

Program

Day-1: 25th July, 2016

09:00 AM-10:00 AM	Registration
10:00 AM-12:00 PM	Inauguration , Introduction and Course overview
12:00 PM-01:00 PM	Lunch
01:00 PM-02:00 PM	Chemistry lab visit & Introduction to Analytical Instruments
02:00 PM-03:00 PM	Chemical Engineering lab visit & Introduction to Analytical Instruments
03:00 PM-04:00 PM	Environmental Engineering lab Visit & Introduction to Analytical Instruments
04:00 PM-5:00 PM	Solar research lab visit & Introduction to Instruments

Day-2: 26th July, 2016

09:00 AM-11:00 AM	Analytical methods, Procedure & Protocols overview by Prof. Nirendra Misra.
11:00 AM-12:00 PM	Classification of Instrumental Techniques and Instruments used for Analysis by Dr. Rajib Bandyopadhyay
12:00 PM-01:00 PM	Lunch
01:00 PM-02:00 PM	Introduction and Application of Infrared Spectroscopy by Dr. Manoj Pandey
02:00 PM-05:00 PM	Practical session on FT-IR Instrument (Perkin-Elmer, Spectrum-II) and analysis of samples (3 Parallel sessions)

Day-3: 27th July, 2016

09:00 AM-10:00 AM	Fundamental Principles of Measurements, tolerance and significant figures by Prof. Nirendra Misra
10:00 AM-12:00 PM	Introduction to Various Chromatography Techniques by Dr. Manoj Pandey
12:00 PM-01:00 PM	Lunch
01:00 PM-05:00 PM	Purification and analysis of samples by using TLC, Chromatotron, Column chromatography (3 Parallel sessions)

Day-4: 28th July, 2016

09:00 AM-11:00 AM	Fundamental Principles of Gas chromatography by Dr. Rajib Bandyopadhyay
11:00 AM-12:00 PM	Introduction to Mass spectroscopy & GCMS by Dr. Pravin Kodgire
12:00 PM-01:00 PM	Lunch
01:00 PM-05:00 PM	Purification and analysis of samples by using Gas chromatography and GC-MS, (3 Parallel sessions)

Day-5: 29th July, 2016

09:00 AM-10:00 AM	Fundamental Principles of UV-Vis. Spectroscopy by Dr. Anurag Kandya
10:00 AM-12:00 PM	Analysis of samples by using UV-Vis Spectrophotometer (3 Parallel sessions)
12:00 PM-01:00 PM	Lunch
01:00 PM-05:00 PM	Introduction to XRD, FE-SEM and Practical session by Dr. Indrajit Mukhopadhyay (3 Parallel sessions)
05:00 PM-06:00 PM	Validatory

Organising Committee:

Patron:

- Prof. H.B. Raghavendra (Director, SoT, PDPUP)

Convener:

- Prof. Nirendra Misra (HOD, Dept. of Science, SoT, PDPUP)

Coordinators:

- Dr. Rajib Bandyopadhyay (Chemistry)
- Dr. Manoj Pandey (Chemistry)

Supporting members:

- Dr. Indrajit Mukhopadhyay (Solar Research)
- Dr. Pravin Kodgire (Chemical Engineering)



ISO 9001:2008



SHORT TERM TRAINING PROGRAMME

INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS

A

Skill Development Initiative for Chemical & Pharmaceutical Industries

25th -29th JULY, 2016



Organized by

Department of Science
School of Technology

Pandit Deendayal Petroleum University
Raisan, Gandhinagar, Gujarat-382007

Sponsored by

Torrent Pharmaceuticals Limited

Ahmedabad, Gujarat, India

About the University

Pandit Deendayal Petroleum University (UGC recognized) has been established by the Gujarat State Legislative Act in 2007. The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities. It intends to broaden the opportunities for students and professionals to develop core subject knowledge which are duly complemented by leadership training interventions, thereby helping the students to make a mark in the global arena. This objective is being further addressed through a number of specialized and well-planned undergraduate, post-graduate and doctoral programs as well as intensive research projects. In addition to this, PDPU offers multiple courses ranging from engineering, arts and management along with maximum exposure and opportunities to its students through various National and International exchange program with a number of acclaimed University worldwide.

About the Science Department

Department of Science as a part of School of Technology since 2011, is actively engaged in research and teaching in the frontier areas of Chemistry and Physics. The department offers Ph.D. program in Chemistry & Physics and offering B.Sc. (Hons.) programme in Chemistry and Physics this year onwards. Department is also likely to offer certificate course on 'Instrumentation & Analytical Techniques for Chemical Analysis', a step towards skill development of students for Chemicals and Pharmaceutical industries. The Department of Science has well equipped laboratories with advanced analytical and computational facilities. Department has taken an initiative for setting up 'State of Art Analytical laboratory'. The department has talented faculties with Ph.D and Post Doctoral experience with strong commitment to teaching and research.

Objective of the workshop

Most of the science graduate students do not get exposure to instruments during their study. Instruments have taken precedence over classical methods of chemical analysis due to their speed, sensitivity, detection limit, reproducibility and several other factors. In order to have proper operation and utilisation of instrument, basic understanding of the instrument is required. This course would give them an opportunity to get familiarize with the instruments and their analytical skills. Course benefits can be reaped in getting better job opportunities in Chemicals and Pharmaceutical industry.

With this objective, a course on **Instrumental methods of Chemical Analysis** has been designed to be held at PDPU from **25th - 29th July 2016**. The course is for **Under-Graduates / PG students/ Research scholars/ Working personnel** who would like to hone their fundamental skills, learn more of modern trends in analytical chemistry and about contemporary techniques. The course would have theory, practical and interactive sessions. Blend of acquired knowledge and hands-on experience of relevant equipment would surely keep one ahead in career path.

Topic to be covered, include:

- Analytical techniques; methods, procedures & protocols
- Fundamental principles of measurements, tolerance & significant figures
- Classification of instrumental techniques & instruments used for analysis
- Theory and practice: XRD, FE-SEM, FT-IR, Chromatography (TLC, Column chromatography, Chromatotron, GC, GC-MS), UV-Visible spectrometer, Data refinements and statistical analysis

Who can participate?

B.Sc., M.Sc., & Ph.D. students, professionals working in industry and any other interested individual can apply

Duration : 5 day (Accommodation available on payment basis in PDPU Boys & Girls hostel on request)

Course fee : Rs. 5000/- for working personnel
Rs. 3000/- for students

Venue : School of Technology, PDPU
Raisan, Gandhinagar, Gujarat.

Contact: Dr. Manoj Pandey, Assistant Professor

(STTP Program, Co-ordinator)

Department of Science, SoT

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Visit: <http://sot.pdpu.ac.in/sciencedept.html>

Registration form

1. Name: _____
2. Gender: Male/ Female
3. Qualification: _____
4. Designation & Affiliation: _____
5. Address: _____
6. Email: _____
7. Mobile: _____

Last date of Registration: 20th July, 2016

Register online:

<http://goo.gl/forms/OD1qVet5AkvOorBO2>

I enclose a demand draft of _____ Rs. Drawn in favour of " Pandit Deendayal Petroleum University", Payable at Gandhinagar, Gujarat- 382 007 or deposited Rs._____. through NEFT (State Bank of India, IFSC: SBIN0014937, A/C Name: Pandit Deendayal Petroleum University, A/C No.: 31803338764).

Transaction ID/DD No.:

Name of the Bank & Branch: _____