Diet – drugs – diseases  
Karuvil thontrum Noikal. 3 hrs.
3. Periods of children (Balar paruvankal)  
Paalunum paruvam – paalum sorum unnum paruvam – sorunum paruvam  
kaappu paruvam –etc.(mile stones.) 3 hrs.
4. New born baby  
Examination of a new born baby  
Diseases of new born baby  
Premature baby 3 hrs.
5. Diet of the Baby  
Breast milk – complimentary food – malnutrition  
Nutritional disorders  
Character of breast milk, Cow milk & Goat milk 3 hrs.
6. Prevention of children diseases  
Traditional methods  
Immunization 3 hrs
7. Kiranthy Noi  
Definition – types – Aetiology – Signs & symptoms – Treatment  
Senkiranthy -Karunkiranthy 3 hrs.
8. Thoda Noi  
Padchi thodam – Paravai thodam – Pul thodam – Edsi thodam – echchil  
thodam – Pen thodam – Aan thodam – Therai thodam  
Definition – Types – etiology – signs & symptoms – treatment and kiraka  
thochankal of thodams which are mentioned in Pararasa sekaram 3 hrs.
9. Mantha Noi  
Definition, Etiology , Signs & symptoms and Treatment of the followings;  
  
Paal mantham – Thonkal mantham – Akni mantham – Kattu mantham –  
Sanni mantham – Aanaka mantham – Oothu mantham – Por mantham –  
Nei mantham – Vaayu mantham – Neer mantham – Pzhu mantham –  
Amar mantham – Semiya mantham – Visha mantham – Pzha mantham –



Pei mantham – Kal mantham – Vali mantham – Uzhatthu mantham – Muththoda mantham – Adda mantham – Maladi mantham – Peru mantham – Vatha mantham – Suli mantham – Kana mantham – Mantha sanni – Mantha valippu -

4 hrs.

10. Kanai Noi

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Vatha kanam – pitha kanam – thoonku kanam – surkkanam – moola kanam – raththa kanam – varat kanam – veppa kanam – valasanthira kanam – veenku kanam – valuppu kanam – saththi kanai – manth kanai – aththi surak kanai – mansat kanai – neela kanai – mahendra kanai – anat kanai

3 hrs.

11. Karappan Noi (Infantile eczema)

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Vatha karappan – piththa karappan – sletpana karappan – senkarappan – karum karappan – veenku karappan – pudaikarappan – kollikarappan – erikarappan – koppulakarappan – vaippulicarappan – 18 karappan which are mentioned in balavakadam

3 hrs.

12. Diarrhoea (Kazhichchal Noi)

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Kana kazhichchal – aama kazhichchal – mantha kazhichchal – neerpaduvan – seriya paduvan – erat paduvan – raththa paduvan – thonkal kazhichchal -

2 hrs.

13. Dysentery (Seetha kazhichchal)

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Vayittuk kaduppu – vayittulaivu – vayittuk kothippu – moolak kothippu –

2 hrs.

14. Fever (Suram)

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Vatha suram – piththa suram – piththasletpana suram – sletpanasuram – muththoda suram – vathakarappan suram – aamasuram – vida suram – kiranthivappu suram – vatha piththasuram – pala suram – mantha suram – utsuram – avasuram – salakkduppu suram – aththisuram – neerththodasuram – vathasletpanasuram – sletpanapiththasuram – vidaachchuram – sannisuram – thdiman suram – paravai suram – kozhai suram – akkarasuram.

3 hrs.

15. Sanni rogam

Definition, Etiology, Signs & symptoms and Treatment of the followings;

Mantha sanni – manthakana sanni – aama sanni – korama sanni – thanthirika sanni – alaththidu sanni – vida sanni – kulir sanni – thoda sanni – theera sanni.

2 hrs.

- 16 Akkara Noi  
Definition, Etiology, Signs & symptoms and Treatment of the followings;  
  
Karuththa akkaram – sivantha akkaram – vellai akkaram – ullakkaram – eeral akkaram – vaai akkaram – akkarasuram – akkarasurasanni – akkarakiranthi veppu – sooli – neeli – sothi – kapali – kumari – kundi – veeli – 3 hrs.
17. Intestinal worms (Kudat puzhukkal)  
  
Siru puzhu – masarippuzhu – sandaippuzhu – thanappuzhu – keerippuzhu – nagappuzhu – thiraippuzhu 3 hrs.
18. Anaemia (Pandu Noi)  
  
Definition – types – etiology – signs & symptoms – treatment 3 hrs.
- 19 Sobai (Oothal Noi)  
Valioothal–azhaloothal 2 hrs.
20. Jaundice (Kamalai)  
Definition, Etiology, Signs & symptoms and Treatment of the followings;  
  
Oothukamalai – mansatkamalai – varatkamalai 3 hrs.
21. Convulsions (Valippu Noi)  
Definition, Etiology, Signs & symptoms and Treatment of the followings;  
  
Mantha valippu – kakkai valippu – allu valippu – puraesivu valippu – soorai valippu – kuranku vali – karadi vali 3 hrs.
22. Skin disease  
Scabies – padar thamarai etc. 3 hrs.
23. Diseases of the respiratory system  
Definition, Etiology, Signs & symptoms and Treatment of the  
Erumal – kasam etc. 3 hrs.
24. Infectious diseases (ottuvarotty diseases)  
Thondai karappan – kakkuvan erumal – virana sanni (thanurvathasanni) – vaisoori(Ammai noi) – elampillai vatham etc. 3 hrs.
25. Mental health of children  
Mental retardation – infantile hemiplegia - brain fever – juvenile arthritis 3 hrs
- 26 Miscellaneous diseases  
Urinary tract infection – pneumonia – meningitis – brain fever – congenital heart diseases etc. 4 hrs.

## **Practical**

1. Clinical training in diagnosis and treatment of common Kuzhanthai Noikal.
2. Training in method of examination of each system.
3. Each student should be submitted 20 case sheets.
4. Training in advice about management of children. Each student should attend five medical camps.
5. Each student should prepare 20 Siddha Paediatric drugs and submit the practical record book during the Viva examination.

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assesment 1.1 Case Sheets (20) 1.2 Prepared Medicine(20)	05% 05 %		
2. End course Assesment 2.1 Essay 2.2 Practical - (Clinical)	40 % 40 %	5 structured questions – 3 hrs One long case & One short case	40 % 40 %
2.3 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **TEXT BOOKS**

1. Pararajasegaram Balaroga Nidhanam.
2. Balavagadam.
3. Essential Paediatrics by O.P.Ghai.

### **Annexture D – 3 - Siroroga Maruththuvam (E.N.T & Eye)**

### **FOURTH BSMS**

### **OBJECTIVES**

1. Providing knowledge in diagnosing the diseases arising from the organs above the Neck.
2. Providing knowledge in Siddha drugs to treat the common diseases arising from the organs above the Neck.

3. Provide knowledge and skill to handling the Instruments to diagnose the diseases arising from the organs above the Neck.

### **Number of hours spent in teaching**

Lectures	-	75 Hour
Tutorials	-	15 Hours
Practical (Clinicals)	-	60 Hours

### **Course Contents**

1. Eye
  - 1.1 Structure of the Eye
  - 1.2 Causes of Eye diseases
  - 1.3 Detail study of 96 Eye diseases
  - 1.4 Preventive aspect of Eye diseases
  - 1.5 Achiothana anjanum, Thatpanapudapaka vithi 10 hrs
2. 2.1. Causes, types, signs and symptoms and treatment of the ear diseases.(Karna Noikal) 12 hrs
  - 2.2. Otitis Externa, Otitis media, labyrinthitis, Wax, injuries of the Tympanic membrane, deafness, vertigo. 3 hrs
3. 3.1 Causes, types, signs and symptoms and treatment of the nasi noikal (nasal diseases). 13 hrs
  - 3.2. Rhinitis, Nasal allergy, Polyposis, Epistaxis, Sinusitis 3 hrs
4. 4.1 Causes, types, signs and symptoms and treatment of the vai noikal (oral diseases) 3 hrs
  - 4.2 Stomatitis 1½ hrs
5. Thantha Noikal (Dental diseases)  
Causes, types, signs and symptoms and treatment. 3 hrs
6. Eru Noikal(Thantha moolam)  
Causes, types, signs and symptoms and treatment . 3 hrs
7. Nakku noikal (Tongue diseases)  
Types, signs and symptoms and treatment 3 hrs
8. Uthaddu Noikal  
Types, signs and symptoms and treatment 3 hrs
9. Thondai noikal (Throat diseases)
  - 9.1 Types, signs and symptoms and treatment 6 hrs
  - 9.2 Pharyngitis, laryngitis, Tonsillitis 2 ½ hrs

- |   |       |
|---|-------|
| 10. Sirasu noikal<br>Causes, types, signs and symptoms and treatment.                 | 5hrs  |
| 11. Kapala noikal<br>Causes, types, signs and symptoms and treatment.                 | 3 hrs |
| 12. Amutha noikal (Brain diseases)<br>Causes, types, signs and symptoms and treatment | 2 hrs |

### **EVALUATION**

Type of Examination	Distribution of Marks	Details of evaluation (No. of hrs. No. of questions).	Qualifying pass marks
1. In course Assessement			
1.1 Case sheet - 05	05 %		
1.2 Research Project	05 %		
2. End of course			
2.1 Essay	80 %	5 structured questions – 3 hrs	40 %
2.2 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text books**

01. Pararajasegaram – Siroroga Chikitsai – I.Ponnaiah
02. Siththar arvai maruththuvam – Uththmarayan
03. Sarabenthira vaithiya muraikal – Siro roga chikitchi
04. Anupava poga deva ragasium - Seetharaam Pirasad

### **Annexture D – 4 - Samooga Nala Maruthuvam – Community Health Medicine**

### **FOURTH BSMS**

### **OBJECTIVES**

01. Obtain knowledg in method of maintaining the Healthy life.

02. Provide knowledge in identify the problems in the community.
03. Provide knowledge in identify the basic factors of the community problems.
04. Obtain knowledge in methods of the maintaining the health of mother, child and elders.
05. Training in Yoga and Meditation.

### **Number of hours spent in teaching**

Lectures - 90 hours  
 Tutorial - 20 hours  
 Practical - 120 hours

### **Course Contents**

01. Aarogyam  
 Definition of Aarogyam, Influencing factors, Quality of life.
02. Role of food in health.
03. Thinasariyai – Day routine.
04. Ruthusariyai  
 Paruva Kaalangal (seasonal variations) - Dietetics and regimen for different seasons – Seasonal diseases.
05. Natural urges  
 Diseases due to suppression of natural urges.
06. Rejuvenation therapy
07. Importance of air in maintains health
08. Importance of Water in maintains health  
 Types of water – Purification - Water borne diseases - Water therapy
09. Yoga  
 Importance of Yoga - Methods of Yoga therapy – Methods of Yaga which is applied in disesease condition.
10. Pranayama
11. Dhyana – Meditation
12. Health services in Sri Lanka
13. Knowledge in population and vital statistics

Birth rate – Mortality rate – Morbidity rate

14. Primary, secondary & tertiary prevention
15. Communicable diseases and its prevention
16. Non communicable diseases and their Prevention
17. Registration of Birth and Death
18. Basic knowledge in research
19. Maternal & Child care
20. Immunization
21. Family planning methods
22. Planning of Housing and urbanization
23. Health education

## **Practical**

1. Demonstration of yoga
2. Demonstation of Pranayama
3. Demonstration of Meditation
4. Community studies  
Clerkships
5. Every student must submit a field study project  
(Community based problems)

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assesement 1.1 Tutorial based	05%	Two tutorial based	

1.2 Research Project	05 %	examination each of half an hour duration	
2. End course Assessment			
2.1 Essay	80 %	5 structured questions -3hrs	40 %
2.2 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text books**

1. Siddha Maruththuva Sirrappu - Dr.R.Thiyagarajan L.I.M;
2. Noi Illa Neri - Dr.K.Thurairasan H.B.I.M;
3. Siddha Maruththuvaanga Surrakkam.
4. Park's Text book of Preventive medicine & Sociology.

## **Annexure D - 5 Paramparai Maruthuvam (Traditional Medicine)**

### **THIRD BSMS**

### **OBJECTIVES**

1. Provide knowledge and skills in the method of traditional diagnosis treatment and preparation of traditional medicine.



2. Obtain knowledge in the simple remedies of traditional medicine.
3. Understand and adopt the traditional methods of Pathyam and Abathyam.

### **Number of hours of teaching**

Lecture - 45 hrs  
 Practical - 60 hrs

### **Course Contents**

1. Nadi sasthanam
2. Diagnosis, treatment, Pathyam and Apathyam in Skin diseases.
3. Diagnosis, treatment, Pathyam and Apathyam in Murivu Nerivu.
4. Visha Vythiyam
5. Manasiga rogam  
 Chikitsai Muraigal - Nool Katuthal - Chanting of Manthras - Thayam Katuthal –  
 Maruthiddu - Various other traditional Psychiatric
6. Traditional treatment of Kulanthai Perinmai (Infertility)
7. Medical Astrology
  - 7.1. Planetary influence and Astrology in diagnosis and prognosis of disease.
  - 7.2. Treatment, diet and regiment based on Astrology.
8. Traditional management of specific diseases.
  - 8.1. Senkamari (Jaundice)
  - 8.2. Moola Rogam (Piles)
  - 8.3. Kann Noikal (Eye diseases)
  - 8.4. Vatha Rogam
  - 8.5. Thoivu Noi (Asthma)

### **Clinical Assignment**

Each studentr should submit of projects in any one of the above said topics under the guidance and supervision of the relavant traditional Physician. Project should contain 20 – 50 pages. It should be submitted at the commencement of the Third term.

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation e.g. No. of hrs. No. of questions etc.</b>	<b>Qualifying pass marks</b>
1. In course Assessement			

1.1 Project	10 %		
2. End course Assessment			
2.1 Essay	80 %	5 structured questions – 3 hrs	40 %
2.2 Viva	10 %	10 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Annexture E: Objectives, Syllabi and Method of Evaluation of Final BSMS Course.**

### **Annexture E – 1 - Noinadal Chikitsai - Part - II**

#### **FINAL BSMS**

Number of hours spent in teaching

Lectures	-	90 Hours
Tutorials	-	30 Hours
Clinical	-	180 Hours

## Course Contents

1. Swarapetham – cough – Irippu – Ellaippu – Ulaimanthai 20 hrs
2. Thamaraga Noi (Heart diseases) – Kuruthialal noi – Eraththakkothippu (Hypertension) – Velluppu Noi (Aneamia) – Oothal noi (Oedema) - Methorogam 25 hrs
3. Siruneer Noikal – Neerini perukkal Noikal - Neerini arukkal Noikal – Mathumegam (Diabetis mellitus) 15 hrs
4. Kushtam – 18 types – Kaalaanchagapadai – Karappan – Padar thaamarai 15 hrs
5. Ammai Noi
6. Vallippu Noi – 21 types (Convulsion)
7. Moorchsai Noi
8. Verri Noi
10. Unmatham 15 hrs

Modern concept of diseases will be taught in order to diagnosis the diseases.

## Training in the Teaching Hospital

6. Practical training in examination of the indoor patients.
7. Training to diagnosis of diseases.
8. Skills in management of patients.
9. Each student should be submitted 25 case sheets.
10. Attending the Medical camps and to submit reports.

## EVALUATION

Type of Examination	Distribution of Marks	Details of evaluation (No. of hrs. No. of questions)	Qualifying pass marks
1. In course assessment			

1.1. Case sheets	05%		
1.2. Case examination and viva	05%		
2. End Course assessment			
2.1. Essay	40 %	5 questions – 3 hrs	40 %
2.2. Clinical	40 %	Long case - 1 hour Short case 4 -1hour.	40 %
2.3. Viva	10 %	10min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text Books**

1. Siddha maruththuva Noinadal, Noimuthal nadal Part I & II - Dr. M. Shanmugavel
2. Siddha Maruththuvam - K N. Kuppusamy muthaliyar
3. Yugi vaiththiya sinthamany
4. Pararajasegaram
5. Segarajasegaram

### **Annexture E – 2 - Aruvai Maruthuvam (Surgery )**

#### **FINAL BSMS**

#### **OBJECTIVES**

1. Understand the common surgical conditions.

2. Obtain knowledge to assess the surgical conditions and refer to appropriate surgical institution.

### **Number of hours spent in teaching**

Lectures	- 75 hours.
Tutorials	- 15 hours.
Practicals	-120 hours.

### **Course Contents**

1. Introduction of surgery.  
Origin and development of Aruvai Maruthuvam, Aruvai Maruthuvam in ancient days, Achievements of Dhenvanthiri, Sustiruthar and Therayar in Surgery.
2. Study of Yanthirangal and Anuyanthirangal.
3. Study of Sasthirangal and Anusasthirangal.
4. First Aid
  - 4.1 Definition
  - 4.2 Methods of First aid
  - 4.3 First Aid in following conditions.  
Haemorrhage, Drowning, Coma, Fracture, Electric shock, Asphyxia, Burns, Snake bite, Insect bite
  - 4.4 Panthanam
5. Rakthamochchana Vithy  
Leach application, Kuruthy velipaduthal
6. Raththasthambana vithy
7. The 3 stages of Surgery  
Poorva karmam (Pre operative care), Pirathana karmam (Operative care), Uthara karmam (Post operative management)
8. Viraja vingnanam  
Virana sothai – Visarpam – Vithirathy – kaddy – Viranagal – Burns
  - 8.1 Inflammation – Wounds – Abscess – Pilavai (Carbuncle) – gangrene -  
Ulcers of the leg – Tetanus – Shock
  - 8.2 Head Injuries
9. Paknum (Fracture)  
Santhy paknam – Kanda paknam – Suluku
10. Sarakkini karma vithy
11. Vithai noi – Viruthy (scrotal swelling)
12. Pounthiram (Fistula)

13. Kidney  
Haematuria – Renal stone
14. Carcinoma of the Gastro intestinal system.
15. Breast lump
16. Rectal Haemorrhage
17. Signs & symptoms of Acute Abdominal conditions and Diagnosis  
Acute Appendicitis – Acute Cholecystitis -Acute Pancreatitis - Gall stone -  
Intestinal obstruction – Peritonitis – Diverticulitis - Acute Salpingitis -  
Ruptured Spleen - Perforated peptic ulcer.
18. Hernia
- 19 Neck swelling
20. Surgical aspect of skin conditions

## **Practical**

1. Demonstration of method of Panthanam
2. Demonstration of method of First Aid
3. Demonstration of Fracture and Renal stone through X- Ray
4. Demonstration of minor surgery
5. Demonstration in suturing

## **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessement 1.1 Case Sheet (05)	05%		

1.2 Essay / Viva	05 %		
2. End of course			
2.1 Essay	80 %	5 structured questions – 3 hrs	40 %
2.3 Viva	10 %	12 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

## **Text books**

1. Baily and love's short Text book of Surgery.
1. Text book of Surgery – David A.Mac Farlant, Lewis P.Thomas.
2. Scott, An aid to Clinical Surgery.
3. Diseases of the Nose, Throat and Ear – I.Simson Hall, Bernard H.Colman.
4. Lecture notes on diseases of the Ear, Nose and Throat.
5. Text book of Ear, Nose and Throat

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## **Annexture E – 3 - Mahalir Maruthuvam (Gynaecology)**

### **FINAL BSMS**

### **OBJECTIVES**

1. Understand and identify the Mahalir Noikal
2. Gain knowledge to carry out the general examinations of Mahali Maruththuva patients.

3. Obtain knowledge to advise the patients, management and treatment.
4. Obtain knowledge to refer the cases to relevant institutions if required.

### **Number of hours spent in teaching**

Lectures	–	60 hrs.
Tutorials	–	15 hrs.
Clinical	–	90hrs.

### **Course Contents**

1. Introduction – different periods of women – pethai – pethumbai – mankai – madanthai – arivai – therivai – perilampen – moothatti – kizhavi - women diseases — diagnosis – treatment
2. Menstruation (Pooppu) - intermenstrual bleeding – causes – signs & symptoms – treatment
3. Amenorrhoea (Soothaka thadai) – causes – types – signs & symptoms – diagnosis – treatment
4. Menopause (Soothakamudivu)
5. Dysmenorrhoea (Kerppavayu) - causes – types – signs & symptoms – diagnosis – treatment
6. Menorrhagia (Perumpaadu) - causes – types – signs & symptoms diagnosis – treatment
7. Leucorrhoea (Vellai saithal)
8. Vaginal discharge - causes – signs & symptoms – diagnosis – treatment
9. Sterility (Malattu rogankal) – causes – types – signs & symptoms – diagnosis – treatment
10. Itching of the vulva (Akal namai) - causes – signs & symptoms – diagnosis – treatment
11. Back ache (Muthukuvali) - causes – signs & symptoms – diagnosis – treatment
12. Incontinence of urine (Siruneer adakklaamai) - causes – signs & symptoms – diagnosis – treatment
13. Inflammation of the genital organs (Pirappuruppu thabitham) – akal thabitham – yoni thabitham - causes – signs & symptoms – diagnosis – treatment
14. Diseases of the vagina (Yoni rokankal) - causes – types – signs & symptoms – diagnosis – treatment



15. Tumours of the genital organs – vallai katti – kendai katti – thasainaar kattikal - causes – types – signs & symptoms – diagnosis – treatment
16. Uterine prolapse – fistula etc.
17. Breast cancer – cancer of the uterus
18. Family planning
19. Sexual transmitted diseases – vettai – vellai – mehavettai – paranki noi – 21 types of meha noikal

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course Assessment 1.1 Case sheet (20)	10%	.	
2. End course Assessment			
2.1 Essay	40 %	5 structured questions – 3 hrs	40 %
2.2 Clinical	40 %	One long case & one short case	40 %
2.3 Viva	10 %	12 min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text Books**

1. Pararajasekaram , Ketparoga nidhanam
2. Sarabenthira vaithiya muraigal - Ketparoga nidhanam
3. Mahalir Maruthuvam
4. Text Book of Gynaecology - D.C.Dutta.

### **Annexture E – 4 Mahappettiyal (Obstetrics)**

#### **FINAL BSMS**

#### **OBJECTIVES**

1. Identify the clinical signs & diagnose pregnancy.
2. Explain the anatomical and physiological changes of pregnancy.
3. Educate the pregnant mother on the methods she should adopt to have a safe pregnancy and labour.

4. Detect the disorders of pregnancy and refer the patient to the General Hospital.
5. Conduct normal labour if necessary.
6. Assess the condition of the new born baby and take action accordingly.

### **Number of hours spent in teaching**

Lectures – 75 hrs.

Tutorials – 15 hrs.

Clinical – 120hrs

### **Course Contents**

1. Introduction – pregnancy – female pelvis – female genital organs
2. Development of ovum, embryo & foetus – formation of placenta – types of placenta – umbilical cord – amniotic fluid – foetal head – presentation - lie – attitude – position etc.
3. Signs, symptoms and diagnosis of pregnancy – karppa naadi – physiological changes during pregnancy.
4. Ante Natal Care – Aims – history taking – examination – advices
5. Minor disorders of pregnancy
6. Labour
7. Post Natal period
8. Care of new born baby
9. Condition associated with pregnancy and complications of pregnancy – bleeding during pregnancy(Karppa perumpadu) – suronitha kerppa vayu – kerppa soolai – hydatidiform mole(nithampa soolai) – kerppa suram – kerppa girumi – kerppa vitpuruthi – kerppa punarchchi – kerppa vanjanai – kerppa maruththeedu – polyhyramnios (sool mahotharam) – karppa neeramai – nithampa neeramai – PET & eclampsia (kuthirai valippu, mantha valippu, athi mantha valippu) – ectopic pregnancy – abortion – hyperemesis gravidarum - diabetes mellitus (mathumeham) – hypertension (raththakkothippu) – karppa soolam – kaya suvatham – karum kiranthi
10. Apana vayu – soosika vayu – abnormal presentations
11. Intra uterine death (karuppai akamariththal)

### **Practical**

1. Attending the Antenatal clinic and Maternity ward.
2. Each student should be submitted at least 20 case taking records

### **EVALUATION**

<b>Type of Examination</b>	<b>Distribution of Marks</b>	<b>Details of evaluation (No. of hrs. No. of questions)</b>	<b>Qualifying pass marks</b>
1. In course assessment			
1.1 History taking record	10 %		
2. End course Assessment			
2.1 Essay	40 %	5 structured Questions – 3 hrs	40 %
2.2 Clinical	40 %	Long case – 1hour	40 %
2.3 Viva	10 %	12min / student	40 %
3. Over all pass Marks			50 %
4. Distinction marks			75 %

### **Text Books**

1. Pararajasekaram – Ketparoga nidhanam
2. Pirasava vaithiyam – A.Subramaniapillai
3. Sarapenthira vaithiya muraigal Ketparoga nidhanam
4. Obstetrics – By Ten Teachers