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 2021-22

Name of the Programme : OBSERVING THE SKY WITH STELLARIUM AND BEYOND

Name of the Department : PHYSICS

Course Code : PY 093

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 - 2021-22

CHEMISTRY
Coir Technology

COMMERCE
GST Filing & Tally

ECONOMICS
Applied Economics Analysis

ENGLISH
Interpersonal Relationship Counseling and Psychological Guidance

PHYSICS
Observing the sky with Stellarium and beyond

SOFTWARE DEVELOPMENT
Add on Course in PHP

TOURISM STUDIES
Air Transport Operations

ZOOLOGY
Brackish Water Aquaculture Methods and Practices

ENGLISH
Certificate Course
Fundamentals of Communication and Soft Skills

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

NAME OF COURSE : **Observing the Sky with Stellarium and beyond**

COURSE CODE : **PY 093**

NO OF STUDENTS ENROLLED :**23**

CONTENTS

Add on Course
Syllabus
Observing the Sky with Stellarium and beyond (30 Hours)

Unit 1: What is Stellarium (10 hours)

Introduction, Different Sky watching softwares, Stellarium- A free software, How can we download it and install on our computer. Setting our position in it, making it to ready to use. Basic operations on stellarium-Zoom in and zoom out, go to a particular date and time. Setting our position on different places on Earth-Setting our position on Moon or other planets.

Unit 2: Constellations in stellarium and Sky (10 Hours)

What is a constellation and what is the difference between a star group (ie an open cluster or a globular cluster) and constellations. Identifying constellations using the full figure using stellarium and identifying the constellation on night sky, total number of constellations, the zodiac and twelve important constellations, Sun and Moon's motion through zodiac constellations, identifying the boundaries of constellations, celestial equator and ecliptic, the two equinox points- a discussion on Precession of equinox.

Unit 3: Planets, Deep sky objects and celestial coordinate systems (10 Hours)

Identifying Five bright planet in night sky with the help of stellarium. Zooming out the plants and identifying their clear appearance and their satellites, the ring system of Saturn, Observing virtually the distant planets such as Uranus and Neptune. At first identifying deep sky objects such as Andromeda galaxy and Orion nebula with naked eye using stellarium in a clear night sky. Uses of stellarium: Observing eclipses of past and future using stellarium, transit of different plants. Identifying different Open Clusters and nebulas in the nightsky. Celestial coordinate systems (alt –azimuth and equatorial (RA-Declination) coordinates) using stellarium.

Add-On Cell

St.Michael's College, Cherthala

Department Of Physics

Observing the Sky with Stellarium and beyond

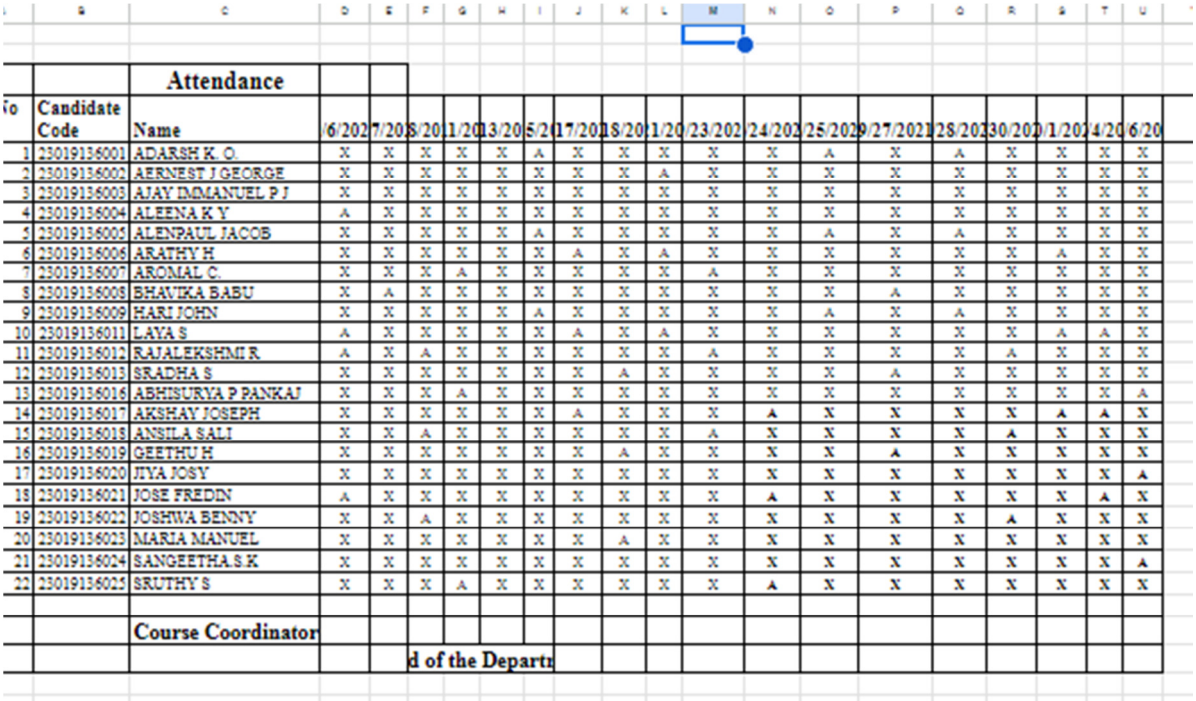
Class Schedule Format 2021-2022

Department: Physics | | | | **Course: Observing the Sky with Stellarium and beyond**

Date	Day	Time	Name of Teacher	Class Room No
9/6/2021	1	3.30 to 4.30	Dr.Mini P A	A12
9/7/2021	2	3.30 to 4.30	Dr.Dhwajam D B	A12
9/8/2021	3	3.30 to 4.30	Dr.Saneesh Sebastian	A12
9/11/2021	4	9.30 to 3.30	Dr.Mini P A	A12
9/13/2021	5	3.30 to 4.30	Dr.Mini P A	A12
9/15/2021	6	3.30 to 4.30	Dr.Dhwajam D B	A12
9/17/2021	7	3.30 to 4.30	Dr.Saneesh Sebastian	A12
9/18/2021	8	9.30 to 3.30	Dr.Saneesh Sebastian	A12
9/21/2021	9	3.30 to 4.30	Dr.Mini P A	A12
9/23/2021	10	3.30 to 4.30	Dr.Dhwajam D B	A12
9/24/2021	11	3.30 to 4.30	Dr.Saneesh Sebastian	A12
9/25/2021	12	9.30 to 3.30	Dr.Dhwajam D B	A12
9/27/2021	13	3.30 to 4.30	Dr.Mini P A	A12
9/28/2021	14	3.30 to 4.30	Dr.Dhwajam D B	A12
9/30/2021	15	3.30 to 4.30	Dr.Saneesh Sebastian	A12
10/1/2021	16	3.30 to 4.30	Dr.Mini P A	A12
10/4/2021	17	3.30 to 4.30	Dr.Dhwajam D B	A12

10/6/2021	18	3.30 to 4.30	Dr.Saneesh Sebastian	A12

ATTENDANCE



		Attendance																		
o	Candidate Code	Name	/6/202	7/202	8/202	1/202	3/202	5/202	17/202	18/202	1/202	23/202	24/202	25/202	29/27/2021	28/202	30/202	1/202	4/202	6/202
1	23019136001	ADARSH K. O.	X	X	X	X	X	A	X	X	X	X	X	A	X	A	X	X	X	X
2	23019136002	AERNEST J GEORGE	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
3	23019136003	AJAY IMMANUEL P J	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	23019136004	ALEENA K Y	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	23019136005	ALENPAUL JACOB	X	X	X	X	X	A	X	X	X	X	X	A	X	A	X	X	X	X
6	23019136006	ARATHY H	X	X	X	X	X	X	A	X	A	X	X	X	X	X	X	A	X	X
7	23019136007	AROMAL C.	X	X	X	A	X	X	X	X	X	A	X	X	X	X	X	X	X	X
8	23019136008	BHAVIKA BABU	X	A	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X
9	23019136009	HARI JOHN	X	X	X	X	X	A	X	X	X	X	X	A	X	A	X	X	X	X
10	23019136011	LAYA S	A	X	X	X	X	X	A	X	A	X	X	X	X	X	X	A	A	X
11	23019136012	RAJALEKSHMI R	A	X	A	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X
12	23019136013	SRADHA S	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X
13	23019136016	ABHISURYA P PANKAJ	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	A
14	23019136017	AKSHAY JOSEPH	X	X	X	X	X	X	A	X	X	X	A	X	X	X	X	A	A	X
15	23019136018	ANSILA SALI	X	X	A	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X
16	23019136019	GEETHU H	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X
17	23019136020	JIYA JOSY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A
18	23019136021	JOSE FREDIN	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	A	X
19	23019136022	JOSHWA BENNY	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
20	23019136023	MARIA MANUEL	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X
21	23019136024	SANGEETHA.S.K	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A
22	23019136025	SRUTHY S	X	X	X	A	X	X	X	X	X	X	A	X	X	X	X	X	X	X
		Course Coordinator																		
					d of the Departr															

St. Michael's College, Cherthala

Add on course examination

Observing the sky with Stellarium and beyond

Time : 1.5 hrs Max. Marks : 40

Part A

Write **all** questions. Each carrying **One mark**

1. What is Stellarium?
2. What is Zodiac?
3. Write the total number of constellations
4. Which is the brightest star in the night sky?
5. Which is the largest planet in our solar system?

Part B

Write **any Four** questions. Each carry **Two marks**

6. Write down the names of two sky watching softwares.
7. What are constellations?
8. What are Open Clusters? Give one example.
9. Explain the terms Ecliptic and Celestial Equator
10. What is mean by Eclipse?
11. What is mean by a Galaxy and give two examples.

Part C

Write **any Three** questions. Each carrying **four marks**

12. Explain the Precession of equinox.
13. Explain the zodiac constellations with examples
14. What is Mean by transit of a planet. Explain how can be find it by Stellarium.
15. Explain how can we use stellarium to predict the eclipses.
16. Briefly describe the different Celestial coordinate systems.

Part D

Write **any one** question. Carrying **fifteen marks**

17. Write a note on stellarium. Its working and uses in night sky watching.
18. Explain the terms: (a) Zodiac (b) Celestial Coordinates (c)Zodiac Constellations (d) deep Sky objects (e) Nebula.

Add-On Cell

St.Michael's College, Cherthala

Mark List

Discipline : PHYSICS

Course Title :Observing the sky with Stellarium and beyond

Date of Examination : 11/03/2022 Maximum Marks: 30

Sl No	Candidate Code	Name of the Student	Mark Obtained
1	23019136001	ADARSH K. O.	20
2	23019136002	AERNEST J GEORGE	23
3	23019136003	AJAY IMMANUEL P J	23
4	23019136004	ALEENA K Y	21
5	23019136005	ALENPAUL JACOB	23
6	23019136006	ARATHY H	25
7	23019136007	AROMAL C.	22
8	23019136008	BHAVIKA BABU	23
9	23019136009	HARI JOHN	23
10	23019136010	KARTHIK SURYA	nil
11	23019136011	LAYA S	22
12	23019136012	RAJALEKSHMI R	21
13	23019136013	SRADHA S	24
14	23019136016	ABHISURYA P PANKAJ	28
15	23019136017	AKSHAY JOSEPH	22
16	23019136018	ANSILA SALI	26
17	23019136019	GEETHU H	26
18	23019136020	JIYA JOSY	24
19	23019136021	JOSE FREDIN	21
20	23019136022	JOSHWA BENNY	22
21	23019136023	MARIA MANUEL	26
22	23019136024	SANGEETHA.S.K	26
23	23019136025	SRUTHY S	25

ST. MICHAEL'S COLLEGE
CHERTHALA, ALAPPUZHA - 688 539
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ADD-ON COURSE
CERTIFICATE

This is to certify that Mr. AJAY IMMANUEL P J (23019136003)
B.Sc Physics 2019 Admission has completed
Certificate/Add-on course in Observing the sky with Stellarium and beyond
(PY 093) offered by the Department of Physics
during the academic year 2021-2022. He/She is awarded with B Grade.

Head of the Department Course Coordinator Principal

Report of ADD ON Programe 2021 – 2022

"Observing the sky with Stellarium and beyond"

Department of physics conduct an ADD ON course in the academic year 2021 – 2022 "Observing night sky with Stellarium and beyond". Its aim is to improve the astronomical aptitude of students especially the night sky watching using the free software 'Stellarium'. Also classes are conducted for get a knowledge about Celestial Sphere, Celestial coordinates and sky watching.

Students gave a good response to the classes and they attended the whole programme interestingly. They studied the whole three chapters and got good grade in all the class test and final examination.

Generally the ADD ON programme in this year was success full and they all get good scores.

ST. MICHAEL'S COLLEGE MAYITHARA 688539 CHERTHALA

Principal
St. Michael's College
Cherthala