



N.S.S.R.s

Vasantdada Patil Arts, Commerce and Science College. Patoda.

Department of Physics

Summary of Certificate Course in Modern Physics

By the prior permission of honorable Principal Professor Dr. Abasaheb Hange sir, Department of physics design and constructed 'Certificate Course in Modern Physics'. It is 32 hours (16 hours theory and 16 hours practical) course.

On the 7th May 2022 the inauguration of Certificate Course in Modern Physics program held at Department of Physics. Professor Dr. Mustajeeb Khan (Director, UGC-HRDC, Foreign Students Cell, Board of Students Development, - Dr. Babasaheb Ambedkar Marathwada University, Aurangabad) as a chief guest and Principal of our college Professor Dr. Abasaheb Hange sir, president of the program. On this occasion our vice principal Prof. Dr. Machale sir, vice principal Dr. Pachkore sir, P.G. Director Dr. Manojkumar Prakash Sir, Junior college vice principal Mr. Patait sir, supervisor Mr. Takankhar sir and our staff member and number of students who admitted to this course are present.

The detail syllabus covered as per schedule on Tuesday theory and Thursday practical excluding holiday, the 14 students enroll for this course, with maximum intake of 20 students. On 06/09/2022 the examination is conducted for 50 marks theory and 50 marks practical. The certificates are distributed on completion of course every students

The main objective is the students are expected to understand the fundamental concepts and recent developments in modern physics, and develop practical skill, is seen to be achieved. This course with student's qualification is priority useful to get the job.

This is the summary of the certificate course in modern physics.

H.O.D.
Department of Physics
Vasantdada Patil College
Patoda, Dist. Beed.

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Vasantdada Patil Arts, Science and Commerce College. Patoda.
Tal. Patoda, Dist. Beed
Department of Physics
Certificate Course in Modern Physics
Admission Form
Academic Year 20 - 20

Batch No.		Photo
Serial No.		
Name of Applicant		
Father's Name		
Date of Birth		
Gender	Male/ Female/ Other	
Category		
Caste		
Educational Qualification		
Address		
Mobile No.		
Email ID		
Aadhar card No.		
Documents attached		

Guardian Signature:

Applicant Signature:

Course Co-ordinator's Signature:

Admission is confirmed to the course: _____

Office Use

Date of Admission:

Receipt No.:

Sign.:

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Tal. Patoda, Dist. Beed

Department of Physics

Certificate Course in Modern Physics

Name of the course: Certificate course in Modern Physics

Course type: Certificate course

Duration: Two month (32 Hours)

Eligibility: Xth or 10 equivalent

Medium of course: English

Theory : 16 Hours (weekly 2 lectures)

Practical: 16 Hours (8 practical's, 2 hours each, weekly 1 practical)

Assessment/Evaluation process: 50 Marks short answer type exam

Objectives:

- Student should be known about basic electronics.
- The students are expected to understand the fundamentals, basic principles, concepts and recent developments in modern physics.
- The relevance of practical with theory is useful to improve the understanding of the concepts.
- Students' base should be preparing for getting deep knowledge in this field.


Learning outcomes:

- Awareness about basic and applications.
- Learning theory to know the properties, characteristics, specifications.
- To develop practical skill to identify, select and know the use of components.

Syllabus:

Sr. No.	Content	Hours
Theory		
1	Units and Measurements: Fundamental and supplementary units, Meter scale, Screw gauge, Vernior caliper. Study if components- Introduction, Active components, passive components, Resistors fixed resistors, carbon composition resistors, wire wound resistors, film resistors, variable resistors, Rheostat. Capacitors function of capacitors, specification of capacitors, classification of capacitors. Inductors function fo inductors, specification of inductors, applications of inductors, classifications of inductors. , Types of diodes, Transformer construction and working, classification of transformer. specifications, applications. Switches types of switches.	8
2	Meters- Introduction, Moving coil Galvanometer, permanent magnet moving coil galvanometer, its advantages and disadvantages, characteristic. Ammeter use and advantages. Voltmeter use and advantages. Ohmmeter use and advantages. Multimeter use as voltmeter and ohm meter. Test Instruments- Introduction Cathode Ray Oscilloscope, Block diagram of C.R.O., function of knobs, vertical amplifier and horizontal amplifier, Time base generator, Different controls. Applications. Signal Generator Block diagram, Types of signal generator, Applications. Frequency counter, Electronic Voltmeter	8
Practical		
1	Meter scale, Least count and measurements. Screw gauge, Least count and measurements., Vernior caliper, Least count and measurements.	4
2	Resistors measurement, Capacitors measurement, Inductors working, Types of diodes identification, Transformer primary and secondary measurement, Switches working.	4
3	Moving coil Galvanometer working, Ammeter measurement, Voltmeter measurement, Ohmmeter measurement, Multimeter measurement.	4
4	Cathode Ray Oscilloscope setting, wave form knowing, measurement of time and amplitude. Signal Generator working, Frequency counter working, Electronic Voltmeter measurement	4
	Total	32


H.O.D.


Principal



Navgan Shikshan Sansths Rajur's
**VASANTDADA PATIL ARTS, COMMERCE
AND SCIENCE COLLEGE, PATODA.
DIST. BEED.**
**DEPARTMENT OF PHYSICS
CERTIFICATE OF COMPLETION**

This is to certify that has
successfully completed **Certificate Course in Modern Physics**
with the duration of 16 theory and 16 practical's, during June – July 2022.

Obtained Grade:

Dr. A. K. Dongare
Head & Course Co-ordinator

Prof. Dr. Abasaheb Hange
Principal



Certificate course in Modern physics
List of students

07-05-2022

- ① Ku Kale Prajaktq Mahadev
- ② Ku Sutar Renuka Harikisan
- ③ Ku Pawal Priti Sambhaji
- ④ Ku Pawal Sukanya Mohan
- ⑤ Ku Shaikh Nuzhat Ubedullah
- ⑥ Ku Shinde Yogita Ranjit
- ⑦ Ku Jawale Ashvini Mahendra
- ⑧ Mr Khandagale Ghaitanya Balu
- ⑨ Mr Pankhade Vinayak Suryakant
- ⑩ Mr Chaure Prithviraj Prakash
- ⑪ Mr Ghumare Vrushabh Rajendra
- ⑫ Mr Ghumare Ajit Vasant
- ⑬ Mr Sonap Shubham Bhagwat
- ⑭ Mr Hingmire Hariom Somnath

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