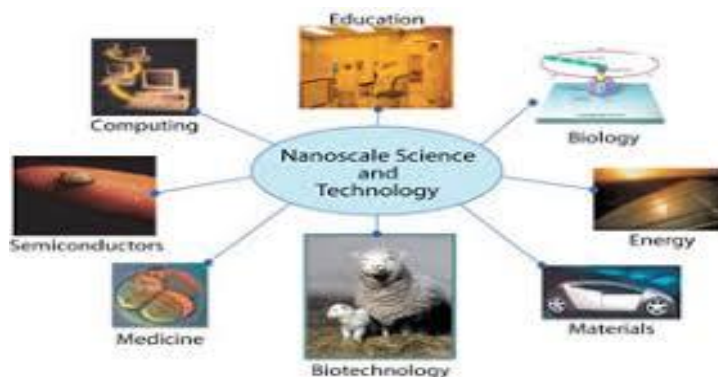




SANT BABA BHAG SINGH UNIVERSITY, JALANDHAR

Value Added Course:

**Nano Science and Technology
for Science and Engineering
Application**



Department of Physical Sciences (UISH)

DATE: 13/07/2020

DURATION: 30Hours

COORDINATOR:

Dr Mithu Maiti Jana

Assistant Professor (Chemistry)

Department of Physical Sciences

University Institute of Sciences & Humanities

Sant Baba Bhag Singh University, Jalandhar



REGISTRATION FORM

Value Added Course on “Nano Science and Technology For science and Engineering Application”

Name_____

Date of birth_____ Department_____

Class/Semester_____

Address for correspondence_____

Contact No. _____

Email _____

Signature of Applicant

VENUE

Block No.5, Room No. 310, Sant Baba Bhag Singh University, Jalandhar, Punjab, India.

For more Information Contact

Dr Mithu Maiti Jana

Assistant Professor (Chemistry)

Room No. 515, Block No.5

Department of Physical Sciences

University institute of Sciences & Humanities

Sant Baba Bhag Singh University, Jalandhar, 144030.

Contact No. 9417226156



APPLICATION FOR CONDUCTING VALUE ADDED COURSES

1. Name of the Department: Department of Physical Science

2. Programme: UG & PG

3. Details of the Value Added Courses:

a. Name of the Value Added Courses : *Nano Science and Technology For science and Engineering Application*

b. Type of Value Added Courses (Theory/ Lab/ Lab integrated Theory/others) : Theory

c. Short Description: Value added courses are the types of courses which help a particular individual to develop their skills in their chosen field of the study. The Value Added Courses aim to provide additional learner centric graded skill oriented technical training, with the primary objective of improving the employability skills of students. In this course students will gain the knowledge about the field of *Nano Science and Technology* which is provide an opportunity to students to develop inter-disciplinary skills

d. Syllabus including:

Week 1: Introduction to Nano science and technology, Synthesis and Characterization of Nanomaterials. Synthesis of different types of nano composites. Instrumentation techniques for characterisation of nano materials like AFM,SEM, TEM, etc

Week 2: Nanotechnology to Various science and Engineering Prospects such as Wastewater Treatment, Chemical Sensor. Applications in Displays and other Devices, Building Materials, Nanotechnology for Sustainable Energy, Solar energy, batteries. Nano carbon Technology and Applications, carbon nanotube.

4. Target audience: UG (B.Sc NM/B.Tech); PG (MSc Chemistry / M.Sc Physics/M.Tech)

5. Details of Faculty handling the course:

a. Name of the Faculty handling the Value Added course : Dr. Mithu Maiti Jana

b. Details including designation and expertise: Assistant professor in Chemistry, Department of Physical Science and Ph. D in chemistry(Material science)

c. Contact details:

Email ID: Maiti.mithu@gmail.com

Phone No: 9417226156

6. Tentative Time Table:

Course Name	Course Code	Duration	Batch Timings	Tentative Batch Start Date
<i>Nano Science and Technology For science and Engineering Application</i>	CHM001	2 weeks (30 hours)	2.5hrs(2.00-4.30pm)	September 2020 onwards

7. Number of students opting for the course: 30-40 (Tentative)**8. Department Consultative Committee:**

S.NO.	Name	Designation	Department	Institute	Position
1	Dr. Nisha Sharma	Coordinator	Physical Science	UISH	Chairperson
2	Dr. Mithu Maiti Jana	Assistant professor	Physical Science	UISH	Member
3	Dr. Ashima Kanwar	Assistant professor	Physical Science	UISH	Member
4	Dr. Inderdeep Singh	Assistant professor	Physical Science	UISH	Member
5	Dr. Honey Sharma	Assistant professor	Physical Science	UISH	Member

9. Name and Designation of the Coordinator:

Dr. Mithu Maiti Jana,
Assistant professor Chemistry,
Department of Physical Science

Head of the Department

(with date & seal)

Dean Academics

Controller of Examination



Value Added Course : Nano Science and Technology For science and Engineering Application

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Course Name	Course Code	Duration	Batch Timings	Tentative Start Date	Batch	Course Coordinator
<i>Nano Science and Technology For science and Engineering Application</i>	CHM-001	2 weeks (30 hours)	2.5hr (2:00pm-4:30 pm)	September 2020..onwards		Dr. Mithu Maiti Jana

Eligibility:

B. Sc/B. Tech /M. Sc/M. Tech

Prerequisites

Students must have learnt Physics/ Chemistry as core subject at undergraduate level.

Course Fee:

Not Applicable

Course Duration information:

2 weeks (30 hours)

Course Syllabus

Week 1: Introduction to Nano science and technology, Synthesis and Characterization of Nanomaterials. Synthesis of different types of nanocomposites. Instrumentation techniques for characterization of nanomaterials like AFM,SEM, TEM, etc.

Week 2: Nanotechnology to diverse science and Engineering Prospects such as Wastewater Treatment, Chemical Sensor. Applications in Displays and other Devices, Building Materials, Nanotechnology for Sustainable Energy, Solar energy, batteries. Nano carbon Technology and Applications, carbon nanotube.

Course outcomes:

After successful completion students will be able to

1. Understand the basics of *Nano Science and Technology*
2. Priliminary methods of different type of nanocomposites fabrication.
3. Understand about different instrumentation techniques like AFM,SEM, TEM for nanomaterial characterization.
4. Understand information about applications of nano composites in medicine, industry etc.
5. Provide an opportunity to develop inter-disciplinary skills for interdisciplinary research.