

Certificate Course on Composites

offered by
**Department of Polymer and Surface Engineering (DPSE),
Institute of Chemical Technology, (ICT), Mumbai
and
FRP Institute, Chennai.**



Scope of the certificate course:

To teach and equip candidates participating in the certificate course to have sound technical knowledge on Composites by giving them broad outlook on composites subjects covering raw materials, processing, application, testing and quality control.

This course will give necessary inputs for the four major categories of human skill requirements in the composites industry such as manufacturing, quality control, marketing and purchase departments.

Starting Date for the Certificate Course:

Course will start on 20th (Friday) December 2013

Course Duration :

4 months

Qualification to for the candidates

- (i) Diploma holders with 2 years work experience in composites industry
- (ii) B.Sc Graduates with specialization in Physics, Chemistry, Materials science
- (iii) B.E, any specialization

Class hours (only on week ends)

Friday 2.00 PM to 7.30 PM (5 hours lecture- Half an hour break)

Saturday 11.00 AM to 5.00 PM (5 hours lecture)- (one hour break for lunch)

Number of candidates for the course : 25

Course Fees : Rs.32,000* per candidate for members of FRP Institute

Rs.35,000* per candidate for non members

(*includes 12.36% service tax)

Selection of candidates :

Candidates will be selected for the certificate course based on a written test / interview.

Industry visit:

Industry visits will be arranged to give the candidates practical knowledge on composites materials and processes.

Student Evaluation:

Attendance of the candidates will be monitored and a final written test will be conducted.

About ICT Mumbai :

Established 77 years ago with the noble intention of advancing India's knowledge reserves in chemical science and technology, the Institute has grown to become a premier (deemed) university devoted to education, training, research and industrial collaboration in chemical engineering, chemical technology, applied chemistry, pharmacy, biotechnology and bio-processing. The list of achievements of this great centre of learning is voluminous and ever since its inception, the Institute has been a fertile breeding ground for some of India's most gifted minds. The Institute's alumni have distinguished themselves in all walks of life, be it in industry, academia, government or public service in India as well as abroad. Some of the rare international honours have been bestowed upon them and some have been role models, serving the nation.

FRP Institute :

FRP Institute is a registered non profit professional society based in Chennai. This organization was formed in 1999 and has members ranging from large multinational corporations to small fabricators spread all over the country. The member list include raw material suppliers, fabricators, machinery manufacturers, scientists, composite specialists, consultants, designers, educational institutions etc. The Institute works in close collaboration with the industries and institutions for upgrading the Composites Technology and to promote the growth of the Indian composites industry.

The Institute organizes International Conference and Exhibition on Reinforced Plastics (ICERP) event every two years. The Institute has successfully organized six ICERP events since 2002. The ICERP series event has become an ideal platform for the foreign companies to make joint ventures and collaborations with Indian companies and it has also created an opportunity for the Indian composites companies to showcase their capability to the Global Composites fraternity.

National Conferences :

FRP Institute jointly organized three National Conferences in association with Fibreglass Industries Association of Andhra Pradesh (FIAAP), at Hyderabad in the year 2009, 2010 and 2012. All three events were supported by Karnataka Association of Fibreglass Industries (KAFI), Bangaluru, Micro, Small and Medium Enterprises Development (MSMED), Hyderabad and Advanced systems laboratory of Defence Research and Development Organization (DRDO), Hyderabad

Certificate Course Syllabus :

Introduction to Materials, Raw materials in Composites Industry: Resins: Unsaturated Polyester, Epoxy, Vinyl ester, Phenol formaldehyde, Polyurethane, Other resins, Fibres: Glass fibres, Carbon fibres, Aramid fibres, Natural fibres.

Speciality Materials : Additives, Speciality chemicals, Fillers, Core materials, Prepregs, Composites Manufacturing processes: Hand lay up, Filament winding, Vacuum infusion method, Pultrusion, SMC / BMC, RTM / LRTM / RRIM, Autoclave moulding, Compression moulding, Spray up, Thermoplastic composites processing

Sandwich construction, Textile Composites, Natural fibre Composites, Nano composites, Mould making.

Composites Applications in various sectors:

Wind energy, Infrastructure, Automotive, Electrical, Aerospace & Defence, Marine, etc. Testing of Composites, Standards IS, ASTM, Property evaluation: Tensile, Flexural, Impact, Compression, NDT of Composites, Quality control: Quality standards – ISO 9000, TQM.

Testing & Quality Control :

Common problems and their solution : With respect to raw materials and products manufactured through various processes.

Handling, Storage and safety of Materials and working environment, Lab / Practicals, Industry visits , Recycling/ disposal, Composites Market trend in India and world wide, Project work (optional)

Both academic and industry experts will be delivering lectures in the Certificate Course on Composites Technology at DPSE, ICT, Mumbai.

For Any further information, please contact:

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