ABOUT THE INSTITUTION

VimalJyothi Engineering College (VJEC) is an educational project of the Archdiocese of Thallassery established in the year 2002 and is managed by Meshar Diocesan Educational Trust. The college is approved by AICTE and affiliated to APJ Abdul Kalam Technological University (KTU). VJEC is a self-financing catholic minority institution aiming at generating fervor for Engineering and Technology in students. Here we inspire, nurture and foster them to realize their career potential in the field of Engineering and Technology. Further, VJEC is an ISO 9001:2015 certified Institution and also accredited by NAAC and NBA. With profound insight into the resource requirements of the higher education system, VJEC has proudly set up world-class infrastructure complemented with intellectual capital in the form of competent faculty. Many of the facilities are way beyond the regulatory requirements aiming for learning beyond the syllabus to address the requirements of the industry. These material facilities along with value addition programs and student support systems are the integral facets of empowerment at VJEC. Digital library, industry supported project labs, language lab, and student chapters of professional bodies such as IEEE, ISOI, IETE, SAE, CSI offer an extensive range of resources, opportunities and services to the outcome based teaching learning process. Effective implementation of quality control processes ensure Engineering graduates with the expected level of knowledge, skill and attitude.

ABOUT THE DEPARTMENT

The Mechanical Engineering Department was established in the year 2004. The Department offers students the opportunity to pursue an exceptional, high quality education. It has been recognized as Research Centre to have interaction with KTU University, Kerala for collaborative research programme which leads to Ph.D. degree by research.

The Department is one of the largest in terms of faculty, students, & activities and continues to lead and expand its activities in various directions. The Department has a distinguished faculty, dedicated staff and superb student body that effectively work together to fulfill the academic mission. The academic activities are supported by seven well equipped laboratories/research centres.

ABOUT THE COURSE

Nanomaterials are a rapidly developing field, which includes a diverse collection of disciplines. The applications of nanomaterials are gaining overwhelming response in almost all the fields. Introduction and scope, nanostructures, effect of nanoscale dimensions on various properties, Fabrication methods, characterisation methods, applications of nanomaterials and nanocomposites. Especially in healthcare sector, tremendous developments have been achieved. In the coming years, the developments in this field are expected to fluorish and lead to several life-saving medical technologiesand treatment methods and other applications such as aerospace,automobile and electronics components.

RESOURCE PERSONS

Dr. P. Kuppusami,Ph.D.,Senior Scientist- IGCAR
Dr.T.P.D.Rajan, Ph.D.,Principal Scientist - CSIR
Dr.BalaprasadAnkamwar, Ph.D., (University of Pune)
Dr.Nishanth K G, Ph.D.,Scientist - CSIR
Dr.N.Selvakumar, Ph.D., MEPCO.Sivakasi.
Dr.Jeyasubramanian, Ph.D., MEPCO, Sivakasi.
Dr. A Subramania, FRSC, Pondicherry University),
Dr.Nigil Thomas, Ph.D., (Nirmalagiri College)
Dr.GurumurthyHegde, Ph.D., (BMS College of Engineering)
Dr. KaviyaSomasundaram, Ph.D., (IISc Bangalore)
Dr.L.Muthulakshmi, Ph.D.,Madurai Kamaraj University.
Dr. P. Thiruramanathan,Ph.D., (RIT, Rajapalayam),
Dr. Gokul, Ph.D., (College of Engineering)
Dr.G.S.Hikku, Ph.D., (Chettinad Academy of Research & Education)

OBJECTIVES

To introduce nanomaterials and nanocomposites

- ✓ Biosynthesis and characterization techniques used in nanomaterials.
- ✓ Powder Metallurgy based Nanocomposites

EXPECTED OUTCOMES

The participants will be able to

- ✓ Understand properties of materials at nanoscale
- ✓ Hands on training for synthesis and preparation of nanoparticles.
- ✓ Characterization methods used in nanomaterials.
- ✓ Fabrication techniques of Nanocomposites
- ✓ Acquaint with the various applications of nanomaterials and nanocomposites

COURSE CONTENTS

- ❖ Green Synthesis of Metal Nanoparticles from plant extracts
- ❖ Green Synthesis of Metal Oxide Nanoparticles from plant extracts
- ❖ Chemical reduction of metal nanoparticles
- ❖ Synthesis of metal oxide Nanoparticles using gel combustion technique
- ❖ Synthesis of metal oxide Nanoparticles using precipitation technique
- ❖ Synthesis of Ferro fluid nanoparticles
- ❖ Preparation of Thin film by Spin coating technique
- ❖ Electrode Deposition Technique of metal nanoparticles
- ❖ Preparation Superhydrophophic coating for self-cleaning application.
- ❖ Synthesis of metal oxide Nanocomposites using Co-precipitation technique
- ❖ Powder Metallurgy Techniques used to prepare Nanocomposites and its applications
- ❖ Nano Catalysis.
- ❖ XRD, SEM, TEM characterization.

REGISTRATION FORM

One Week Hands on Training Programme on "Preparation and Synthesis of Nanocomposites and Nanomaterials"

Name :

Institution :

Educational Qualification :
Gender :
Accommodation needed : Yes / No
Address for :

Communication

Pin code :
Phone (Mobile) :
E-mail ID :

Declaration

The information given above is true to the best of my knowledge. I agree to abide by the rules and regulations governing the course. If I am selected I will attend the course for entire duration.

Place:Signature of Applicant

Date:

Signature and seal of
the Head of Department

REGISTRATION FEES

The Registration fee is Rs.4500/-, No. of Participants are restricted to 30. Students and faculties from all Engineering and Arts & Science Institutions are requested to fill the registration form and send the photocopy of the filled registration form and payment receipt to this Email.ID: christopher0420@vjec.ac.in or Whatsapp No.6374805245. Last Date for Registration: 22-11-2019. Registration can be done through NEFT, Google pay, etc. to this account number 24273070000040, IFSC Code: SYNB 0002427, Bank Name: Syndicate Bank, Vimal Jyothi Extension Counter. Any Quires please contact the coordinator Phone: 8300352566.

NOTE:

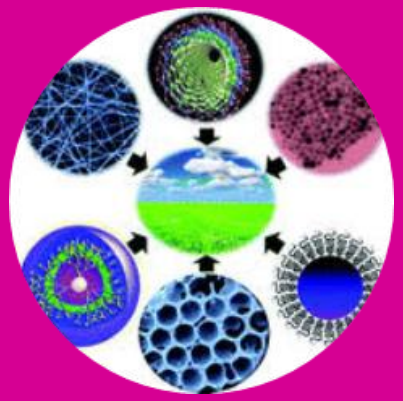
Training provides preparation of nanomaterials by chemical and biological methods and their applications in biomedical and other engineering related fields. Powder metallurgical preparation of nanocomposites provides the testing of material like Electrochemical corrosion, Tribological testing, testing of mechanical properties, etc., end of the training programme the students should be enriched in doing their project work as a group or individuals.

SPOT VISIT:

Visiting tourist places near kannur as part of the programme such as palakkayamThattu, Paithal mala hilltop hike, St.Angelo Fort, Muzhappilangad Beach, Tagore Park Mahe (union territory of Puducherry), Aralam wildlife Sanctuary, Coorg, ThalaKavery, etc.,

One Week Hands on Training Programme on "Preparation and Synthesis of Nanocomposites and Nanomaterials"

09.12.2019 -15.12.2019



Co-ordinators

Dr. S.ChristopherEzhil Singh, M.E., Ph.D.,

Dr.P.Sridharan, M.E., Ph.D.,

Organized by

Department of Mechanical Engineering

Vimal Jyothi Engineering College

Accredited by NAAC and NBA

Chemperi, Kannur, Kerala - 670 632.

Web:www.vjec.ac.in