

Date:05/01/2022

To,  
The Principal,  
Arts, Commerce and Science College Onde,

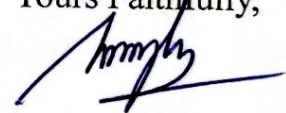
**Subject:** Regarding grant permission to start Certificate Course on  
Mathematical Methods in Physics.

Respected Sir,

With reference to above mentioned subject, the department of Physics wish to start **Certificate Course on Mathematical Methods in Physics** for our college students from 11<sup>th</sup> Jan to 31<sup>st</sup> March, 2022. This course is beneficial for the students as they will gather knowledge of said subject. I will be very glad if you grant permission to run this course.

Thanking you in anticipation.


Yours Faithfully,

  
Mr. Sachin M. Ingole  
Head, Dept. of Physics

HEAD OF THE DEPARTMENT  
Arts Commerce And Science College,  
Onde, Tal. Vikramgad, Dist. Palghar  
Pin-401605



Permission Granted

  
05/01/2022



Sanjeevan Gramin Vidyakiy & Samajik Sahayata Pratishthan's

## Arts, Commerce & Science College, Onda.

Tal. Vikramgad, Dist. Palghar (MS)-401605, Affiliated to University of Mumbai.

NAAC Accredited- Grade-C (CGPA-1.85), ISO-9001:2015 Certified

### Department of Physics

Date: - 05/01/2022

## NOTICE

All the students are hereby informed that the Department of Mathematics is going to conduct the **Certificate Course on Mathematical Methods in Physics** from 11<sup>th</sup> January to 31<sup>th</sup> March. Those who are interested enrol their names to Prof. S. M. Ingole till 7<sup>th</sup> Jan., 2022.

Note :-

- 1) The course will be free of cost
- 2) Total course duration is 30 hrs

Prof. Ingole S. M.

Head of Department

HEAD OF THE DEPARTMENT  
Arts Commerce And Science College,  
Onda, Tal. Vikramgad, Dist. Palghar  
Pin- 401605



Dr. V. S. Sonawane

I/C Principal

I/C PRINCIPAL

ARTS, COMMERCE & SCIENCE COLLEGE  
Onda, Tal. Vikramgad, Dist. Palghar.  
Pin-401605



**Sanjeevan Gramin Vaidyakiya & Samajik Sahayata Pratishthan's  
Arts, Commerce and Science College,  
Onde Tal. - Vikramgad Dist. - Palghar 401605  
(Affiliated to the University of Mumbai)**

**Department of Physics**

*Organises*

**"Certificate Course on Mathematical Methods in Physics"**

*Eligibility: F.Y. B.Sc.*

**Commencement of Course: 11<sup>th</sup> Jan., - 31<sup>th</sup> March, 2022**

**Course Duration: 30 hours**

**Time: Every Saturday 02.30 pm to 4.30 pm**

**Number of Seats Available: 20 Only**

**Date of Registration: 05<sup>th</sup> - 10<sup>th</sup> January, 2021**

*(Admission on first-come-first serve basis)*

**Course Co-ordinator**

**Mr. Sachin Madhukar Ingole**  
(Assistant Professor in Physics)  
Contact No: 9730179856



## “Certificate Course on Mathematical Methods in Physics”

### Syllabus

- 1. Derivative** **6 Hours**  
state and use standard formulas of derivative of standard functions, chain rule of derivatives, second and higher order derivatives.
- 2. Integration** **8 Hours**  
state and use standard formulas of integration of standard functions, Infinite integration, definite integration.
- 3. Vector Algebra.** **8 Hours**  
Vectors, scalar, laws of vector algebra, unit vector, rectangular unit vector, components of vector, dot product, cross product, scalar triple product, vector triple product.
- 4. Differential Equation** **8 Hours**  
Introduction, order and degree, various forms of differential equation and its solution.

**Methodology:** Classroom teaching, Assignment.

**Evaluation Method:** A total 50-marks test examination.

#### **Objective of the Course:**

On successful completion of this course students will able to:

1. Basic mathematical concepts and application of them in physical situations.
2. Demonstrate quantitative problem solving skills in all the topic covered.

#### **Expected Learning Outcomes: After completing**

- Successfully perform different grafting techniques.
- Learners will able to know criteria for successful grafting.
- Explain what and why different grafting techniques are used for different plant species.
- Learners will know limitations in grafting
- Learners will able to know the reasons of grafting failure



**Student Enrolment**  
**Certificate Course in Mathematical Methods in Physics**  
**(2021-22)**

<b>Sr. No.</b>	<b>Name of the Student</b>	<b>Class</b>
1.	AKRE PRAJAKTA RAVINDRA RAJESHRI	F.Y.B.Sc.
2.	BHADANGE JAYESH SAKHARAM TAI	F.Y.B.Sc.
3.	BHAVAR ASMITA BACHHU MANISHA	F.Y.B.Sc.
4.	BHIMARA BHAVESH JIVAN DARSHANA	F.Y.B.Sc.
5.	BHOYE RUTIK ARUN YASHODA	F.Y.B.Sc.
6.	CHAUDHARI RUSHIKESH PRAKASH REKHA	F.Y.B.Sc.
7.	DALVI NATHU PADMAKAR SHEVANTI	F.Y.B.Sc.
8.	GAVALI TANMAY TUSHAR LATA	F.Y.B.Sc.
9.	GHUTE HITESH VISHNU KASTURI	F.Y.B.Sc.
10.	GIMBAL VAIBHAV BANDU RANJANA	F.Y.B.Sc.
11.	JADHAV ARVIND KESHAV GULAB	F.Y.B.Sc.
12.	JANATHE VIKAS SADU RANJANA	F.Y.B.Sc.
13.	KHANDARE AJAY RAMESH MEENA	F.Y.B.Sc.
14.	KHARPADE SACHIN LAXMAN SANGITA	F.Y.B.Sc.
15.	KOLEKAR PRAVIN YEDNESH ASHWINI	F.Y.B.Sc.
16.	KURKUTE NITESH VIKRAM KIRAN	F.Y.B.Sc.
17.	KURKUTE PANKAJ KAILAS SUCHITA	F.Y.B.Sc.
18.	MAHALE KRUSHNA LAXMAN CHAPI	F.Y.B.Sc.
19.	MALEKAR YASH SUDAM RANJANA	F.Y.B.Sc.
20.	MARADE APEKSHA RAMESH ROSHNA	F.Y.B.Sc.



Certificate Course in Mathematical Methods in Physics (2021-22)

Student Attendance

Sr. No.	Name of the Students	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	AKRE PRAJAKTA	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	BHADANGE JAYESH	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	BHAVAR ASMITA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	BHIMARA BHAVESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	BHOYE RUTIK ARUN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	CHAUDHARI RUSHI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	DALVI NATHU	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	GAVALI TANMAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	GHUTE HITESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	GIMBHAI VAIBHAV	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	JADHAV ARVIND	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	JANATHE VIKAS	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	KHANDARE AJAY	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	KHARPADE SACHIN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	KOLEKAR PRAVIN	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	KURKUTE NITESH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	KURKUTE PANKAJ	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	MAHALE KRUSHNA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	MALEKAR YASH	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	MARADE APEKSHA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P





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### Department of Physics

Date: -04/04/2022

#### Report of Certificate Course on Mathematical Methods in Physics

The Department of Physics has smoothly conducted the Certificate Course on Mathematical Methods in Physics. The notice of admission is issued on 5<sup>th</sup> January 2022. The notice was issued with the permission of the principal of the college Dr. V. S. Sonawane. The certificate course is free of cost for all the students of college. The curriculum is designed in such a way that every student has get the knowledge said subject. This course is carried out from 8<sup>th</sup> Jan to 31<sup>th</sup> March, 2022. Due to covid pandemic partial classes has been carried out offline and rest of classes had taken via online mode. Total 20 students had enrolled for this course. All the students appeared for the exam and successfully completed the course. All the students where honoured by a completion certificate.



Mr. Ingole S. M.

Course coordinator

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