CERTIFICATE PROGRAMME – ENERGY AUDIT IN BUILDING SECTOR

Detailed Syllabus, Curriculum and Credits

SYLLABUS

GENERAL CONTENT

Energy Scenario - basics of energy conversion- Conventional and Non conventional energy sources – energy use patterns - Energy applications in daily life. **Energy conservation** – Energy efficiency – Energy tariffs- Key feature of Energy conservation act 2001- Energy efficiency labelling - key features of energy conservation building code – GRIHA rating – Green Building Certification

SKILL CONTENT

Instrumentation in Energy audit – physics of measurement techniques and functions- instrument calibrations – errors in measurement.

Energy audit – basic steps – methods and importance, Interpretation of energy audit reports. Case study: Energy Audit of a buildings. Case study discussions from other energy intensive sectors

Mock audit

TEXT BOOKS AND REFERENCES :

1. Guide to Energy Management, B. L Capehart ,1994.
2. https://beeindia.gov.in/news-events/energy-conservation-building-code-rules-2018
3. Hand book of Energy Audit by Sonal Desai, Mc Grawhill Education , 2015.
4. Hand book of Energy audit by Albert Thumann, 9th edition.

CREDIT DISTRIBUTION (one lecture hour (1 L) = 1 hour ; 1 credit = 12 L)

THEORY: Courses, Topics and Credit

Course	Unit	Topic	Hours	Credit	Contact classes in hours
GENERAL CONTENT					
Course 1 (EABS01) **ENERGY**	I	• Basics of energy conversion	4 L		16
	2	• Conventional and Non-conventional energy sources	4 L		
	3	• Energy use patterns	4 L		
	4	• Energy applications in daily life	4 L		
		• Tutorial	4 L		
		• Self Study (Homework/E-resources)	8 (0.5L)	**2**	
		TOTAL	**24 L**		
Course 2 (EABS02) **ENERGY CONSERVATION**	1	• Energy efficiency	3 L		22
	2	• Energy tariffs	3 L		
	3	• Key feature of Energy conservation act 2001	3 L		
	4	• Energy efficiency labelling	3 L		
	5	• Key features of energy conservation building code GRIHA rating	5L		
	6	• Green Building Certification	5 L		
		• Tutorial	9 L		
		• Self Study (Homework/E-resources)	8 (0.5L)	**3**	
		TOTAL	**36 L**		
Course 3 (EABS03) **TECHNICAL COMMUNICATION**	1	• Technical Communication – I	3 L		
	2	• Technical Communication – II	3 L		
		• Tutorial	4L		
		• Self Study	4(0.5L)		

		TOTAL	**12 L**	**1**	
Course 4 **ICT Skills** (EABS04)	1	• ICT Skills – I	3 L		
	2	• ICT Skills – II	3 L		
		• Tutorial	6 L		
		• Self Study	4 (0.5L)	**1**	
		TOTAL	**12 L**		
Course 5 **INSTRUMENTATION IN ENERGY AUDIT** (EABS05)	1	• Physics of measurement techniquesand functions	4 L		**12**
	2	• Instrument calibrations	4 L		
	3	• Errors in measurement	4 L		
		• Tutorial	10 L		
		• Self Study	4 (0.5L)	**2**	
		Total	**24 L**		
Course 6 (EABS06) **PROFESSIONAL ETHICS**		PROFESSIONAL ETHICS	4 L		
		Tutorial	3 L		
		Self Study	4 (0.5L)		
		Total	**9L**		
Course 7 (EABS07) **ENVIRONMENTAL STUDIES**		VALUE EDUCATION	2 L		
		Self Study	2 (0.5L)	**1**	
		Total	**3L**		
		Total Credit for EVS and Value Education: 9+3 = 12 L	**12 L**		
Course 8 **ENERGY AUDIT**	1	• Energy Audit– basic steps	4 L	**2**	**20**
	2	• Methods and importance	2 L		
	3	• Interpretation of energy audit reports.	5 L		
	4	• Case study: Energy Audit of a	6 L		

		buildings.			
	5	• Case study discussions from other energy intensive sectors	3 L		
		• Tutorial	3 L		
		• Self Study	2 (0.5L)	**2**	
		Total	**24 L**		
Grand Total for Theory = 144 Hrs = 12 Credits					

Skill Content: Practical Session, Details and Credit (I hour = 2 L)

Paper	Details	Lecture Hours (L)	Credits
Theory class of practicals		12 L = 24 hours	**2**
Practicals		4L	
		4L	
		4L	
		4L	
		4L	
		4L	
TOTAL		24 L = 48 hours	**4**
Field Visits		4L	
		4L	
		4L	
		4L	
		4L	
		4L	

	TOTAL	24 L= 48 hours	**4**
Mock Audits		4L	
		4L	
		4L	
		4L	
		4L	
		4L	
	TOTAL	24 L = 48 hours	**4**
Internships		4L	
		4L	
		4L	
		4L	
		4L	
		4L	
	TOTAL	24 L = 48 hours	**4**
Grand Total hours for Practical = 108 L = 108 x 2 hours = 216 hours = (216/12) credits = 18 credits			**18**
Grand Total credit for whole programme = 12 + 18			**30**

Total Credits: 30

Contact hours by Mithradham: 70

COURSE IN VERMICOMPOSTING CERTIFICATE REPORT

Approved by UGC and complying with NSQF Framework (Level 4)

Conducted by Dept. of Zoology, Sree Sankara College, Kalady

Duration of the Course: 6 months

Date of Commencement: 15/12/2020

Name of the Course Co-ordinator Dr. Mini K D

Earthworms are acknowledged as the friends of farmers, are the intestines of earth. Using worms to convert biowaste into nutrient-rich fertilizer is simple, inexpensive, energy efficient, and a great way to teach students to become life-long recyclers. As a process for handling organic residuals, it represents an alternative approach in waste management. In this sense, vermicomposting is compatible with sound environmental principles that value conservation of resources and sustainable practices. The certificate course in Vermicomposting proposed by Dept. of Zoology was approved by UGC, complying with NSQF (Level 4).

Aim & Objectives of the Course

- Students will be able to compost even in a limited space
- To acquire knowledge of composting
- To attain employability
- To generate employments
- To start organic farming,
- To maintain pollution free environment
- To get the knowledge of biodiversity of local earthworms
- To inculcate an attitude rooted in environment protection & conservation of resources

Advantages & the Prospects of the Course

- Students can construct their own compost farm & generate income by supplying earthworms, vermiwash, & vermicompost.
- Students, by using vermicompost in their field can increase the crop yield.

- Students residing in cities can produce vermicompost in small scale for garden/household plants
- Promotion of vermicompost technology will help to prevent environmental pollution.
- It will lead towards organic farming & healthy food.
- Recycling of garbage has become necessary in order to sustain a healthy environment.

Dept. of Zoology, Sree Sankara College Kalady conducted the course for a duration of six months. A total of 28 applicants enrolled for the course from diverse fields. Official start of the course was on 15th December 2020 by Sri. Kabeer B Haroon, the Ex. M D of Clean Kerala and the founder Director of Kudumbasree. The entire syllabus of the course was covered by the faculty of Zoology and resource persons from the field of vermicomposting technology. Students were given hands on training in vermicomposting. All of them started vermicomposting units of their own at home. The harvested compost was used in their homestead gardens and organic farming.

Internal and external evaluation processes were carried out both in theory and practical. All the students performed well in the exams as well as the project presentation. The course was completed in June and the certificates were distributed in the convocation programme by the Principal.

****

Details of Students Enrolled

No. of Students	28
No. of Males	6
No. of Females	22
General	11
OBC	17
No. of Students enrolled	28
No. of Students passed	27

No. of Drop-outs 1

No. of students placed

27 students successfully completed the course, already maintaining vermicomposting units at their home. Till now they finished three compost harvests. Organic farming also started running in many houses. Their acquired skill of managing and maintaining vermicomposting units . The Kudumbasree members of Kalady Panchayath were given a training session on Vermicomposting by the Coordinator and the students.

Everything about Vermicompost Tutorial session by the Coordinator

Link :

https://www.youtube.com/watch?v=FjvxkWBI80Q&authuser=0

POSTGRADUATE DEPARTMENT OF COMMERCE

COURSE CURRICULUM

PROGRAMME NAME	**CERTIFICATE COURSE ON STOCK MARKET TRADING**
DURATION	**6 MONTHS**

CREDITS	**30**
PROGRAMME OUTCOME	On completion of the programme, participants will be able to: 1. Prepare for employment and acquire self-employment skills. **2.** Identify opportunities in Capital Markets **3.** Have complete knowledge about financial market, how to trade in stock and commodity market **4.** Trade online in stock market. **5.** Equip with numerical and analytical skills

Sl.No	Module	Key Learning Outcomes	Equipment Required
1	**Introduction to the Course** Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00	• List expectations from the program • Outline the objectives of the program	Laptop, white board, marker, projector
2	**Capital market** Theory Duration (hh:mm) 60:00 Practical Duration (hh:mm) 30:00	• Acquire basic knowledge of capital market • Recognize the Primary Market & secondary Market • Identify the Major Market Participants • Study about the Major exchanges and indices • Understand Legal Framework and regulations • Discuss the Trading and Trading Membership • Understand Clearing and Settlement Process • Comprehend the Fundamental Valuation concepts • Understand the various trading software (ODIN, NEAT, NOW) • Acquire Practical training of market operations	Laptop, white board, Marker, Computer Lab, Projectors, Network Connectivity

3	**Derivatives Market** Duration (hh:mm) 20:00 Practical Duration (hh:mm) 10:00	• Acquire knowledge on the basics to Derivatives • Understand the different types of derivative contracts • Understanding of future, forward, option and SWAP • Analyse Future contracts, Mechanism & pricing of Forward contracts • Understanding of Options and it's (call & put) • Practical knowledge on Trading, Clearing and Settlement, Risk Management in Derivatives • Understand the Regulatory Frame Work • Accounting of Derivatives	Laptop, white board, Marker, Computer Lab, Projectors, Network Connectivity, Online Test, Mock Trading Sessions
4	**Commodity Market** Theory Duration (hh:mm) 20:00 Practical Duration (hh:mm) 10:00	• Understanding Commodity Market • Live Trading in Commodities- MCX and NCDEX • Discuss the difference between International commodity and Domestic Commodity	Laptop, white board, Marker, Computer Lab, Projectors, Network Connectivity, Mock Tests, Online Quiz
5	**Currency Market** Theory Duration (hh:mm) 20:00 Practical Duration (hh:mm) 20:00	• Illustrate the Currency Derivative and its History • Understand Forward, Future and Options of currency derivative • Analyse the process of Trading, clearing, settlement & Risk Management of currency futures • Identify the Different Strategy used for Currency Derivative Trading	Laptop, white board, Marker, Computer Lab, Projectors, Network Connectivity, Online Quiz, Practical trading online Workshop

		• Practice online trading	
6	**Live Trading Sessions** Theory Duration (hh:mm) 20:00 Practical Duration (hh:mm) 150:00	• Discuss and understand live trading and methodology	Laptop, white board, Marker, Computer Lab, Projectors, Network Connectivity
	Total Duration Theory Duration 144:00 Practical Duration 226:00		Laptop, white board, Marker, Computer Lab, Projectors

Total Course Duration: 370 Hours

iv. Skeleton Systems

7. Classification of nutrients
   i. carbohydrate
   ii. protein
   iii. fat
   iv. minerals
   v. vitamins
8. Balanced diet,
9. Malnutrition,
10. Dietary guidelines for healthy eating,
11. Hypo kinetic Diseases and their common causes,
12. Prevention of Hypokinetic diseases and their management
    i. Obesity
    ii. Diabetics
    iii. Hypertension
    iv. Osteoporosis
13. BMI.

(20 Hours)

Module 3

1. Human body type
   i. Ectomorph,
   ii. Endomorph
   iii. Mesomorph
2. Importance of correct posture
3. Postural deformities
   vi. Kyphasis,
   vii. Lordosis,
   viii. Scoliosis,
   ix. Knock knee,
   x. Bow legs,
   xi. Flat foot
   xii. Text neck
4. Causes and corrective exercises
5. First Aid
6. Meaning definition and importance,

Physical Health & Life Skills Education

Course Code: - PE5OPT01

Syllabus for Open course in Physical Education

Module 1

1. Introduction to Physical Education &Physical Fitness
2. Concept of Physical Education
3. Meaning, Definition
4. Aims and Objective of Physical Education
5. Need and Importance of Physical Education
6. Physical Fitness Components
7. Types of Fitness
   i. Health related
   ii. Skill/Performance related,
8. Activities for the development of physical fitness (Aerobic and Anaerobic).

(20 Hours)

Module 2

1. Health & Nutrition
2. Definition and meaning of Health
3. Dimensions of Health
4. Factors affecting Health
5. Major systems in human body
   i. Circulatory,
   ii. Respiratory,
   iii. Muscular and
   iv. Skeleton Systems,
6. Effects of Exercise on Body Systems
   i. Circulatory,
   ii. Respiratory,
   iii. Muscular

7. Principles of First Aid ,
8. Common injuries emergencies and their management
    i. Sprain,
    ii. Strain,
    iii. Fracture,
    iv. Dislocation,
    v. Wound,
    vi. Cuts,
    vii. Drowning,
    viii. CPR
9. Meaning, definition of Yoga.
10. Need and importance of Yoga in the modern society,
11. Benefits and effects of Asanas,
12. Surya Namaskar.

(16 hours)

Module 4

1. Introduction to Sports& Games, Events and Awards
    i. International-
    ii. Olympic Games
    iii. winter, summer, Paralympics)
    iv. Asian Games,
    v. Common Wealth Games,
    vi. National Games,
    vii. Santhosh Trophy,
    viii. Ranji Trophy.
    ix. Sports Awards-
    x. Rajiv Gandhi KhelRethna Award,
    xi. Dronacharya Award ,
    xii. Arjuna Award
    xiii. G.V Raja Award.
2. Tournaments
    i. Type of Tournament
    ii. Knock Out
    iii. League

1	180021076153	KARISHMA C B
2	180021076118	AMAL BABU
3	180021044236	SHALAT JACOB
4	180021076164	ROBIN SHAJY
5	180021076132	BASIL ELDHOSE
6	180021044235	SHABNA YOUSAF
7	180021076166	SANDRA SUDHAKARAN
8	180021044210	AKSHAY G
9	180021076112	ADITHYAN M
10	180021044238	SREEHARI A P
11	180021076157	NIGIL SHANLY
12	180021076174	YADHUKRISHNAN P G
13	180021024083	VIJAYALAKSHMI DALI
14	180021024064	HARITHA P S
15	180021024060	BINEKHA BABU
16	180021024065	KARTHIKA R
17	180021024071	MEENU MOHANAN
18	180021076151	JOSEB DAVIS
19	180021024073	NAVEENA R NAIR
20	180021076115	AKASH MADHU
21	180021076163	ROBIN ROCKEY
22	180021076122	ANAGHA P R
23	180021076146	HARIPRIYA E A
24	180021076126	ARAVIND SHAJI
25	180021009237	VAISHNAVI BABU
26	180021009212	AMRUTHA VASU
27	180021044231	ROHITH SHAJAN
28	180021026984	ARDRA M KUMAR
29	180021027023	SREESHMA VALSAN
30	180021027011	MARIA VARGHESE
31	180021044237	SOORAJ V S

32	18002102407 6	R LAKSHMY
33	18002102405 1	AKHILA ANTONY
34	18002102698 0	ANJALI K S
35	18002104424 0	SULTHANA PAREED
36	18002100922 9	NIVEDITHA VISWANATH
37	18002107871 8	JESNA ANTONY
38	18002103619 4	SREELAKSHMI R
39	18002107873 1	VARSHA SUREDRAN
40	18002107614 3	GOKUL SURESH
41	18002107872 7	SREESHMA SHAJI
42	18002107872 5	SILPA SUKU
43	18002107613 1	BASIL KUNJU
44	18002107613 3	C S KRISHNADAS
45	18002102405 5	AMAL C D
46	18002101179 5	ADARSH MANOJ
47	18002101785 2	RAJEEV

Yoga Instructor Diploma														
Intake					**Passout**					**Placement**				
General	**OBC/ OEC**	**SC**	**ST**	**Total**	**General**	**OBC/ OEC**	**SC**	**ST**	**Total**	**General**	**OBC/ OEC**	**SC**	**ST**	**Total**
23	20	6	-	49	10	14	3	-	27	2	4	-	-	6

Reg.No	Name in Full	Address	Category	Date of Admission	Marks					Date of full fee payment	Remarks
					I Sem Internal	I Sem Main	II Sem Internal	II Sem Main	Consolidated		
DYI2021001	ABIN C R		General	17- 01- 2021	78	265					
DYI2021002	AISWARYA I R		General								
DYI2021003	AISWARYA S	Konikkuzhi(H), Chunanguveli, Erumathala.P.O,Aluva.	SC/ST	17 - 01 -2021	59	162					
DYI2021004	AISWARYA T S		SC/ST								
DYI2021005	AJILKUMAR N S	Naduvil purakkal (H), Cherai.P.O	OBC								
DYI2021006	AKHIL ASHOK	SANRA -53, Sankar Nagar, Kannadikkadu, Maradu.P.O, Ernakulam.	General	17 - 01 - 2021	80	297					
DYI2021007	ANIL V		General								
DYI2021008	ANJANA G		General								
DYI2021009	ANJITHA E S	Erattaplamootil (H), Mattoor, Kalady.P.O	OBC	17 01-2021	81	340					
DYI2021010	APARNA P R	Parankithodath, Nambiapuram, Palluruthy, Ernakulam.	OBC								
DYI2021011	ARAVIND M V	akkattillam, Aim Company, Kadandu .	General								
DYI2021012	ARAVIND VELAYUDHAN		General								
DYI2021013	ATHIRA P R		General								
DYI2021014	BHAGYALAKSHMI K		OBC	17 -01-2021	44	176					
DYI2021015	BINDU VIPIN	Thekkedath (H), MRA 65, Deepam lane, Mamangalam, Palarivattom.	General	17 - 01 -2021	74	261					
DYI2021016	BINI K S	Alunkal (H), Methala.P.O, Perumbavoor, Ernakulam	OBC	17 - 01 -2021	80	303					
DYI2021017	DEVADAS K H		General								
DYI2021018	DILJITH K S		SC/ST	17 01 -2021							
DYI2021019	DRUSYA C S		SC/ST	17 - 01 -2021	63	222					
DYI2021020	GOVIND M N	Manakkattillom, Mariyathuruthu.P.O Thiruvattu,Kottayam	General	17 -01 -2021							
DYI2021021	GREESHMA RATHEESH	Parepparambil (H), Keezhmedu, Thottumukham.P.O, Aluva	SC/ST	17 -01- 2021	80	240					
DYI2021022	HARINDRANATH SOMAN	Karukampilly panikkasseri (H), Thabore.P.O Poothamkutty	OBC	17 - 01 -2021							
DYI2021023	HARISANKAR BHATTATHIRIPAD		General	17 -01 -2021							
DYI2021024	HARISANKAR R	Krishna NIvas, Sree Sankara College Road, Mattur, Kalady	General	17 - 01 - 2021							
DYI2021025	HEMA MOHAN	Vazhappanalil (H), Okkal .P.O Chelammattom, Ernakulam Dst.	General	17 - 01-2021	80	299					
DYI2021026	JAYALAKSHMI V M		OBC								
DYI2021027	JIBIN BABU	Oreethayil(H), Peralam, Kamballur.P.O, Cherupuzha.	General	17 -01 -2021	77	242					
DYI2021028	JIBISA N K	Nedungattukudy (H), Okkal .P.O, Okkal.	OBC	17 - 01 - 2021	78	237					
DYI2021029	JISHNU MANOJ		OBC	17 -01 - 2021	81	259					
DYI2021030	JITHU KRISHNA R	Kalarikkal House, Madakkumpady.P.O, Mala, Trissur	OBC	17-01 - 2021	82	355					
DYI2021031	LAKSHMI VINAYAKUMAR	Kakkattu (H), Elambakappilly.P.O Elambakappilly.	General	17 -01 - 2021	80	330					
DYI2021032	MANJU MANOHARAN	Nadumuri House, P.O.Kombathukadavu, Puthenchira, Trissur..	OBC	17 - 01 - 2021	81	308					
DYI2021033	MOHANAN M N		General	17 - 01 - 2021							
DYI2021034	NAMYALAKSHMI R	SreeSankaran (H), Mattur, Kalady.	General	17 - 01 - 2021	65	243					
DYI2021035	NEERAJA RAJAGOPAL	Parambath (H), Madavoor.P.O Muvattupuzha.	General	17 - 01 - 2021	82	383					
DYI2021036	RAGHUL REGHU		OBC	17 - 01 - 2021	79	299					
DYI2021037	RAGI S	Thoppil (H), Neeleeswaram.P.O, Kalady	OBC	17- 01 - 2021	77	260					
DYI2021038	RAKESH KRISHNAN		General	17 - 01 - 2021							
DYI2021039	RENJITH VIJAYAKUMAR		General	17 - 01 - 2021							
DYI2021040	SADASIVANKUNJI. V. M		General	17 - 01 - 2021							
DYI2021041	SAIKRISHNA LAL	Kizhakkaparthukudi(H), Okkal.P.O, Okkal.	OBC	17 - 01 - 2021							
DYI2021042	SANIKA M B	Manely (H), Okkal.P.O, Thannipuzha Perumattom.	OBC	17 - 01 - 2021	75	292					
DYI2021043	SATHEESAN K R	Kalathil Vettil (H), Kumbalam .P.O Ernakulam.	OEC	17 - 01 - 2021	76	231					
DYI2021044	SETHUNADHU P A	Pazhamayil(H), Manalumkal .P>O, Anikkau, Kottayam.	OBC	17- 01 - 2021	76	263					
DYI2021045	SINDHU K S	Thottathil (H), Kumaranasan lane, Injakkal Temple, Maradu	OEC	17 - 01 - 2021	62	179					
DYI2021046	SUMAL PETER C A	Chakkalakkal (H), Near South Pulluparakkal, Nettur.P.O	OBC	17 - 01 - 2021	0	0					
DYI2021047	SWATHY M S		General	17 - 01 - 2021	78	319					
DYI2021048	T S DEVIKA SEKHARAN		SC/ST	17 - 01 - 2021							
DYI2021049	VRINDHA R		OBC	17 - 01 - 2021	78	291					

SREE SANKARA COLLEGE, KALADY

NAAC Re-Accredited with B++ Grade

Affiliated to Mahatma Gandhi University

Scheme and Syllabus for UGC approved

Certificate Course

in

Water Quality Monitoring Techniques

SCHEME AND SYLLABUS FOR

CERTIFICATE COURSE IN WATER QUALITY MONITORING TECHNIQUES

The University Grants Commission (UGC) has launched a scheme on skills development based higher education as part of college/university education, at the level of Certificate, Diploma, Advanced Diploma, B.Voc., P.G. Diploma, M.Voc. and Research Degree under the NSQF (National Skill Qualifications Framework). This would enable the graduates completing Certificate/Diploma courses to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge. The proposed programme will be a judicious mix of skills, professional education related to concerned vocation and also appropriate content of general education.

Sree Sankara College, Kalady is providing a Certificate course in Water Qualty Monitoring Techniques which blends multiple disciplines including Chemistry, Biology and Environmental studies to give students a well rounded education in Water Quality Monitoring Techniques. With its unique collection of hands-on labs, exercise lessons and activities this program will prepare students for a wide range of careers in rapidly growing Robotics and embedded system industries.

Objectives

This **Certificate program** will be based and operated on a clear scientific design considering all the related issues, thorough relevant background information, planned monitoring objectives, appropriately suitable methods and desired outcomes so as to be beneficial to the enrolled students.

This programme aims to train the students

- to test and analayse physico-chemical and bacteriological parameters of water samples
- to provide theoretical information and practical training on relevant instrumental techniques like Atomic Absorption Spectrometer, UV-Visible spectrometer, Gas Chromatograph -Mass Spectrometer etc. involved in water quality monitoring.
- to monitor the quality of water supplies
- to verify the safety of drinking water

- to give awareness and implement various water treatment techniques helpful to the society
- to maintain safe clean water

ELIGIBILITY FOR ADMISSION

A pass in Plus Two or equivalent examination or an examination recognized as equivalent thereto by this University.

CURRICULUM

The curriculum in each of the semester/years of the programme(s) will be a suitable mix of general education and skill development components. The General Education Component shall have 40% of the total credits and balance 60% credits shall be of Skill Component.

DURATION

The duration of Certificate Course in Water Quality Monitoring Techniques shall be 6 months including the internship.

PROGRAMME STRUCTURE

Certificate course in Water Quality Monitoring Techniques include 67% Skill Development Components (67 % of total Credit) and 33% General Education Component (33% total Credit) as per guidelines of UGC and NSQL.

- Skill Development Components - 60% Weight age
- General Education Component - 40% Weight age

NSQF Level Skill	Skill Component Credits	General Education Credits	Total Credits	Normal Duration	Exit Points / Awards
4	20	10	30	One Semester	Certificate

EXAMINATIONS

Certificate Programme in Water Quality Monitoring Techniques

The evaluation of each paper shall contain two parts:

- Internal or In-Semester Assess External or End-Semester Assessment (ESA)
- The internal to external assessment ratio shall be 1:4.
- Both internal and external marks are to be rounded to the next integer.

All the courses (theory & AOC), grades are given on a 7-point scale based on the total percentage of marks, *(ISA+ESA)* as given below:-

Percentage of Marks	Grade	Grade Point
95 and above	O (Outstanding)	10
90 to below 95	A+ (Excellent)	9
80 to below 90	A (Very Good)	8
70 to below 80	B+ (Good)	7
60 to below 70	B (Above Average)	6
50 to below 60	C (Average)	5
40 to below 50	P (Pass)	4
Below 40	F(Fail)	0

	Ab (Absent)	0

MARKS DISTRIBUTION FOR EXTERNAL AND INTERNAL EVALUATIONS

The external theory examination shall be conducted by the College at the end of the semester. Internal evaluation is to be done by continuous assessment. For all courses total marks of external examination is 80 and total marks of internal evaluation is 20. Marks distribution for external and internal assessments and the components for internal evaluation with their marks are shown below:

For all Theory Courses

a) Marks of external Examination : 80

b) Marks of internal evaluation : 20

Components of Internal Evaluation – Theory	Marks
Attendance	5
Assignment /Seminar/Viva	5
Test paper(s) (1 or 2) (1×10 =10; 2×5 =10)	10

For all AOC Courses total marks for external evaluation is 80 and total marks for internal evaluation is 20.

For all AOC Courses

Marks of external Examination : 60

Marks of internal evaluation : 20

Components of Internal Evaluation – AOC	**Marks**
Attendance	5
Record	5
Skill Test	5
Lab Performance / Punctuality	5
Total	20

*Marks awarded for Record should be related to number of experiments recorded and duly signed by the teacher concerned in charge.

All three components of internal assessments are mandatory.

11.1 PROJECT EVALUATION

a) Marks of external Examination : 80

b) Marks of internal evaluation : 20

Components of Internal Evaluation	Marks

Punctuality	5
Experimentation/Data Collection	5
Skill Acquired	5
Report	5
Total	20

*Marks for dissertation may include study tour report if proposed in the syllabus.

Components of External Evaluation	Marks
Dissertation (External)	50
Viva-Voce (External)	30
Total	80

(Decimals are to be rounded to the next higher whole number)

PATTERN OF QUESTIONS

Questions shall be set to assess knowledge acquired, standard and application of knowledge, application of knowledge in new situations, critical evaluation of knowledge and the ability to synthesize knowledge. The question setter shall ensure that questions covering all skills are set. She/he shall also submit a detailed scheme of evaluation along with the question paper. A question paper shall be a judicious mix of short answer type, short essay type /problem solving type and long essay type questions.

Pattern of questions for External examination – Theory paper

Question Type	Total no. of questions	Number of questions to be answered	Marks of each question	Total marks
Very short answer type	12	10	2	20
Short answer (Not to exceed 60 words)	9	6	5	30
Long essay	4	2	15	30
TOTAL	**25**	**18**		**80**

12.2 Pattern of questions for external examination – AOC

Question Type	Total no. of questions	Number of questions to be answered	Marks of each question	Total marks
Theory Assessment- Short Answer Type	8	5	4	20
Skill Assessment- Practical	1	1	60	60
TOTAL	**9**	**6**		**80**

Mark division for external AOC/ LAB examination

Record	Theory/ Procedure/ Design	Activity/ Neatness	Result	Viva	Total
10	10	20	10	10	60

PROGRAMME STRUCTURE

Sl. No	Course Code	Title	GC/ SC	T/P/ AOC	Total Hours	Credits	Hrs/WEEK
1	WQMGC01	Environmental Studies	GC	T	75	5	5
2	WQMGC02	Water Quality Monitoring Techniques	GC	T	75	5	5
3	WQMSCP01	WQM Practical I	SC	P	60	4	4
4	WQMSCP02	WQM Practical II	SC	P	60	4	4
5	WQMSC03	Advanced Instrumental Techniques in Water Quality Monitoring	SC	AOC	75	5	5
6	WQMSCI01	Internship and Project	SC	AOC		6	I month
7	WQMSCF01	Field Visit	SC	AOC		1	

Job Opportunities after completing this course:

After completing this course, participants will have job opportunities in:

1. **wastewater treatment plants**
2. **water research institutions**
3. **consulting firms as water quality practitioners**
4. **various Government and private sectors dealing with water quality analysis**

This Certificate programme provides

Certificate Programme in Water Quality Monitoring Techniques

1. **Expertise to job opportunities in Water sector in India and abroad**
2. **Aademic and industrial experience in Quality Control and Analysis**
3. **Skill training in reputed laboratories**

PROGRAMME STRUCTURE

Sl. No	Course Code	Title	GC/ SC	T/P/ AOC	Total Hours	Credits	Hrs/WEEK
1	WQMGC01	Environmental Studies	GC	T	60	4	4
2	WQMGC02	Elementary Chemistry	GC	T	60	4	4
3	WQMSCP01	WQM Practical I	SC	P	60	4	4
4	WQMSCP02	WQM Practical II	SC	P	60	4	4
	WQMSC03	Water Quality Monitoring Techniques	SC	T	60	4	4
5	WQMSC04	Water Treatment	SC	T	60	4	4
6	WQMSCI01	Internship and Project	SC	AOC		5	I month
7	WQMSCF01	Field Visit	SC	AOC		1	

WQMGC01 ENVIRONMENTAL STUDIES

Objectives:

To impart awareness on various environmental aspects, with glimpses of contemporary issues . to emphasise the fragility and sensitivity of our environment, in particular the biosphere and to focus the importance of its protection.
To promote environmental awareness and create a brighter future for our next generations help them foster a sense of responsibility

MODULE – I

Multidisciplinary nature of environmental studies

Definition

Scope and importance of environmental studies for sustainable development

Need for public awareness

MODULE – II

Natural resources and its conservation, **Renewable and non-renewable resources**

Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, dams and their effects on forests and tribal people.

Water resources: : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. water quality standards in India; role of state in water resources management

Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity
Role of an individual in conservation of natural resources

MODULE – III

Environmental pollution - – concepts and definition.

Water pollution: Types, effects and sources of water pollution. Pollution of fresh water, ground water and ocean. Thermal pollution. Case study

Soil pollution: Composition of soil - reactions in soil. Wastes and pollutants in soil.

Air pollution: Primary pollutants, hydrocarbons-photochemical smog, particulates, radioactivity, effects of atmospheric pollution - acid rain, ozone layer depletion. Indoor air pollution. Air pollution accidents

Role of an individual in control of pollution

MODULE– IV

Environmental management and social issues: Impact assessment- aim, concepts and methods, Environmental management system

Waste water management: Treatment of waste water, primary, secondary and tertiary treatment. Biological treatment of waste water- aerobic methods, floc and film based processes Activated sludge process, Trickling filter process, Aerobic pond. Anaerobic process- Methanogenesis, Single and double stage reactors. Solid waste management- anaerobic treatment and land filling. Composting.

Solid waste management: anaerobic treatment and land filling. Composting

Environmental laws: Environment protection act, Air and Water (Prevention and control of Pollution) Act

WQMGC02: Elementary Chemistry for Water quality monitoring techniques

Module 1: **Fundamental Concepts in Chemistry**
Modern periodic law – Long form of periodic table. Periodicity in properties: Atomic radii, ionic radii, ionization enthalpy, electron affinity (electron gain enthalpy) and electronegativity (Pauling scale). Atomic mass - Molecular mass - Mole concept – Molar volume - Oxidation and reduction – Oxidation number and valency - Equivalent mass. Methods of expressing concentration: Weight percentage, molality, molarity, normality, mole fraction, ppm and millimoles. percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.

Module 2: Chemical Bonding
Chemical Bonding: Introduction – Type of bonds. Ionic bond, Covalent Bond, Intermolecular forces: Hydrogen Bonding, van der Waal's forces. Dipole-dipole interactions. Hydrogen bonding in H_2O

Module 3: **Acids and Bases**
Concept of Equilibrium: Acids and Bases - Arrhenius, Lowry-Bronsted and Lewis theories. Ionic product of water - pH and pOH, Strengths of acids and bases - K_a and K_b, pK_a and pK_b. Buffer solution. Preparation of buffer solution having a known pH. Solvation, solubility, solubility product, common ion effect and their applications.

Module 4:
Evaluation of Analytical Data

Units, significant digits, rounding, scientific and prefix notation, graphing of data - Precision and accuracy – Types of errors – Ways of expressing precision – Methods to reduce systematic errors.

Module 5: Laboratory Operations: Laboratory safety and first aid. Use of different glassware like pipette, burette, standard measuring flask, distillation apparatus; heating methods, filtration techniques, weighing principle in chemical balance, weighing in electronic balance

WQMSC03- WATER QUALITY MONITORING TECHNIQUES

Objectives

- To define the different parameters that determines the quality of water
- To explain the physico-chemical and bacteriological parameters required to interpret the water quality

Module I

Water sampling and preservation

Sample Collection for Physico-Chemical Parameters., Sampling Methods for Bacteriological Testing, identifying locations and collecting samples for water quality analysis as per the standard protocol

Module II

Drinking water quality parameters and their significance

Water – Quality, Standards and Criteria: Physical, chemical and biological water quality; Water quality guidelines, criteria and standards.

pH, Electrical conductivity, Turbidity, Chloride , Acidity, Alkalinity, Hardness , Total Coliform, Faecal Coliform , E.Coli, Fluoride, Nitrate-N, Iron, Dissolved Oxygen, Biochemical Oxygen Demand, Heavy metals, Pesticides.

Bacteriological analysis of drinking water, Disinfection by chlorination

Module III

Interpretation of results of analysis of water quality monitoring, Indian Standard for Drinking Water as per BIS specifications.

Module IV

Titrimetric analysis - fundamental concepts. Primary and secondary standards, quantitative dilution. Acid base titrations titration curves –pH indicators. Redox titrations – titration curve, redox indicators, Redox titrations – titration curve Complexometric titrations – EDTA titrations - titration curves – metal ion indicators.
Gravimetric analysis: Unit operations in gravimetric analysis - illustrations using iron and barium estimation.

Separation and purification techniques – filtration, crystallization and precipitation – fractional distillation, solvent extraction.

Graphing and Analysis: Using Origin and Microsoft Excel - Importing Data, Data Management and Data Exploration, Graphing, Data Analysis Tools and Custom Reports and Batch Analysis

Module V

INSTRUMENTAL TECHNIQUES IN WATER QUALITY ASSESSMENT

UV-Visible spectrophotometer : Principle and working of spectrophotometer, colorimeter, fluorometer.
FT-IR Spectrometer: Principle, and working of spectrometer
Atomic Absorption Spectrophotometer: Principle, and working of spectrophotometer
Flame photometer: principle and working of ***flame photometers***
Inductively Coupled Plasma (ICP): Principle and applications
Gas Chromatograph: Detectors involved-Flame Ionisation Detector, Electron Capture Detector.
Mass spectrometry: Principle, amd working of Gas Chromatography Mass Spectrometer (GC/MS).

WQMSC04: Water Treatment Techniques

Certificate Programme in Water Quality Monitoring Techniques

Module I

Water treatment technologies overview; Water treatment plants producing drinking water, process water, soft water, RO water and DM water.

Coagulation/Precipitation, Flocculation and Settling: Coagulation-flocculation; Coagulants and flocculating agents; Flash mixing tanks, flocculation tanks, clari-flocculators and settling tanks.

Filtration Systems: Filtration theory , Slow sand filters; Rapid gravity filters;
Pressure filters; and Multigrade roughing filters.

Disinfection: Chlorination; Ozonation; Membrane processes for disinfection.

Other Water Treatment Technologies: Ion-exchange process; Adsorption process; membrane processes (nanofiltration and reverse osmosis); Defluoridation units and household level water purification systems.

Water Harvesting: Rainwater harvesting; catchment harvesting; Harvesting structures

Module II

Waste Water Treatment

Overview of Wastewater Treatment Technologies: Preliminary, primary, secondary and tertiary treatment technologies.

Preliminary Treatment: Screens; Grit removal facilities; Effluent sumps and pumps; and Equalization tanks.

Primary Treatment: Neutralization and precipitation; Primary and secondary sedimentation tanks; Membrane filtration processes;

Biological Treatment: Activated sludge process and its modifications including SBR; Trickling filters and RBC units; SAF, FAB and MBBR technologies; UASB reactors and its modifications; Waste stabilization pond systems and its modifications.

Other Treatment Technologies:

Filtration and chlorination; Membrane processes for TDS reduction

Biological treatment of waste water- aerobic methods, floc and film-based processes, Activated sludge process, Trickling filter process.

Estimation of wastewater characteristics of some typical wastewater as per PollutionControl Board requirements including DO, BOD COD, Total Kjeldahi Nitrogen phosphates

Wastewater Characteristics and Effluent Standards: Physical, chemical and of water pollution; DO, BOD and, Suspended solids, Total dissolved solids, ; Effluent standards.

Module – 3

Wastewater Treatment in specific industries: Distillery,Sugar, Pulp and paper, Cement, Textile, Dairy, Fertilizer,Pesticides, Pharmaceutical.

Design of complete treatment system & disposal forindustries: Distillery, Diary, Sugar Paper and Pulp mill tomeet P.C.B. norms.

WQMSCP01

WQM Practical I

1.Estimation of pH

2. Estimation of Electrical Conductivity

3. Estimation of Total dissolved Solids

4. Estimation of Colour and Turbidity

5.Training on the basics of volumetric analysis

Acidimetry and Alkalimetry

i) Strong acid-Strong base

ii)Strong acid – Weak base

iii)Strong base – Weak acid

6. Bacteriological analysis of drinking water.

7. Determine the potability of provided water sample by MPN technique.

8. Enumeration of Total number of heterotrophic bacterial population in water samples.

WQMSCP02.

WQM Practical II

1. Estimation of Total Suspended Solids
2. Estimation of oil and grease
3. Estimation of Ammoniacal Nitrogen
4. Estimation of Chloride
5. Estimation of Alkalinity
6. Estimation of Total Hardness
7. Estimation of Calcium
8. Estimation of Magnesium
9. Estimation of Iron
10. Colorimetric measurement of some heavy metals in effluents (e. g. Cr., Pb)
    Colorimetry:
    i) Estimation of Iron in water colorimetically.
    ii) Determination of molar absorptivity of Fe^{3+}.
    iii) Verification of Beer Lambert's law and determination of strength of unknown solution
6. Estimation of Dissolved Oxygen
7. Estimation of COD and BOD

Books for Reference:

1.A.K. De, Environmental Chemistry, Wiley Eastern Ltd.

4. Skoog, D. A., West, D. M., Holler, F. J., & Crouch, S. R. (2013). *Fundamentals of analytical chemistry*. Nelson Education.

1.

3. S. Manahan, Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science, CRC Press, 2013

4. R.C. Brunner, Hazardous Waste Incineration, McGraw Hill Inc., 1989

5. W.P. Cunningham, T.H. Cooper, E Gorhani, and M.T. Hepworth, Environmental Encyclopedia, Jaico Publishing House, Mumbai, 2001.

6.APHA (2005). Standard Methods for the examination of water and waste water, American Public Health Association.

7. Trivedy R K and Goel P K (1998). Practical Methods in ecology and environmental sciences.

Sree Sankara College Kalady

Diploma in Yoga Instructor Course - 2020-21

SYLLABUS

SEMESTER I						
Course Code	**Course Name**	**Contact Session (Hrs)**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
SSCDPY01	Basic Sanskrit & Yoga Philosophy	90	6	20	80	100
SSCDPY02	Yogic Concept of Ayurveda and Naturopathy	120	8	20	80	100
SSCDPY03	Kriya, Pranayama, Mudra and Bandha	120	8	20	80	100
SSCDPY04	Asana	120	8	20	80	100

SEMESTER II						
Course Code	**Course Name**	**Contact Session (Hrs)**	**Credit**	**Internal Marks**	**External Marks**	**Total Marks**
SSCDPY05	Hathayogapradipika & Patanjala Yoga Sutras	90	6	20	80	100
SSCDPY06	Therapeutic Yoga	120	8	20	80	100
SSCDPY07	Kalari & Yoga	120	8	20	80	100
SSCDPY08	Advanced Asanas	120	8	20	80	100

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 1

Paper 1 - SSCDPY01 - **BASIC SANSKRIT AND YOGA PHILOSOPHY**

Contact Hours: 90 **Credits: 6** **Marks: 80**

Outcome of the Course: Yoga; one among the six orthodox philosophical systems of Bharath, is to be learned basically in its philosophical aspect. Since basic texts and commentaries of Bharatiya Darsanas are in Sanskrit, learners should familiarise with basic lessons of Sanskrit.

Objective: To understand basic lessons of Sanskrit language such as types of nouns and verbs, Vibhaktis, Lakaras, Sentence construction, communicative Sanskrit and basics of Bharatiya Darsanas with special reference to Yoga

Course Outline

Module 1
Communicative Sanskrit, Subanta, Tinganta, Sentence Creation, Subhashithas
Module 2
Systems in Indian Philosophy
Module 3
History and Development of Yoga Philosophy
Module 4
Jnanayoga, Bhaktiyoga, Rajayoga and Karmayoga

References:

Samskrtasubodhini
Outlines of Indian Philosophy
Rajayoga
Karmayoga
Jnanayoga
Bhaktiyoga

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 1

Paper 2 - SSCDPY02 - **YOGIC CONCEPTS OF AYURVEDA AND NATUROPATHY**

Contact Hours: 120 **Credits: 8** **Marks:** 80

Outcome of the Course: Ayurveda and Naturopathy are in deep contact with Yogic concepts. A Yoga practitioner should be able to understand the basic concepts of both.

Objectives: To introduce the fundamental theories of Ayurveda and Naturopathy for the well being and to introduce the literature of Ayurveda for the expanded learning.

Course Outline

Module 1
Basic principles of Ayurveda, Tridosha Sidhanta, Panchabhuta Sidhanta, Panchaprana Sidhanta
Module 2
Basic principles of Dinacharya and Rtucharya
Module 3
Diet in Naturopathy
Module 4
Principles of Naturopathic therapy

References:

Ashtangahrdayam
Prakrtijivanam, Dr.Utpalakshan

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 1

Paper 3 - SSCDPY03 - **KRIYA, PRANAYAMA, MUDRA AND BANDHA**

Contact Hours: 120 **Credits: 8** **Marks:** 80

Outcome of the Course: Yoga is fundamentally meant to control the mind. So, primary lessons of Yoga are to familiarise the techniques for the same.

Objectives: To learn the theories and practice the techniques of Kriya, Pranayama, Mudra and Bandha

Course Outline

Module 1
Shadkriyas - Thrataka, Nauli, Kapalabhati, Nethi, Dhauti, Vasti
Module 2
Breathing exercises and Ashtakumbhakas - Chandrabhedi, Bhramari, Sitali, Sithkari, Bhastrika, Ujjai, Plavini, Murcha
Module 3
Adimudra, Chinmudra, Chinmayamudra, Brahmamudra, Aswinimudra
Module 4
Tribandhas - Mulabandha, Uddyanabandha, Jalandharabandha

References:

Hathayogapradipika
Yogopanishads
Kherandasamhita

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 1

Paper 4 - SSCDPY04 - **ASANA**

Contact Hours: **120** **Credits:** **8** **Marks:** 80

Outcome of the Course: Yoga is well known for its specialities of practicing physical positions. It is not only for physical well-being but also meant for spiritual and mental health. Exercises are to be learned in such a way to attain physical as well as mental/spiritual enlightenment.

Objectives: To introduce various types of Asana, learn the theories from Yoga literature and practice them.

Course Outline

Module 1
Loosening and Stretching exercises
Module 2
Suryanamaskaram
Module 3
Vrkshasana, Katichakrasana, Arthakatichakrasana, Padahastasana, Arthachakrasana, Trikonasana, Parivrtatrikonasana, Parsvakonasana, Virabhadrasana, Sasankasana,
Module 4
Vajrasana, Suptavajrasana, Ushtasana, Paschimottanasana, Vakrasana, Bhujangasana, Salabhasana, Dhanurasana, Merudandasana, Halasana, Matsyasana, Viparitakarani, Sirshasana, Sarvangasana

References:

Hathayogapradipika
Kherandasamhita

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 2

Paper 5 - SSCDPY05 - **PATANJALAYOGASUTRA AND HATHAYOGAPRADIPIKA**

Contact Hours: 90 **Credits: 6** **Marks:** 80

Outcome of the Course: The nature, objectives and theories of modes operandi of Yoga are clearly explained in its literature. Textual learning of Yoga Sutras with its known ancient commentaries are inevitable for a Yoga practitioner. So that a learner of Yoga should have completely gone through the fundamental literature of Yoga to avoid infiltrations of foreign elements into the subject, which will be harmful to the practitioners later.

Objectives: To make learners well aware of the philosophy of Yoga and its fundamental doctrines through Patanjala Yoga Sutras and Hathayogapradipika

Course Outline

Module 1
Selected sutras from four chapters of Patanjala Yoga Sutras
Module 2
Selected sutras from four chapters of Patanjala Yoga Sutras
Module 3
Selected sutras from Hathayogapradipika
Module 4
Selected sutras from Hathayogapradipika

References:

Patanjala Yoga Sutras
Hathayoga Pradipika

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 2

Paper 6 - SSCDPY06 - **YOGA THERAPY**

Contact Hours: **120** **Credits:** **8** **Marks:** 80

Outcome of the Course: Yoga as a traditional method of therapeutic science, is very important to avoid diseases of modern era. Asanas and Pranayama are successfully established to cure various illnesses in nowadays. A learner should be capable to practice such therapeutic aspects of Yoga in legally supported cases.

Objectives: To learn and practice therapeutic system of Yoga for the prevention of diseases.

Course Outline

Module 1
Yoga therapy for Gastric Intestinal disorders
Module 2
Yoga therapy for Neurological disorders
Module 3
Yoga therapy for Rheumatic disorders
Module 4
Yoga therapy for Cardiovascular disorders

References:

Yogic Therapy, Shivanatha Saraswathy

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 2

Paper 7 - SSCDPY07 - **KALARI AND YOGA**

Contact Hours: **120** **Credits:** **8** **Marks:** 80

Outcome of the Course: Kalari is the well known martial art of Bharath, which is highly established in Kerala. It gives much importance to the physical, mental as well as spiritual well-being of human being. There are lot of similarities between Yoga and Kalari. Fundamental knowledge in Kalari is preferred to a Yoga practitioner to establish and co-operate possible aspects of Kalari in their practice.

Objectives: To introduce the types of Vativu and Payattu and practice them.

Course Outline

Module 1
Ashtavativu Part I
Module 2
Ashtavativu Part II
Module 3
Meypayattu Part I
Module 4
Meypayattu Part II

References:

കടത്തനാടൻ കളരിപ്പയറ്റ് - അടിസ്ഥാനതത്ത്വങ്ങൾ, കടത്തനാട് ചന്ദ്രൻ ഗുരുക്കൾ, കടത്തനാട് കെ.പി.സി.ജി.എം കളരിസംഘം, പുതുപ്പണം

SREE SANKARA COLLEGE KALADY

YOGA INSTRUCTOR DIPLOMA COURSE

Semester 2

Paper 8 - SSCDPY08 - **ADVANCED ASANAS**

Contact Hours: 120 **Credits: 8** **Marks:** 80

Outcome of the Course: After learning basic Asanas, a learner is to be uplifted to the Advanced Asanas, in which Yogic concepts are more significantly highlighted. Practice of advanced Asanas make the learners well-handed in Yoga. They should turn into a researcher's mode by deep references in the literature of Yoga such as Hathayogapradipika.

Objective: To familiarise learners in practicing advanced Asanas and literary learning of Hathayogapradipika.

Course Outline

Module 1
Swastikasana, Gomukhasana, Virasana,
Module 2
Kurmasana, Kukkutasana, Uttana Kurmasana,
Module 3
Dhanurasana , Matsyasana, Mayurasana
Module 4
Uttana Kurmasana, Savasana, Siddhasana

References:

Hathayogapradipika

Sree Sankara College (SSC), announces its Add on Course on “How to write a Research Paper and Project Report”for the year 2020- 21. This add on course is specially designed for the research scholars, post graduate students and final year degree students of Sree Sankara College, Kalady. The Add on Course is first of its kind with a purpose to help research scholars and students in addressing their problems on writing a research paper and project report. The Course also aims at assisting them in conducting a paper presentation in a one day seminar. The Course is designed to provide conceptual understanding and impart knowledge on Research in the context of development of social science research with theoretical and ethical aspects across disciplines through various methods of research. The participants shall be required to prepare a research paper in their respective areas of work. This is a 33 hours Course which begins on October 5th 2020 and ends on December 9th 2020. There will be five modules. One module will be discussed per week (first week of getting started and last week of evaluation and assessment.) with one hour per week of net meeting (synchronous communication). Participants are expected to attend daily afternoon classes from 3.00p.m to 3.30p.m on all regular working days.

Course Participants:

• Research scholars of Sree Sankara College having background of research.

• Post graduate students and final year degree students of Sree Sankara College,Kalady.

Course Fee

• Rs. 300/-

Last Dates:

Last date for applying for Add on Course on How to write a research Paper and Project Report is **4TH October 2020.**

Maximum No of Participants: 40 (on a first come first served basis; contact course coordinator)

Course evaluation: 75% attendance and minimum 40% marks for end of the course examination are necessary for successful completion of the course.

Course certificate: Issued to successfully completed participants

Course Coordinator: Dr. Smrithi Ashokan, Assistant Professor, Dept. of Commerce, Sree Sankara College, Kalady.

Contact Details: mobile 9745656555

Email id: masmrithi@gmail.com

The Course follows the prescribed syllabus

OBJECTIVES OF THE COURSE

The main objectives of the Course are to educate the participating research scholars and students in the following aspects of research and writing of a project report.

SYLLABUS

HOW TO WRITE A RESEARCH PAPER AND PROJECT REPORT

(For Commerce, Economics & Management)

MODULE I: Purpose of guide-Steps in Project Report-Topic Selection-Synopsis Writing-Theoretical Framework-Questionnaire Preparation-Data Collection and Tabulation-Data Analysis and Interpretation-Project Report Writing-Research-Types of research design-Design flaws to avoid-Independent & Dependent variables.

(5HRS)

MODULE II: Choosing a research problem-Reading research effectively-Narrowing a topic idea-Broadening a topic idea-Extending the timeliness of a topic idea-Preparing to write-academic writing style-Choosing a title-Making an outline-Paragraph development.

(6HRS)

MODULE III: Abstract-Executive summary-Types of abstract-Checklist defining relevant parts of abstract Koopman (1997)-Thematic scope of abstract-Hourglass model (based on swales 1993)-The Introduction-The C.A.R.S Model-Background Information-Primacy of research question-The Research Problem/Question, Review of research-Purpose-Significance-Origination-Development-Organisation-Theoretical Framework.

(8HRS)

MODULE IV: Literature review-Citation tracking-Evaluating sources-Primary sources-Secondary sources-Tertiary sources-Methodology-qualitative methods-quantitative methods.

(7HRS)

MODULE V: Results-Discussions-Limitations of the study-References-Using keywords-Conclusions-Appendices-Citing sources-Avoiding Plagiarism-Footnotes or End notes-Further reading-Annotated Bibliography- Title page-Page layout-Page numbering-Spacing & Justification-Font face & Size-visual layout.

(7HRS)

Total teaching hours -33hrs

Paper presentation Seminar -1 day (FN&AN)

OUTCOMES OF THE COURSE

1. Outcomes - are **specific, measurable statements that let you know when you have reached your goals**.
2. An explanation of how the proposal will address the needs shown in the Statement of the Problem;
3. An explanation of the benefits that will be realized if the proposal is accepted;
4. Clear information about WHO will benefit and HOW they will benefit from the proposal;
5. The results section is **where you report the findings of your study based upon the methodology [or methodologies] you applied to gather information**. The results section should state the findings of the research arranged in a logical sequence without bias or interpretation.