



Shri Shivaji Education Society Amravati's
Shri Shivaji Science & Arts College
Chikhli, Dist. Buldana- 443201(MS).



Department of Physics

Report on Certificate Course Nanotechnology

- 1) **Title of the Activity:** One Week Certificate Course on Nanotechnology
- 2) **Date:** 02/01/2020 to 10/01/2020
- 3) **Notice:** A leaflet of the program display on notice board
- 4) **Organizer:** Dr. A. M. Garode (Principal)
- 5) **IQAC Cordinator:** Dr. V. U. Pochhi
- 6) **Convenor:** Mr. N. B. Thakare
- 7) **Course Coordinator:** Dr. D.N. Bhoyar
- 8) **Members:** Mr. N.B. Thakare, Dr. V. B. Huse, Dr. P. B. Nalle, Dr. P.P. Padghan, Dr. D.N. Bhoyar.
- 9) **No of Participants:** 120
- 10) **The Practice/Activity:**

Department of Physics of Shri Shivaji Science College Chikhli, organized certificate Course on dated 02/01/2020 to 10/01/2020 entitled, "Nanotechnology." First of all the welcome address of IQAC Coordinator Dr. V. U. Pochhi, after that principal address of Dr. A. M. Garode. At last vote of thanks given by Mr. N. B. Thakare and with the permission of organizer committee member the program ends.

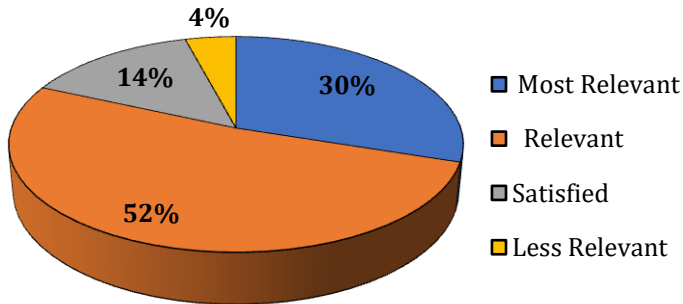
In this course there are 5 module, first module "Introduction to Nanotechnology" taught by Dr. P. P. Padghan. Second module "Nanomaterials" taught by Dr. P. B. Nalle. Third module "Preparation method" taught by Mr. N. B. Thakare. Fourth and fifth module taught by Dr. V. B. Huse "Characterization techniques, by Dr. D.N. Bhoyar Case study". These module taught by teacher in entire week.

Practical session are taken in Department of Physics by all physics teacher with help of non teaching staff Mr. A. B. Bahekar & Mr. R. A. Shaikh.

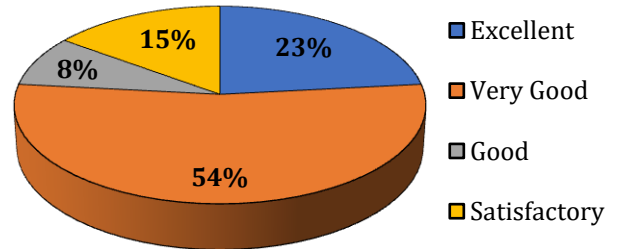
11) Feedback & Action Taken:

Feedback: The overall feedback of the participants about course as follows,

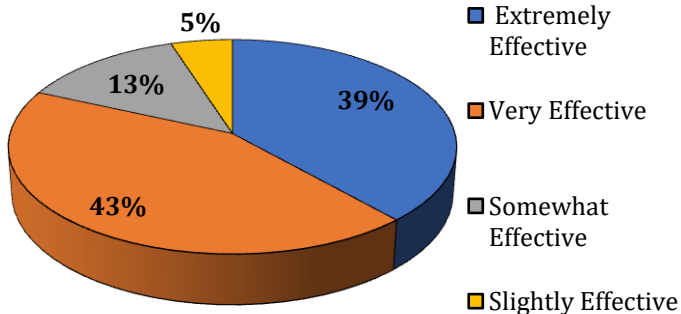
1) How do you rate the relevancy of the theme of the Lecture?



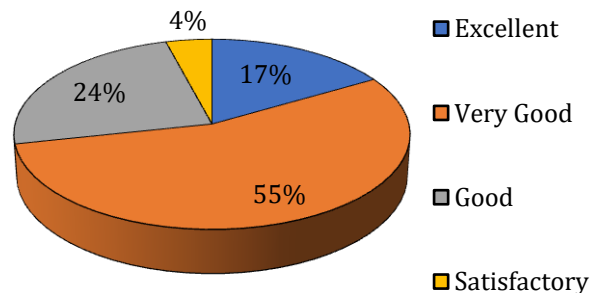
2) How do you find the content of this Course?



3) How do you rate the quality of the delivery of the lecture & practical by the resource person?



4) Please rate your overall knowledge level covered before attending the session



Action Taken:

1. It is decided to organize Certificate Course on Nanotechnology
2. A committee for the organization for the program was formed.
3. The members of the committee are mentioned in above report.
4. The work was distributed among the committee members.
5. A Boucher of the program was prepared and display on the college notice board.
6. Theory & Practical are to be taken
7. This program help to students increase their research knowledge & skill.
8. As a result of participating in the certificate course on “Nanotechnology ” students as well as entre participates will be able to learn and understand nanotechnology and how research works to do in material science. As well as how to prepare nonmaterial using different synthesis technique.
9. Feedbacks of participants were collected analysed.



Shri Shivaji Education Society, Amravati's
Shri Shivaji Science & Arts College Chikhli,
Dist. Buldana

Accredited by NAAC B⁺⁺ Grade (CGPA 2.82)



Department of Physics

Certificate Course in Nanotechnology

Date: 02nd to 10th January 2020

Organizer

Dr. A . M. Garode
Principal

Dr. V. U. Pochhi
IQAC Cordinator

Organizing Committee

Mr. N. B. Thakare
Convener
Head, Department of
Physics

Dr. D. N. Bhojar
Course Coordinator

Dr. V. B. Huse
Member

Dr. P. B. Nalle
Member

Dr. P. P. Padghan
Member

Technical Support

Mr. R. A. Shaikh
Technical Support

Mr. A. B. Bahekar
Technical Support

Certificate Course in Nanotechnology Syllabus

Sr. No.	Course Contents
1.	Module 1: <u>Introduction to nanotechnology:</u> Nano science, nanoparticles, history of nanoparticles, nanotechnology, effect of size on nanoparticles.
2.	Module 2: <u>Nanomaterials:</u> Types of nanomaterials, properties of nanomaterials (structural, morphological, electrical, magnetic, optical, superconductivity) application and drawbacks of nanomaterials.
3.	Module 3: <u>Preparation method:</u> Synthesis of nanomaterials, types of synthesis method, physical method, chemical method, weight chemical method, green synthesis, application and drawbacks of synthesis methods.
4.	Module 4: <u>Characterization techniques:</u> TG -DTA, XRD, FTIR, SEM, TEM, 2/4prob method (DC Resistivity), LCR- Q Meter (Dielectric), VSM etc.
5.	Module 5: <u>Case Study</u> Case study of nanomaterial: oxides, ferrites, perovskite, graphene etc.
6.	Practical: <ol style="list-style-type: none"> 1. Synthesis of oxide using hydro thermal method 2. Synthesis of ferrites using sol-gel method 3. Synthesis of perovskite using solid state method 4. Synthesis of nanomaterials using chemical bath deposition method. 5. Analysis of nanomaterials.

Notes:

1. Minimum marks for passing in theory or practical shall be considered for exemption in theory or practical
2. Minimum pass marks for theory or practical shall be 50% of the maximum marks allotted to the theory or practical.
3. Grade shall be awarded to the successful examinee on securing minimum pass marks in theory and practical.



Shri Shivaji Education Society Amravati

Shri Shivaji Science and Arts College,
Chikhli, Dist. Buldana



Certificate Course on Nanotechnology

This is certified thatShivdeep.....Dilip.....Landkar..... of Shri Shivaji Science and Arts College, Chikhli, Dist. Buldana, Class .B.Sc...-III... has participated in Certificate Course on Nanotechnology organized by Department of Physics Shri Shivaji Science and Arts College, Chikhli, Dist. Buldana. Duration of the Course: ..02.12.2020...30.12.2020

Mr. N. B. Thakare
Course Convenor

Dr. V. U. Pochhi
IQAC Coordinator

Dr. A. M. Garode
Principal