

**SPT**  
SCHOOL OF  
PETROLEUM  
TECHNOLOGY

**ENGINEERING  
MASTERMINDS**

આદ્ય પેટ્રોલિયમ યુનિવર્સિટી



# PDP U

**PANDIT DEENDAYAL PETROLEUM UNIVERSITY**

**Dialogue India  
National  
Ranking**  
For Private  
Higher Education  
Institutions in India  
**RANKS**  
**PDP U**  
**1<sup>st</sup>**  
IN GUJARAT  
**2<sup>nd</sup>**  
Best  
Private University  
in India

**National  
Institutional  
Ranking  
Framework**  
Ministry of  
Human Resource  
Development,  
Govt. of India  
**RANKS**  
**PDP U**  
**1<sup>st</sup>**  
IN GUJARAT  
**55<sup>th</sup>**  
Best  
University  
in India



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Educational Advisor

**Dr. H. B. Raghavendra**  
Director, School of Technology  
Pandit Deendayal Petroleum University

**Prof. Nigam Dave**  
Director, School of Liberal Studies  
Pandit Deendayal Petroleum University

## VISION

To be an internationally renowned and respected Institution imparting excellent education and training based upon the foundation of futuristic research and innovations.

## MISSION

Undertake unique obligation for Education in Energy Engineering and Management with special responsibilities in domain specific aspects of Energy & Infrastructure.

Seek to nurture students of extraordinary motivation and ability and prepare them for life-long learning and leadership in an increasingly knowledge driven world.

Envisage to establish institutes of excellence in education, competitive edge in research and real time relevance with futuristic thrusts in offering of programmes and undertaking of activities and projects.

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## President's Message

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**Dr. Mukesh Ambani**  
*President*

Pandit Deendayal Petroleum University

With Pandit Deendayal Petroleum University, we envisioned the creation of a world-class university. To be one of the front-runners in imparting education in the fields of energy & infrastructure, humanities, engineering, management, and liberal arts. I am exuberant to announce that Pandit Deendayal Petroleum University (PDPU) is now one of the leading international universities in India. In a short span of eight years, PDPU has reached a crucial juncture when a major transformation is taking place in the world economy. PDPU now is old enough to create young professionals who impart significant contributions to the economic and the social landscape of India.

Today the corporate world seeks a generation of young people who are not only academically sound, but are also able to think innovatively. I feel proud to see the holistic education system of PDPU successfully bringing the best out of the students. I'd like to reiterate my whole-hearted support for PDPU and wish them all the very best for their future endeavors and accomplishments.

All the Best!

## Director General's Message

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**Dr. C. Gopalkrishnan**  
*Director General (Interim)*

Pandit Deendayal Petroleum University

Greetings from Pandit Deendayal Petroleum University (PDPU), Gandhinagar, Gujarat.

I am happy to present to you students of 2017 batch who will be completing their education at PDPU's School of Petroleum Technology for potential employment in your organization. The students have undergone rigorous and professional engineering education programme under the guidance of highly trained faculty at PDPU and are industry ready to make their careers in business and industry. These students were admitted to PDPU on the basis of meticulous screening process, such as JEE (Main), and ACPC.

PDPU, developed on a 100 acre green landscaped sprawling campus, is located in the planned city of Gandhinagar, the capital of the state of Gujarat. The campus has all the modern facilities like beautiful academic and residential buildings, modern class rooms, internet and Wi-Fi, state-of-the-art laboratories, computational facilities, well-stocked library, excellent cafeteria, wellness centre etc. I am confident that the students will make a good impression with their sound conceptual knowledge, technical skills, and work and professional ethics. The students are well equipped with necessary skills to perform effectively in any environment. I am sure you may like to take advantage of talent nurtured by PDPU, and induct them into your organization.

I, on behalf of PDPU, welcome you to participate in our Campus Recruitment Programme. It would be my proud privilege to host you on the PDPU campus.



# About the University

**Pandit Deendayal Petroleum University addresses the need for trained and specialized human resource and expand the opportunities for students and professionals to develop intellectual knowledge base with leadership skills to compete in the global arena. This objective is being addressed through a number of specialized and well-planned undergraduate and post-graduate energy education programs and intensive research initiatives.**

Since its very inception, Pandit Deendayal Petroleum University has been striving to develop itself into an internationally renowned & respected Institution imparting excellent education & training based upon the foundation of futuristic research & innovations. With the path-breaking innovations in both its curriculum and research, the university is rapidly gaining a legendary reputation in the industry across the world.

In addition to offering formal Undergraduate, Post-graduate & Doctoral Programs, the university actively encourages its faculty members and other academic staff to undertake research projects in order to strengthen the research profile of the university. Research and development is carried in various engineering & technology sectors like Petroleum, Geothermal Energy, Solar PV, Battery & Energy Storage, Biofuels & Bioenergy, Automation Sector, Chemistry and Welding Technologies.

Currently PDPU has five (5) Centre of excellences which are on

**SOLAR RESEARCH & DEVELOPMENT CENTRE**

**CENTRE OF EXCELLENCE FOR GEOTHERMAL ENERGY**

**SIEMENS CENTRE OF EXCELLENCE FOR AUTOMOTIVE SECTOR**

**CENTRE OF BIOFUEL & BIOENERGY STUDIES**

**GUJARAT ENERGY INNOVATION CENTRE**

The University's mission is nurtured and supported by:

- exceptional faculty, who draw students into the pursuit of knowledge, introducing them to the pleasures and responsibilities of the life of the mind in a challenging world.
- graduate, professional, and research programs that foster advanced theoretical development, promote professional preparation, enhance the quality of the faculty, and extend the University's international reach;
- substantial library resources and information technology that support research and classroom learning;
- a residential campus that fosters a sense of community and integrates curricular and extracurricular life; and
- abundant opportunities for students to undertake community service, internships, and study abroad; to participate in substantive research, often as early as the first year; and to study and reflect in ways that foster intellectual, spiritual, and moral growth.

PDPU's lush green & clean campus is located on Knowledge Corridor in the periphery of Ahmedabad & Gandhinagar. The state's remarkable cultural, technological, and economic resources nourish the University's mission and enrich its life, just as the University, in turn, enriches the city.

## UGC Recognition

PDPU is recognized by the UGC - University Grants Commission under Section - 2(f) of the UGC Act, 1956 and included in the list of approved universities in India listed by UGC Approved Universities

## ISO 9001:2008

PDPU has got ISO 9001:2008 Certification for Design, Development & Delivery of Higher Education Programs & Training.

## PDPU Act

Pandit Deendayal Petroleum University (PDPU), Established by the PDPU Act 2007; Acts of the Gujarat Legislature and Ordinances promulgated and Regulations made by the Governor, in the State of Gujarat, India on 4th April 2007.

## SIRO

Government of India, Ministry of Science and Technology, Department of Scientific and Industrial Research has accorded recognition to Pandit Deendayal Petroleum University (PDPU), Gandhinagar as Scientific and Industrial Research Organization (SIRO). On receiving this recognition, PDPU is entitled to all administrative support from the Ministry of Science and Technology (DSIR), as may be required on all issues to promote or encourage scientific research activities. Also the University will be entitled to avail custom / excise duty exemption on the import of equipment, instruments, spares thereof, consumables etc.

DSIR, a Government of India body that undertakes promotion of research and transfer of technology to India, carries out thorough evaluation of the R&D unit and ensures compliance with all Government of India regulations before awarding renewals. The recognition and duty waiver is awarded every three years.

## Association of Indian Universities

PDPU has been granted membership by the Association of Indian Universities. PDPU for strategic planning process including guidelines for assessing on-campus international partnership capacity and developing practical strategic plans for partnership activities in India have planned a collaboration with The International Academic Partnership Program (IAPP), originally funded by the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE), is a major initiative of IIE's Center for International Partnerships in Higher Education.

## Director's Message



### Anirbid Sircar

Director - School of Petroleum Technology

Pandit Deendayal Petroleum University

I feel immensely privileged in extending my whole hearted invitation to your esteemed organization on behalf of the staff and students of School of Petroleum Technology, to participate in the campus recruitment program for 2016-17.

From the moment of its inception, School of Petroleum Technology has witnessed an enthralling elevation in the field of academic excellence, research, development and industrial collaboration. SPT has a good alumni base in Oil and Gas Industry. I feel proud to say that within a short span of time, SPT has built a good reputation with the industry and our placement is reflecting the same.

The Petroleum Engineering program offered at SPT covers the entire value chain from the exploration of hydrocarbon till the supply of petroleum products to end users. Keeping this in mind SPT offers B.Tech degree in Petroleum Engineering with majors in Upstream and Downstream. Our academic programs are amongst the best in the country. The school provides an optimum mix of theory and practical, with strong emphasis on industrial applications. The program gives a lot of importance to practical experience for which extensive interaction with industry is built into the curriculum. SPT organizes expert lectures, conclaves, seminars and workshops and collaborative projects with industry. This makes the students aware of the industry expectations, which in turn helps in making them not only employable but deployable as well.

The School of Petroleum Technology has always been at the fore-front of producing some of the most efficient and innovative engineers in the industry and I hold faith that the students of this year are no less.

I am sure you will find our students are very competent and you will visit us again, year after year. I look forward to a warm and enduring relationship.



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Energy and energy infrastructure are critical to any economy for development and sustainability. India has recognized this fact and has embarked upon a comprehensive strategy to address the concerns of energy security of India. The need for a resource centre was anticipated to keep pace with the fast developing and competitive energy industry, to plan for the future and to continuously build requisite intellectual capital and human resource capability.

**We, at the School of Petroleum Technology (SPT), envisaged the increasing need for well-trained Engineers suited for this sector, and started the B.Tech Programme with a focus on the Oil & Gas sector.**

School of Petroleum Technology has been set up under Pandit Deendayal Petroleum University (PDP) as a centre of excellence to develop human resources to cater to the petroleum and allied energy sectors, improve knowledge base of technologists and provide a competitive edge to professionals in the global arena. It has been promoted with the initiative of Gujarat State Petroleum Corporation Ltd. (GSPC) a Gujarat government undertaking, which is a leader in the energy sector

**School of Petroleum Technology offers Undergraduate and Postgraduate Programmes in Petroleum Engineering, namely B.Tech, M.Tech and Ph.D.**



B.Tech

# PETROLEUM ENGINEERING

The 4 Year B.Tech Programme in Petroleum Engineering is based on integrated approach of relevant basic sciences and engineering and Oil & Gas industry technology operations and emphasis in the application of these knowledge base to exploration, drilling, production, reservoir engineering, pipeline engineering refinery operations, LNG value chain, petrochemicals and gas processing. Total intake is 120 students.



Students in the petroleum engineering program will be taken on a holistic journey of the entire value chain starting from exploration of hydrocarbons to the supply of petroleum products to end users. Keeping this in mind the bifurcation of Upstream and Downstream is carried out.

The major subjects covered in the curriculum of PETROLEUM UPSTREAM are Reservoir Engineering, Operation and Production Engineering, Drilling and Well Completion, Enhanced Oil Recovery etc. The major subjects covered in the curriculum of PETROLEUM DOWNSTREAM are Processing, Marketing and distribution of crude oil and natural gas& its by-products, Refining of petroleum crude, LNG value chain, Pipeline engineering etc.

# Course Structure

## B.Tech Petroleum Engineering



### Petroleum Upstream

Present in India's most prolific on-shore basin and in close proximity to some of the most productive regions of India, SPT students have a very good exposure of the upstream industry. With specialised courses in Workover and Stimulation, Surface Production Operations, Well Test Analysis, Enhanced Oil Recovery, Drilling and Drilling Fluids, the course equips the students with essential skills to tackle the challenges faced by the oil and gas professionals today. Projects aided by the industry encompassing the entire spectrum of the upstream sector have added to the knowledge and skill sets of our students. It is hence implied that the students of the upstream class of petroleum engineering enjoy a niche knowledge base topped with several lectures, workshops and training sessions by engineers, managers and technicians from across the oil and gas value chain.

### Petroleum Downstream

The course structure is exclusively designed to provide students a better understanding of challenges in Refining, Petrochemicals, LNG, Sourcing and Distribution sector of Oil and Gas industry. The academic curriculum of Downstream Majors is perpetually evolving to adapt to the ever changing global requirements along with the diversity of the fields of study. The classroom learning is further augmented by a number of workshops and guest lectures by industry experts which ensures a continuous industry interaction process that aims to provide students with an insight into current trends. The virtue of being located in Gujarat, the refinery and petrochemical capital of our country is an added advantage to the students to get extensive industrial exposure.

#### UPSTREAM

##### Semester I

- Mathematics - I
- Engineering Graphics
- Applied Mechanics
- Chemistry
- W.S. Practice
- Basic Environmental Studies
- Computer Programming
- Introduction to Petroleum Engineering

##### Semester II

- Mathematics - II
- Engineering Materials
- Element of Civil Engineering
- Element of Electrical Engineering
- Element of Mechanical Engineering
- Physics
- Communication Skills

##### Semester III

- Mathematics - III
- Petroleum Geology
- Thermodynamics of Reservoir Fluids
- Earth Science
- Energy Resources
- Basics of measurement and control
- Sedimentary Geology
- Petroleum Chemistry

##### Semester IV

- Fluid Flow in Porous Media
- Geo Mechanics & Strength of Material
- Drilling Fluids and Cementation
- Drilling and Well Completion
- Well log and Formation Evaluations
- Petroleum Exploration
- Earth Science & Hydrocarbon Exploration Fieldwork
- Gandhian Thoughts

##### Semester V

- Assessment of Petroleum Reserves
- Natural Gas Engineering
- Petroleum Production Engineering
- Reservoir Engineering
- Transport Phenomena
- Group Assignment and Presentation
- Industrial Orientation

##### Semester VI

- Contracts in Hydrocarbon Industry
- Introduction to Research Methodology
- Surface Production Engineering
- Well Test Analysis and EOR
- Petroleum Engineering Lab
- Seminar
- Advanced Drilling
- Advanced Numerical Methods
- Prime Movers, Pumps and Compressors
- Petroleum Equipment Design

##### Semester VII

- Unconventional Hydrocarbon Resources
- Integrated reservoir management and oil & gas field development
- Artificial Lift Techniques
- Work over and Stimulation
- Reservoir Modelling and Simulation
- Pre Project Dissertation & Seminar
- Industrial Training and Viva-Voce

##### Semester VIII

- Management in Hydrocarbon Industry
- Safety, Health and Environment
- Pipeline Engineering
- Offshore Production Operations
- Major Industrial Project work
- Grand Viva
- Elective - 1  
→ Petroleum Refining and Petrochemical  
→ Unit Operations in Petroleum Industry

#### DOWNSTREAM

##### Semester V

- Petroleum Process Unit Operations
- Natural Gas Processing
- Hydrocarbon Based Fertilizer Industries
- Product Application Lab
- Group Assignment and Presentation
- Transport Phenomena
- Elective - 1  
→ Time Series Analysis  
→ Enhanced Oil Recovery

##### Semester VI

- Polymer Science and Technology
- Contracts in Hydrocarbon Industry
- Petrochemical Engineering - I
- Petroleum Refinery Engineering
- Design of Hydrocarbon process Equipments
- Petroleum Product Testing Lab
- Advanced Numerical methods
- Seminar
- Introduction to Research Methodology

##### Semester VII

- City Gas Distribution
- Petrochemicals Engineering - II
- LNG Value Chain
- Chemical Reaction Engineering
- Industrial Training and Viva-Voce
- Pre Project Dissertation & Seminar
- Transportation and marketing of petroleum and its products

##### Semester VIII

- Safety, Health and Environment
- Pipeline Engineering
- Regulatory and Policy Issues in Hydrocarbon Sector
- Management in Hydrocarbon Industry
- Major Industrial Project Work
- Grand Viva
- Elective - 2  
→ Petroleum Production Engineering  
→ Unconventional Energy Resources



# LAB FACILITIES

SPT believes in an application based teaching approach rather than a theoretical approach. The School has created a number of sector relevant engineering laboratories which are well equipped to facilitate the pedagogic and research process. SPT has set up state-of-the-art Lab Facilities for the students where they not only perform experiments designed based on the theoretical studies, but are also provided a platform to take up research studies as well. The practical classes are well integrated into the curriculum, but the school encourages even more extensive use of these facilities to nurture a research led environment. The labs are being continuously upgraded with new equipment, to strengthen the research work of the M.Tech and Ph.D students who rely extensively on experiments to validate their work.







### Earth Science

The objective of this lab course is to make students understand the basic properties of rocks and minerals and identify them in hand specimen and under microscope. This enables them to understand the structural geology and mineralogy of the samples as well. They are exposed to the utilization of geological maps and various geological tools.



### Geomechanics and Strength of Materials

The objective of this lab course is to make students understand the mechanical properties of rocks and its application in upstream hydrocarbon industry. The students analyse the pore structure, compressive and tensile strength ductility, hardness, brittleness, elasticity, fatigue limits of various materials.



### Drilling Fluids & Cementation

The objective of this lab course is to make students understand the characteristics of drilling fluid and cementation. They learn about the classification of drilling fluids, properties and nature of drilling fluids, and how to select an effective fluid system.



### Petroleum Engineering-I

The experiments in this course are based on the entire value chain of petroleum engineering. The course covers experiments on Drilling Fluids, Cements and Reservoir Engineering.



### Petroleum Engineering – II

The experiments in this course are based on the entire value chain of petroleum engineering. Students are exposed to practical aspects of Instrumentation and Control, Petrophysics and Logging.



### Safety, Health and Environment

The objective of this lab course is to give students an exposure on day- to-day Safety, Health and Environmental activities of various segments of hydrocarbon industries.



### Petroleum Product Testing

Practical classes are based on theory course content of the Petroleum Engineering course. The students test the physical and chemical properties of petroleum and petroleum related products.



### Petroleum Product Application

Practical classes are based on theory course content of the Petroleum Engineering and Refinery courses. The students test the chemical properties of petroleum and petroleum related products, such as fire point, flash point, drop point, smoke point etc.



### Reservoir Characterization

Practical classes are based on theory course content of the Reservoir Engineering course. The students understand the reservoir characteristics, mineralogy, and textural structure of various samples.



### Computer and Language

SPT has a state of the art Computer and Language Lab, where students are exposed to various computer languages, internet applications and engineering software used in Oil and Gas industry.





# RESEARCH & DEVELOPMENT

SPT Faculties and students undertake various research projects as a part of Research and Development program for self-development as well as for the benefit of university and society.

## FACULTY

### Dr. Anirbid Sircar

Professor & Director SPT

**Areas of Interest:** Geothermal Exploration & Exploitation, City Gas Distribution, Seismic Interpretation, Reservoir Characterization, Probabilistic Resource Analysis, Integrated Reservoir Management Field Development, Asset Management etc.

### Dr. Tajinder Pal Singh

Professor

**Areas of Interest:** Linear Algebra and Numerical Reservoir Simulation.

### Prof. Ashish Sarkar

Associate Professor

**Areas of Interest:** Foraminiferal Micropaleontology, Paleoclimatology, Isotope geochemistry, Basin evolution and Petroleum Geology.

### Dr. Uttam Kumar Bhui

Associate Professor

**Areas of Interest:** Clay mineralogy and low temperature geochemistry, Petroleum system and Basin modelling, Reservoir modelling.

### Dr. Bhawanisingh G. Desai

Assistant Professor

**Areas of Interest:** Applications of Ichnology and Sequence Stratigraphy for reservoir studies.

### Dr. Subhash N. Shah

Shell Chair Professor

**Areas of Interest:** Hydraulic Fracturing, drilling, horizontal/multilateral well completions/stimulation and coiled tubing technology.

### Dr. Bhawanisingh G. Desai

Assistant Professor

**Areas of Interest:** Applications of Ichnology and Sequence Stratigraphy for reservoir studies.

### Dr. N. Madhavan

Assistant Professor

**Areas of Interest:** Economics of ecosystems and biodiversity, Application of environmental indicators, Biomonitoring, Diversity index.

### Mr. Balasubramanian Ragnathan

Lecturer

**Areas of Interest:** Production of Bio fuel from biomass, Biomass gasification and Ionic liquids.

### Mr. Maunish Shah

Lecturer

**Areas of Interest:** Hydraulic Fracturing, Phase changing material (PCM) and its application, Drilling technology.

### Mr. Manan Shah

Lecturer

**Areas of Interest:** Geothermal Exploration and Exploitation, Renewable Energy Sector, Reservoir Simulation, Mathematics.

### Ms. Vaishali Sharma

Lecturer

**Areas of Interest:** Shale Gas Exploration, Production Optimization, Enhanced Oil Recovery, Hydraulic Fracturing.

### Mr. S. S. P. Singh, Professor

Adjunct Faculty

**Areas of Interest:** Well Productivity Improvement Projects.

### Mr. Ravinder Kumar Jain

Adjunct Faculty

**Areas of Interest:** Well Stimulation and Workover, Pipeline.

### Mr. Gudendra S Negi

Adjunct Faculty

**Areas of Interest:** Reservoir characterisation by tracer applications, residual oil saturation estimation.

### Mr. Hiren Patel

Visiting Faculty

**Areas of Interest:** Process Equipment Design, City Gas Distribution, Heat & Mass Transfer

PROJECT TITLE	SPONSORING AGENCY	PI/CO-PI
Ichnofabric analysis, Event Stratigraphy and Depositional Environment of the Cretaceous sediments of Western India	Department of science & Technology	Dr. Bhawanisingh G. Desai
Geothermal Energy Exploration and Exploitation in Gujarat	Government of Gujarat	Dr. Anirbid Sircar, Mr. Manan Shah and Ms. Shreya Sahajpal
Middle Jurassic-Cretaceous Belemnite fauna at Southern and Northern Tethyan margin: Biogeographic patterns, stratigraphic distribution and Key correlative levels.	DST-RFBR International Bilateral Program	Dr. Bhawanisingh G. Desai

# STUDENT ACHIEVEMENTS

## PDPU SPE Student Chapter awarded Outstanding Chapter Award 2016

- Abhay Jani and Ankit Rajput from SPT 13 represented SPT, PDPU in 23rd International Conference on **“Engineering & Technology, Computer, Basic & Applied Sciences”** (ECBA- 2016), 9-10 June 2016, Istanbul, Turkey, organized by Academic Fora, and presented a paper titled **“Improvisation of Heat Transfer Coefficient in Shell and Tube Heat Exchanger”**.
- Jay Doshi from SPT 13, published a paper titled **“Pigging and Its Techniques”** in International Journal of Humanities and Applied Sciences (IJHAS), Vol. 5, No. 2, 2016, ISSN 2277 – 4386, pp. 84-88, May 2016.
- Hitisha Dadlani from SPT 13 published a paper titled **“Determining Shale Parameters using Molecular Dynamic Simulation”**, in Dew Journal, March 2016 Issue.
- Harsh Vyas, Jai Mehndiratta and Palash Dhurvey from SPT 13, represented School of Petroleum Technology, PDPU in OGCE 2015 - Oil & Gas Competition and Exhibition, UTP Malaysia, November 2015.
- Prerak Shah from SPT 13 secured 1st position at PETRODARE 2K15 – **National Level Quiz Competition**, organized by SPE RGCE Student Chapter, Rajiv Gandhi College of Engineering, Chennai, Tamil Nadu, November 2015.

- Shivam Pandey from SPT 12 and Hitisha Dadlani from SPT 13 presented a paper titled **“Bionic Leaf – Using Bacteria to Convert Solar Energy directly to Liquid Fuels”**, at International Conference on Renewable Energy and Sustainable Environment (RESE 2015) at MCET, Coimbatore, Tamil Nadu in collaboration with Cape Breton University Sydney, Canada, August 2015.
- Gogineni Sudarsan Sai from SPT 12 represented SPT, PDPU in the prestigious **Student Leadership Symposium (SLS) sponsored by Chevron held at SEG Annual Conference 2015** at New Orleans, Louisiana, USA, October, 2015.
- Palash Agrawal, Garvit Rawlani, Abhishek Juneja, Prakhar Sarkar, Pranshu Praleya and Atul Khatri from SPT 12 represented SPT, PDPU at **SPE International Symposium “Black Gold”**, organised by Bashkir State University SPE Student Chapter, Ufa, Russia, 11-13 May 2016.
- Akash Srivastava, Riddhiman Sherlekar, and Sai Sudarshan from SPT 13 presented a paper on **“Geological Aspects of Enhanced Oil Recovery”** at Cognizance 2015, IIT Roorkee.
- Akash Srivastava from SPT 13 presented a paper on **“Solar Pond”** at NU-Tech 2015, at Nirma University, February 2015.



# INDUSTRY ACADEMIA INTERACTION

SPT aims to expand the reach of networking by connecting the dots between the industry & academia. Topics related to course curriculum where students need a better clarity are addressed in expert lectures by industry stalwarts. Organizing Conclaves, Seminars, Workshops for students, faculties, industry participants while keeping pace with recent trends and technologies in Oil and Gas sector makes the participants aware of practices followed in industry and helps them in interacting and networking with stalwarts from industry and academics. This helps in overall development of students as well as faculty members. SPT has successfully organized many programs where participants were greatly benefitted. Some of the programs organized by SPT for industry-academia interaction are given below:

Mr. Vikram Singh Mehta  
Executive Chairman Brookings India



Prof. Subhash Shah  
Emeritus Professor, Mewbourne School of Petroleum and Geological Engineering at the University of Oklahoma

## Lectures from Industry Experts

- **Mr. Ashok Kakadia**, Sr. General Manager, Gasification, Reliance Technology Group delivered a lecture on 'Piping and Instrumentation Diagram/Drawing' on 19th Sept, 2015.
- **Dr. R. A. Mashelkar**, FRS, Padma Vibhushan delivered the Pandit Deendayal Memorial lecture on 'Reinventing India as an Innovation Nation' on 25th Sept, 2015.
- **Prof. Subhash Shah**, Emeritus Professor, Mewbourne School of Petroleum and Geological Engineering at the University of Oklahoma (OU) delivered a lecture on 'Hydraulic Fracturing (Fracking): Controversy, Myths, Facts and Impact on Environment' on 4th Nov, 2015.
- **Mr. Mark A. Salkeld**, President & CEO, Association of Canada (PSAC), delivered a lecture on 'HR Practices in Oil & Gas Industry' on 25th Nov, 2015.
- **Dr. B. Mohanty**, Member, PNGRB delivered a lecture on 'City Gas Distribution - Regulatory Challenges and Issues' on 28th Jan, 2016.
- **Dr. Joe Dellinger**, British Petroleum delivered a lecture on 'Seismic Data and Forensic Data Processing' on 5th Feb, 2016.
- **Mr. Vikram Singh Mehta**, Executive Chairman Brookings India delivered a lecture on 'Future of Oil' on the 15th of Feb, 2016.
- **Mr. Suresh Kumar**, Principal, Progrowth Consulting delivered a lecture on 'Oil & Gas Industry - Facts, Crisis and Opportunity' on 24th Feb, 2016.

## Seminars and Workshops/Conclaves

- **SPE PDPU Student Chapter** successfully organized its maiden three day technical fest titled **PDPU SPE Fest 2015** pertaining to Oil & Gas industry from 30th October to 1st November, 2015.
- SPT organized the **Urja Conclave** having the theme 'Initiatives and Practices in Oil and Gas Industry' on 11th and 12th September, 2015.
- Workshop on **Gravity Survey** was held on 20th February, 2016 by Dr. Anirbid Sircar, Director-SPT.
- **Reliance Industries** conducted workshop on **Industry to Academia Building Program** from 5th to 7th Oct, 2015 covering areas like drilling mud, technologies in shale oil and shale gas production, Hydro fracturing and HSE.
- **Knowledge Sharing Programme** was conducted by **IRS-ONGC** from 7th-13th October, 2015. Areas included geological modelling, field development, EOR, reservoir simulation and many more.
- Workshop on **Refraction Seismic: Application in Petroleum Exploration** was organized by **Aimil Ltd.** on 22nd August, 2015.
- SPT organized the **City Gas Distribution Roundtable** on 30th April, 2016.
- SPT in collaboration with Centre of Excellence for Geothermal Energy organized **2nd International Conference on Geothermal Energy: Exploration and Exploitation** on 29th March, 2016.

Mr. Suresh Kumar  
Principal, Progrowth Consulting



Mr. Mark A. Salkeld  
President & CEO, Association of Canada



Urja Conclave, September 2015

City Gas Distribution Roundtable, April 2016





# PROFESSIONAL BODIES & STUDENT CHAPTERS AT SPT



## SOCIETY OF PETROLEUM ENGINEERS (PDPU SPE CHAPTER)

The Society of Petroleum Engineers (SPE) is a not-for-profit professional organization whose mission is to collect, disseminate, and exchange technical knowledge concerning the exploration, development and production of oil and gas resources and related technologies for the public benefit and to provide opportunities for professionals to enhance their technical and professional competence.

PDPU SPE Student Chapter was founded in 2007 and since its inception, the establishment has striven expeditiously to achieve the excellence and renown that it carries today. PDPU SPE Student Chapter has provided exposure to students in the oil and gas industry through guest lectures, panel discussions, exhibitions and workshops. They have hosted lecturers discussing "Challenges of Reservoir Studies", "Sand Control Completion" and "Exploration to Exploitation". PDPU SPE Chapter bears a plethora of events to its credit that were appreciated by the students and allied professionals who were part of the same.

Serving as a token of distinguished performance and appreciation, PDPU SPE Student Chapter stands the only SPE student chapter in India to have bagged four consecutive Gold Standard Awards from SPE International for four times in a row. The Gold Standard is a benchmark for exceptional performance in categories of membership, planning, education, professionalism, service, support and fundraising.



## PETRO-TECH PDPU CHAPTER

The Petrotech chapter, being highly dedicated towards achieving excellence, has organised seminars, conventions and several other competitions where students can come up and showcase their talents. It is because of their industrious and sincere efforts that they are trusted and eulogised extensively as an important component of the School of Petroleum Technology.

Weekly discussion sessions on various matters of practical importance relating to the Energy sector are also regularly organized by Petrotech.

The chapter successful hosted the Petrotech Students Meet in 2013 in PDPU which was attended by all other student chapters in India. This chapter was awarded the best student chapter of Petrotech in 2012.



## AAPG-PDPU CHAPTER

American Association Petroleum Geologists PDPU Chapter was founded in 2013. Despite being relatively new of all the extant student chapters in PDPU, AAPG has earned considerable encomium from students and faculty members. They are the fastest emerging chapter and have been creating benchmarks for other student chapters to match along.



EAGE



## SPG / EAGE / SEG PDPU CHAPTER

Society of Petroleum Geophysicists (SPG) / European Association of Geoscientists and Engineers (EAGE) / Society of Exploration Geophysicists (SEG)

SPG, EAGE and SEG chapters of PDPU work in collaboration to facilitate the exchange of technical ideas and practical experience. They have been the names of great renown and have been working extensively for the best interests of its student members. They have striven to acquire the excellence with which they are associated invariably when it comes to organising events and executing them efficiently.

The university chapters of these international societies help students connect to industry professionals affiliated to the field of Geophysics and Petrophysics applied to the petroleum industry. They also serve the geosciences community with events aimed at disseminating information and providing networking opportunities, all with the purpose of advancing geophysics as a study area for aspiring engineers of tomorrow.

The student chapter received 180 new members this year. The Faculty mentor of this chapter is Dr. Uttam Kr. Bhui who provides valuable guidance for directing chapter activities.

# INTERNATIONAL EXPOSURE PROGRAM

The International Exposure program enables students to not only develop technically but also enriches their linguistic and cultural knowledge. In terms of linguistic and cultural awareness, students emerge with a greater level of sensitivity and patience.

This in turn leads them to move from a fundamental understanding of the theoretical concepts to a more sophisticated interpretation and application based approach. Secondly, most students adapt to the practical challenges they encounter by finding mechanisms to help them cope with their new surroundings. Many students have shown concern about adjusting in the countries they planned to visit. Students also have some misconceptions about the nature of the people and the overall cultural aspects of the region. The exposure program helps the students to soak in the real essence of the cultural aspects in person and enables them to grow technically as well as spiritually.



## LAB EXPERIMENT

- Drilling Simulated Lab
- Pore Scale Characterisation Lab
- Petroleum & Geological Engineering Undergraduate Lab
- Research Laboratory of Petro Physics
- Fourier Transform Infrared Spectroscopy – FTIR
- Scanning Electron Microscope (SEM) Technique
- Acoustic Emission Monitoring
- Rod climbing experiment
- Tubeless siphon / Syringe experiment
- Proppant carrying capacity of different Fracturing Fluids
- Settling velocity
- Flow Generation by Flow Loop

## ENGINEERING PROJECT SITE VISIT

- Baker Hughes Oil Tool Facility
- Baker Hughes INTEQ
- Halliburton
- Well Control Technology Center
- Arbuckle Mountains
- Dougherty Asphalt Quarry In Viola Limestone
- Hunton Anticline And Woodford Shale



## TECHNICAL SESSION TOPICS

- Petrophysics session
- Integrated Core Characterization Centre (IC3)
- Nuclear Magnetic Resonance (NMR) In Porous Media
- Description on mechanical properties of materials like young's modulus, bulk modulus, shear modulus, poisson's ratio, shear stress and strain
- Mercury injection technique for determining the capillary pressure
- The application of probabilistic methods to regionalized variables
- Variogram
- Lost Circulation Materials and its Laboratory Applications
- Unconventional resources and their phase behavior
- Introduction to American Oil & Gas Industry
- Hydraulics of Drilling
- Underbalanced Drilling and Managed Pressure Drilling
- Coiled Tubing
- Hydro Fracturing
- Measuring The Rheological Properties of Foam



# INDUSTRIAL TRAINING

SPT students are required to undergo 6 to 8 weeks of Industrial Training in the non-teaching period of the Third year of the B.Tech Program as partial requirement for the award of the degree. This training can be carried out either in Industry, at an R&D organization, or Schools of Technology/Departments of Universities. The objective of the training is to make the students industry ready and give them an experience of the real industrial scenarios and practices. An effective training/internship enables the students to prepare for interviews in line with the industry expectations. It also prepares them well to enter the industry at the end of their B.Tech program and grooms them as per industry standards.



# RURAL INTERNSHIP

SPT students undergo a compulsory 3 week Rural Internship program at the end of the first year of engineering. The main objective of Rural Internship is to strengthen understanding on concepts of rural development with specific reference to the Indian context. Students are exposed to grassroots realities, in the rural setting, with a focus on participation in interventions by NGOs. This helps in making them understand and appreciate broader contexts of other stakeholders, like government agencies, donors and local self-governance institutions, while participating in existing field projects. This helps in the holistic development of a student and also makes them aware of the harsh climates and adversities they might be facing on the job.

The idea behind this program is to develop a sensitized workforce in energy sector who are socially concerned and willing to positively contribute to the society. The program enables the students to understand about the rural socio-economic scenario and also helps them in facing challenging issues in existing systems and suggests possible solutions. It also helps to enhance other skills of students. i.e. observation skill, analytical skill, decision making skill, communication skill.



# INDUSTRIAL ORIENTATION

SPT students undergo an industrial orientation program at the end of the second year which exposes students to various operations of oil and gas industry for enhancing their understanding about application of science and engineering principles studied in first two years of B. Tech program. The program is aimed at exposing students to upstream, midstream and downstream operations of oil and gas sector





# CENTER OF EXCELLENCE FOR GEOTHERMAL ENERGY

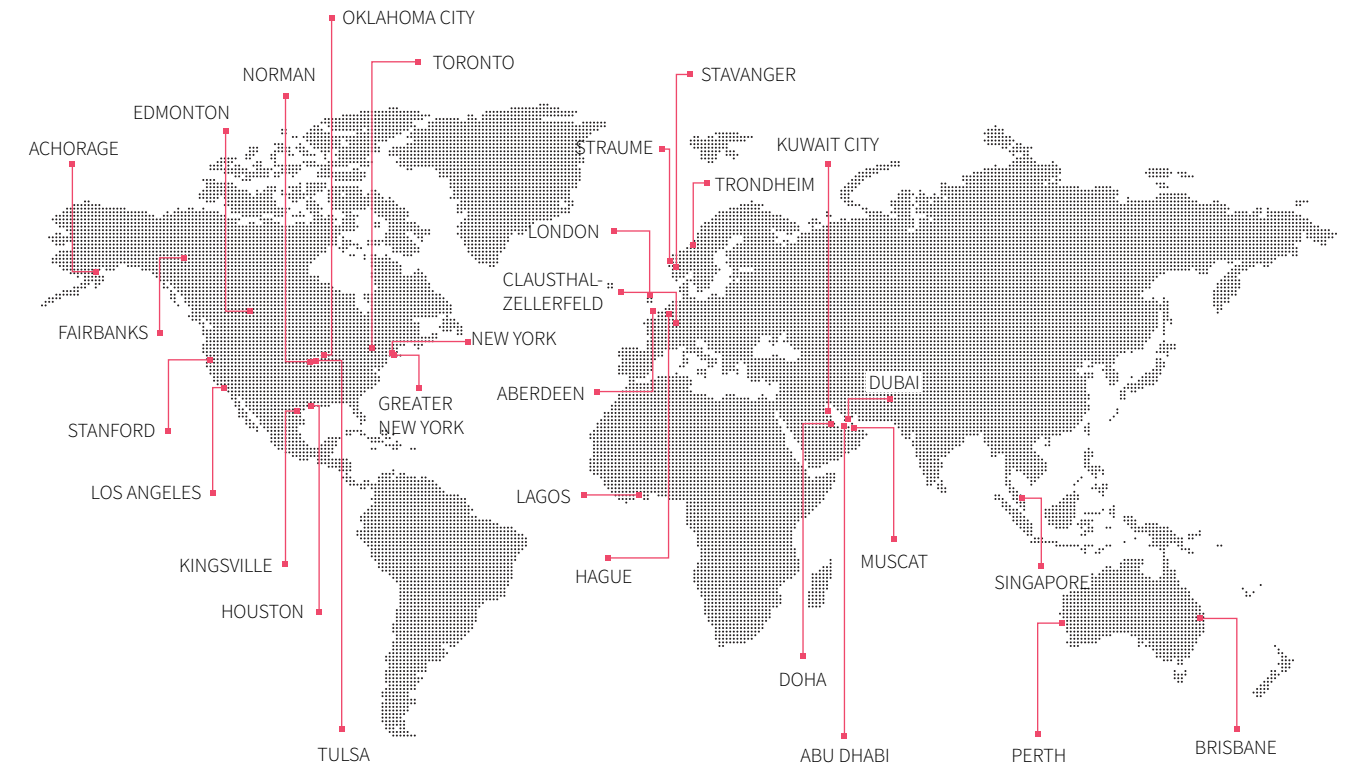
Geothermal Energy is being harnessed and used for domestic as well as commercial purpose in many parts of the world, such as Indonesia, Mexico, Philippines, New Zealand, Iceland, California (US). However, in India, the potential Geothermal Energy has not yet been tapped. As per the studies conducted by Geological Survey of India (GSI), Gujarat also has a potential of geothermal energy, which is yet to be explored.

In order to put Gujarat on unconventional energy basket in India, Government of Gujarat took an initiative of establishing a centre dedicated to research & development activities in the area of exploration and exploitation of geothermal energy. In this light, with the support of Government of Gujarat, PDPU established Centre of Excellence for Geothermal Energy (CEGE) on 10th of October, 2013.

CEGE is carrying out exhaustive research in the investigative studies for analysing the resource potential of various sites in Gujarat.

# GLOBAL ALUMNI PRESENCE

The Alumni of PDPU have not only left their mark on the Indian industry but have also been successful in pursuing their dreams abroad. With a strong and growing presence of PDPU alumni in some of the top notch companies & institutes of the world the PDPU community is on its way to making their presence felt across the global industry.



COMPANY NAME	CITY	COUNTRY
Accenture	Brisbane	Australia
Centrica Energy	Stavanger	Norway
Topeka Capital Markets, Inc.	New York	USA
Halliburton Overseas Ltd	Kuwait City	Kuwait
Keppel Offshore And Marine Technology Center	Singapore	Singapore
Nabors Arabia Co. Ltd.	Muscat	Oman
Norshore	Straume	Norway
Petroleum Development Oman	Muscat	Oman
United Arab Bank	Dubai	UAE
Halliburton	Houston	USA
SEEPSCO	Lagos	Nigeria
Occidental Petroleum Corporation	Houston	USA
Warwick Energy Group	Oklahoma City	USA
Jindal Pipes Ltd	Singapore	Singapore
Neal Adam Services	Houston	USA
Onsite CO2, LLC	Houston	USA
Roth Capital Partners	Houston	USA
L&T Hydrocarbon	Abu Dhabi	UAE
RFID PASS	Houston	USA
Pangea, Inc.	Achorage	USA
ConocoPhillips	Houston	USA

- UNIVERSITY NAME**
- Arizona State University
  - Clausthal University of Technology
  - Memorial University
  - Norwegian University of Science and Technology
  - Rice University
  - Robert Gordon University
  - Stanford University
  - Stevens Institute of Technology
  - TAMU Kingsville
  - TU Delft
  - University of Oklahoma
  - University College London
  - University of Alaska
  - University of Alaska Fairbanks
  - University of Alberta
  - University of Calgary
  - University of Houston
  - University of Oklahoma
  - University of South California
  - University of Southern California
  - University of Tulsa
  - University of Western Australia







# INFRASTRUCTURE

## Wellness Centre

A nutritious diet and a good workout helps students to combat academic stress. School of Petroleum Technology has set up a state-of-the-art wellness centre equipped with cardio & weight training equipment and facilitates student workouts under the expert supervision of a certified trainer.

The wellness centre can look after the needs of more than 50 students per session and is functional throughout the day.

As a part of its wellness initiative, the university also provides an expansive playground for outdoor games, such as football, cricket and practice courts for basketball, volleyball and badminton.

## Cafeteria & Food Court

School of Petroleum Technology has ensured that the students enjoy a healthy diet charted out by a dietician, which is wholesome and nutritious. The food court also provides refreshments throughout the day. The cafeteria is attractively laid out and offers students and eco-friendly environment to relax while deliberating on their academic and personal lives and collectively address the attendant challenges.



## Hostel Facility

Our in-campus residential facilities offer furnished hostel rooms on a twin occupancy basis. This is an optional facility offered to B.Tech students. Separate hostels are provided for female students. There are seven fully functional hostel blocks which are Wi-Fi enabled and are well-designed to meet the needs of the students. These include emergency medical facilities, a doctor on call, 24x7 access to computer labs and a well-equipped and comfortable lounge to facilitate group activities.

## Library

Library and Information Centre is the heart of the school and aims to provide an ideal ambience for both creation & dissemination of knowledge, information, insights & intellect in all its academic programs. The centre has utilized Information Technology extensively to ensure that resources are accessible from anywhere at any time. The Library holds a collection of printed as well as electronic resources which include books, journals, databases, CDs/DVDs, e-journals, reports, case studies, conference proceedings, training manuals, etc

## Other Facilities

- PDPU Campus Store - Pride Forever
- Medical Facility + 24 hours Ambulance
- Bank + 24 hours ATM
- Stationery and General Store
- Medical Store
- Travel Booking Office



## THE TRAINING & PLACEMENT CELL

**The Training and Placement Cell (T&P Cell) handles all the internship and placements for graduates and post-graduate students at Pandit Deendayal Petroleum University (PDU).**

**The T&P Cell office is well equipped to support all placement procedures including Pre-Placement Talk, interviews and group discussions.**

Facilities available at T&P Cell:

- Auditorium and lecture theaters for Pre-Placement Talk
- Well equipped rooms for interviews and group discussions
- Computer labs for conducting online test
- Requisite infrastructure for pooled recruitment drives

The placement policies and other related activities are handled by team of experienced Professionals, Professor-in-Charge along with Students' - Placement Committee. The process of coordination with recruiters is handled by the T&P Cell. The companies are encouraged to communicate with Manager - Training & Placement for initial discussions and subsequent communication for placement procedures.

## CAMPUS RECRUITMENT REQUEST FORM

(TO BE FILLED BY COMPANIES)

NAME OF THE COMPANY : \_\_\_\_\_

ADDRESS : \_\_\_\_\_

CITY : \_\_\_\_\_ STATE : \_\_\_\_\_ PIN : \_\_\_\_\_

TEL. NO. (WITH STD CODE) : \_\_\_\_\_

FAX : \_\_\_\_\_ E-MAIL : \_\_\_\_\_

COMPANY WEBSITE : \_\_\_\_\_

### REQUIREMENTS / CRITERIA :

S. NO	COURSE	TOTAL NO. OF STUDENTS THE COMPANY WISHES TO RECRUIT	PREFERRED INTEREST AREAS	ANY OTHER INFORMATION
1	B.TECH PETROLEUM ENGINEERING			

### CAMPUS RECRUITMENT PROCESS :

- PRE-PLACEMENT TALK (PPT)     
  WRITTEN TEST     
  GROUP DISCUSSION  
 PERSONAL INTERVIEW     
  ANY OTHERS

### CONTACT PERSON :

NAME : \_\_\_\_\_

DESIGNATION : \_\_\_\_\_

TEL. NO. (WITH STD CODE) (O): \_\_\_\_\_ MOBILE NO. \_\_\_\_\_

FAX : \_\_\_\_\_ E-MAIL : \_\_\_\_\_

SIGNATURE OF COMPANY OFFICIAL

# PLACEMENTS @ PDPU - AT A GLANCE

The placement initiatives of PDPU for all of its batches attracted a good number of companies from Energy & Infrastructure, Oil & Gas and other sectors. Most of our students managed to bag substantial job profiles at prestigious organizations along the entire energy value chain. PDPU has received accolades and good industry vibes, both in terms of alumni performance and the curriculum structure. Since its inception, following companies have participated in Placements Season:







# PDP

PANDIT DEENDAYAL PETROLEUM UNIVERSITY

Off. Koba - Gandhinagar Highway, Raisan,  
Gandhinagar - 382 007. Gujarat, India.

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Mr. Guruprakash Iyer

Chief Student Development Officer (CSDO)

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