St. Michael's College, Cherthala

Alappuzha, Kerala-688 539
Affiliated to University of Kerala
and Re-accredited by NAAC with 'A' Grade

ADD ON COURSE 2018-19

Name of the Programme : VERMI TECHNOLOGY

Name of the Department : ZOOLOGY

Course Code : ZO 098

St. Michael's College

MAYITHARA P.O., CHERTHALA, ALAPPUZHA-688539

An institution with Minority Status Affiliated to the University of Kerala and
Re-accredited by NAAC with 'A' Grade

Add on Course - 2018-19

COMMERCE	Diploma in Goods & Services Tax Practices (DGSTP) & Tally
ZOOLOGY	Vermi Technology
CHEMISTRY	Polymer Technology
PHYSICS	Materials science
SOFTWARE DEVELOPMENT	Android Development
TOURISM STUDIES	Customer Service Executive
HINDI	Hindi Language and Communication
MATHEMATICS	Basic Mathematics
ENGLISH	Basics of Business Communication

Phone : 0478-2822387, 2810387
Email : michaelscherthala@gmail.com, Web : www.stmc.ac.in

NAME OF COURSE : **Vermi Technology**

COURSE CODE : **ZO 098**

NO OF STUDENTS ENROLLED : **28**

CONTENTS

DEPARTMENT OF ZOOLOGY
ST. MICHAEL'S COLLEGE, CHERTHALA

SYLLABUS FOR THE ADD-ON COURSE TO BE OFFERED IN THE ACADEMIC YEAR 2018-19

CERTIFICATE COURSE ON 'VERMITECHNOLOGY'

Total hours: 30 **Course co-ordinator: Dr. Antony P. J.**

Course Objective

Students at the successful completion of the course will be able to:
1. Acquire a critical knowledge on role of earth worms in making organic matter from biodegradable wastes.
2. Understand the biology of some important species of earth worms used in vermiculture.
3. Acquire skills on production of vermicompost.
4. Explain benefits and problems with vermiculture and vermicompost.

Module I

2 hrs

Vermitechnology- Definition, history, growth and development in other countries & India, significance.

Module II

3 hrs

Vermiculture – definition, scope and importance; common species for culture; Environmental parmeters; culture methods – wormery – breeding techniques; indoor and outdoor cultures - monoculture and polyculture – merits and demerits.

Module II

2 hrs

Vermicomposting of wastes in field pits,ground heaps, tank method,roof shed method, static pile windrows,top fed windrows, wedges & bin method,harvesting the compost, storage, Vermiwash-Preparation and application.

Module IV

3 hrs

Applications of vermiculture – Vermiculture Bio-technology, vermicomposting, use of vermicastings in organic farming/horticulture, earthworms for management of municipal/selected biomedical solid wastes; as feed/bait for capture/culture fisheries; forest regeneration. Site preparation - criteria for site selection –source of water – access for seed, feed, marketing - pond preparation –water culture

Module V

3 hrs

Vermicomposting Small scale earthworm farming for home gardens - earthworm compost for home gardens. Conventional commercial composting - earthworm composting larger scale (pit, brick and,

heap systems, and Kadapa slab method). Earthworm farming, extraction (harvest), vermicomposting harvest and processing. Vermiwash collection, composition and use. Enemies of earthworms, sickness and worm's enemies; frequent problems – prevention and fixation. Complementary activities of auto

evaluation. Candidate species for culture - Seed collection – Wild and Hatchery seeds – health status analysis

Module VI

3 hrs

Applications of vermiculture- Benefits of vermicompost, Use of vermicompost in agriculture. Basic characteristics of earthworm suitable for vermicomposting. Problems in vermicomposting.

Practical

14 hrs

1. Key to identify different types of earthworms.

2. Study of external features of earth worm species.

3 Study of vermiculture, vermiwash & vermicompost equipments, devices.

4 Preparation vermibeds, maintenance of vermicompost & climatic conditions.

5 Harvesting, packaging, transport and storage of Vermicompost and separation.

Add-On Cell
St.Michael's College, Cherthala
Class Schedule Format 2018-2019

Department: ZOOLOGY

Course: CERTIFICATE COURSE ON VERMITECHNOLOGY

Sl No	Date	Day	Time	Name of Teacher	Class Room No
1	03.01.19	Thursday	3.30 pm	Dr. Antony P.J.	B 22
2	08.01.19	Tuesday	3.30 pm	Ms. Patricia Michael	B 22
3	11.01.19	Friday	3.30 pm	Dr. Antony P.J.	B 22
4	16.01.19	Wednesday	3.30 pm	Ms. Patricia Michael	B 22
5	19.01.19	Saturday	9.30 am	Ms. Patricia Michael	B 22
6	19.01.19	Saturday	10.30 am	Dr. Antony P.J.	B 22
7	19.01.19	Saturday	11.30 am	Ms. Patricia Michael	B 22
8	19.01.19	Saturday	1.30 pm	Dr. Antony P.J.	B 22
9	19.01.19	Saturday	2.30 pm	Ms. Patricia Michael	B 22

10	23.01.19	Wednesday	3.30 pm	Dr. Antony P.J.	B 22
11	25.01.19	Friday	3.30 pm	Ms. Patricia Michael	B 22
12	29.01.19	Tuesday	3.30 pm	Dr. Antony P.J.	B 22
13	05.02.19	Tuesday	9.30 am	Dr. Antony P.J. & Patricia Michael	B 26
14	08.02.19	Friday	10.30 am	Dr. Antony P.J. & Patricia Michael	B 26
15	12.02.19	Tuesday	11.30 am	Dr. Antony P.J. & Patricia Michael	B 26
16	15.02.19	Friday	1.30 pm	Dr. Antony P.J. & Patricia Michael	B 26
17	20.02.19	Wednesday	2.30 pm	Dr. Antony P.J. & Patricia Michael	B 26
18	26.02.19	Tuesday	3.30 pm	Dr. Antony P.J.	B 22
19	01.03.19	Friday	3.30 pm	Ms. Patricia Michael	B 22
20	06.03.19	Wednesday	3.30 pm	Dr. Antony P.J.	B 22
21	14.03.19	Thursday	3.30 pm	Ms. Patricia Michael	B 22
22	16.03.19	Saturday	9.30 am	Dr. Antony P.J.	B 22
23	16.03.19	Saturday	10.30 am	Dr. Antony P.J. & Patricia Michael	B 26
24	16.03.19	Saturday	11.30 am	Dr. Antony P.J. & Patricia Michael	B 26
25	16.03.19	Saturday	1.30 pm	Dr. Antony P.J. & Patricia Michael	B 26
26	16.03.19	Saturday	2.30 pm	Dr. Antony P.J. & Patricia Michael	B 26
27	21.03.19	Thursday	2.30 pm	Dr. Antony P.J. & Patricia Michael	B 26
28	25.03.19	Monday	3.30 pm	Dr. Antony P.J.	B 22
29	27.03.19	Wednesday	3.30 pm	Ms. Patricia Michael	B 22
30	28.03.19	Thursday	3.30 pm	Dr. Antony P.J.	B 22

ST. MICHAEL'S COLLEGE, CHERTHALA
Certificate Course
VERMITECHNOLOGY
Attendance statement (2018-19)

No.	Candidate code	Name of the candidate	% of attendance
1	25018136001	AISWARYA KM	100
2	25018136002	AKHILA K S	91
3	25018136003	ALEX PR	88
4	25018136004	ALICE MARIYA	93
5	25018136005	AMALA LAWRENCE	95
6	25018136007	APARNA A	81
7	25018136008	CHITRHRA K S	91

8	25018136009	HARITHA BAIJU VM	85
9	25018136010	HISANA S	98
10	25018136011	MANU M	93
11	25018136012	MOHAMMED NAJMAL P	78
12	25018136013	NANDANA N	95
13	25018136014	NARMANINI S	90
14	25018136015	PAVANA SOY	100
15	25018136016	PRAVEEN PB	90
16	25018136018	SANDEEP SIJI MS	93
17	25018136019	SHILPA SASIDHARAN	95
18	25018136020	VISHNU ML	95
19	25018136021	ALAN MANUEL GEORGE	92
20	25018136022	ANAGHA S	90
21	25018136023	ANOSH MICHAEL	79
22	25018136024	ARYALAKSHMI SHAJI	93
23	25018136025	CHARLES P JOB	86
24	25018136028	MARIYAM JOHNA J	91
25	25018136029	NANCYMOL JK	82
26	25018136030	PRINCY SEBASTIAN	82
27	25018136031	SANDRA SEBASTIAN	95
28	25018136032	SANIL VINCENT	84

ST. MICHAEL'S COLLEGE, CHERTHALA

FIRST DEGREE PROGRAMME IN ZOOLOGY (CBCSS)

CERTIFICATE COURSE (2018-19)

Course Title: VERMITECHNOLOGY

Time 01.00 hour **Maximum Marks 30**

Draw diagrams wherever necessary

I. Answer ALL questions (Each question carries 1 mark)

1. Red worm

2. Drilosphere

3. Vermiwash

4. Vermicompost

5. Mineralisation

6. Worm casting

7. Compost bedding

8. Vermicompost Teas

9. Clitellum

10. Stacked bin system

(10x1=10marks)

II. Answer any FIVE of the following questions (Each question carries 2 mark)

11. What is vermicomposting food web?

12. Briefly describe about the containers used in vermicomposting.

13. Enumerate the major environmental factors that influence vermicomposting process

14. Briefly explain the identification features of *Eudriluseugeniae* and *Eiseniafoetida*.

15. Comment on Vermiremediation

16. Advantages of vermicomposting

17. Pests and pathogens of affecting vemicomposting

18. Differentiate between apigeic and anecic worms

(5x2=10 marks)

III. Answer any ONE of the following questions (Each question carries 10 mark)

19. Write an essay on different methods of vermicomposting systems.

20. Economic uses of Vermiculture.

(1x10=10 marks)

Add-On Cell
St.Michael's College, Cherthala
Mark List

Discipline : ZOOLOGY
Course Title : VERMITECHNOLOGY
Date of Examination :
29/03/2019 Maximum Marks: 30

Sl No	Candidate Code	Name of the Student	Mark Obtained
1	25018136001	AISWARYA KM	29
2	25018136002	AKHILA K S	24
3	25018136003	ALEX PR	18
4	25018136004	ALICE MARIYA	22
5	25018136005	AMALA LAWRENCE	24
6	25018136007	APARNA A	24
7	25018136008	CHITRHRA K S	27
8	25018136009	HARITHA BAIJU VM	23
9	25018136010	HISANA S	21
10	25018136011	MANU M	19
11	25018136012	MOHAMMED NAJMAL P	18
12	25018136013	NANDANA N	22
13	25018136014	NARMANINI S	23
14	25018136015	PAVANA SOY	29
15	25018136016	PRAVEEN PB	24
16	25018136018	SANDEEP SIJI MS	22
17	25018136019	SHILPA SASIDHARAN	29
18	25018136020	VISHNU ML	28
19	25018136021	ALAN MANUEL GEORGE	25
20	25018136022	ANAGHA S	22
21	25018136023	ANOSH MICHAEL	19
22	25018136024	ARYALAKSHMI SHAJI	28
23	25018136025	CHARLES P JOB	20
24	25018136028	MARIYAM JOHNA J	27
25	25018136029	NANCYMOL JK	27
26	25018136030	PRINCY SEBASTIAN	26
27	25018136031	SANDRA SEBASTIAN	22
28	25018136032	SANIL VINCENT	20

ST. MICHAEL'S COLLEGE

CHERTHALA, ALAPPUZHA - 688 539

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ADD-ON COURSE

CERTIFICATE

This is to certify that **Miss. AISWARYA K M (25018136001)**

B.Sc Zoology 2018 Admission

has completed Certificate/Add-on course in

Vermi Technology (ZO 098)

offered by the Department of Zoology during the academic year 2018-2019. He/Shee is awarded with **A**

Head of the Department | **Course Coordinator** | **Principal**

This certificate course is introduced to undergraduate level students to make them understand the basic techniques in vermicompost technology. It is designed with the intention to teach various aspects such as the role of earth worms in making organic matter from biodegradable wastes. It will also provide field exposure and hands on experience for students on different techniques in vermitechnology.

ST MICHAEL'S COLLEGE
MAYITHARA
688539
CHERTHALA

Principal
St. Michael's College
Cherthala