

**INFORMATION BROCHURE  
FOR  
M.Tech ADMISSIONS IN ENERGY  
SCIENCE & ENGINEERING  
2023-2024**



**भारतीय पेट्रोलियम और ऊर्जा संस्थान, आंध्र प्रदेश**

**विशाखापत्तनम - ५३०००३**

**INDIAN INSTITUTE OF PETROLEUM & ENERGY  
ANDHRA PRADESH**

**VISAKHAPATNAM-530003**

## **Vision & Mission**

### **Vision**

The vision of the Energy Science & Engineering Programme is to become a global leader for interdisciplinary energy research, training and disseminating relevant knowledge so as to resolve national and international energy and sustainability challenges through the application of rapidly evolving energy management standards with the following characteristics;

- Leading and providing state-of-the-art education, laboratories and a research environment
- Achieving the best standards on training in industry that are compatible with local and global frameworks
- Maintaining our position as a preferred professional network for industry and trade in the area of energy innovation and technology

### **Mission**

To create a world powered by clean and green energy. In order to achieve our objective of supporting a Carbonless Economy by providing a secure, reliable, and profitable energy supply, the department has particular objectives in terms of creating highly trained human resources. We are contributing to its development and growth, building a better environment for the future of our planet and generations ahead as India's most important academic entity in energy.

### **Highlights of the M. Tech Programme**

- Fellowship of 12,400/- INR per month will be provided for 24 months to regular students
- Contingency support to regular students
- Project work will be carried out in Industry/Institute
- Placement assistance will be provided to Regular Students.

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## I. THE INSTITUTE

### I.1 ABOUT IIPE

Indian Institute of Petroleum and Energy (IIPE), Visakhapatnam, a domain-specific Institute at par with IITs and IIMs, is established by the Government of India under the aegis of the Ministry of Petroleum and Natural Gas (MoPNG) in the year 2016. The Indian Institute of Petroleum and Energy Act, 2017 (No.3 of 2018) enacted by the Parliament and declared the Institute as an 'Institution of National Importance'. The Institute also enjoys a strong relationship with the industry regarding teaching, research, and student training & placement. A primary goal of research at IIPE has been to meet the country's fossil fuel and renewable energy demands. However, given its position as an energy institute, IIPE also has a great responsibility to contribute toward achieving the United Nations Sustainable Development Goals, i.e., ensuring access to affordable, reliable, and sustainable modern-day energy for all. The Institute has also embarked on an ambitious path to be the country's energy hub. The Institute also aims to produce skilled manpower to meet the quantitative and qualitative gap in Petroleum & Energy sectors and to boost the research activities needed for growth of these sectors by nurturing and promoting the quality and excellence in education and research in various areas of petroleum and energy through the programs leading to the award of the Bachelors, Masters and Doctoral degrees. Fulfilling this responsibility, IIPE is committed to research towards realizing the "Panchamrita" concoction for the climate conundrum, the climate solution offered by the Hon'ble PM, Mr. Narendra Modi, at the COP26 convention in Glasgow. Overall, at IIPE, we strive to help foster Blue Zones, enabling a prosperous world to rise like a phoenix from the ashes of today's challenges. Let us join hands to remain relevant and excellent, focusing on removing India's impediments to achieving the goal of an Atmanirbhar Bharat in the energy sector and progress towards 'future ready India @2047'.

### I.2 ABOUT DEPARTMENT

Department of Energy Science and Engineering at the Indian Institute of Petroleum and Energy (IIPE) in Visakhapatnam plays a crucial role in India's quest for energy independence. As a premier academic institution, IIPE is committed to the research and development of sustainable energy solutions to meet the country's growing energy demands. With a focus on renewable energy technologies, the department offers a postgraduate program in energy science and engineering. It actively engages in cutting-edge research on solar, wind, biomass, and other clean energy technologies and their impact on the environment by reducing greenhouse gas emissions and pollution. Through its interdisciplinary approach, the department collaborates with industry, government agencies, and research organizations to promote innovative research and development in the energy sector. With state-of-the-art research facilities and world-class faculty, the Energy Science and Engineering Department is well-positioned to lead India's transition to a more sustainable energy future.

### I.3 DR S. R. RANGANATHAN LIBRARY



- Library facility at IIPE Vizag was named after Padmasree S. R. Ranganathan was a librarian and mathematician, noted as Father of Library science in India.
- The library houses more than 30,000 books which cover more than 8000 titles.
- Library subscribes to International and National Journals and also subscribes to International and national Newspapers and Magazines along with Digital Library Facility.
- Journal articles and eBooks were provided for access to the students by I.P based and domain based access for the benefit of the students who are staying in the remote areas across the country, due to COVID-19 pandemic situation.
- A total of 5.28 crores of e- resources are accessible through NDLI (Nation Digital Library of India), IIT Kharagpur.
- Library Services includes Internet Browsing; Book Bank; Reference Services; Current Awareness Service; Inter Library Loan; Photocopying; Content Management Service.

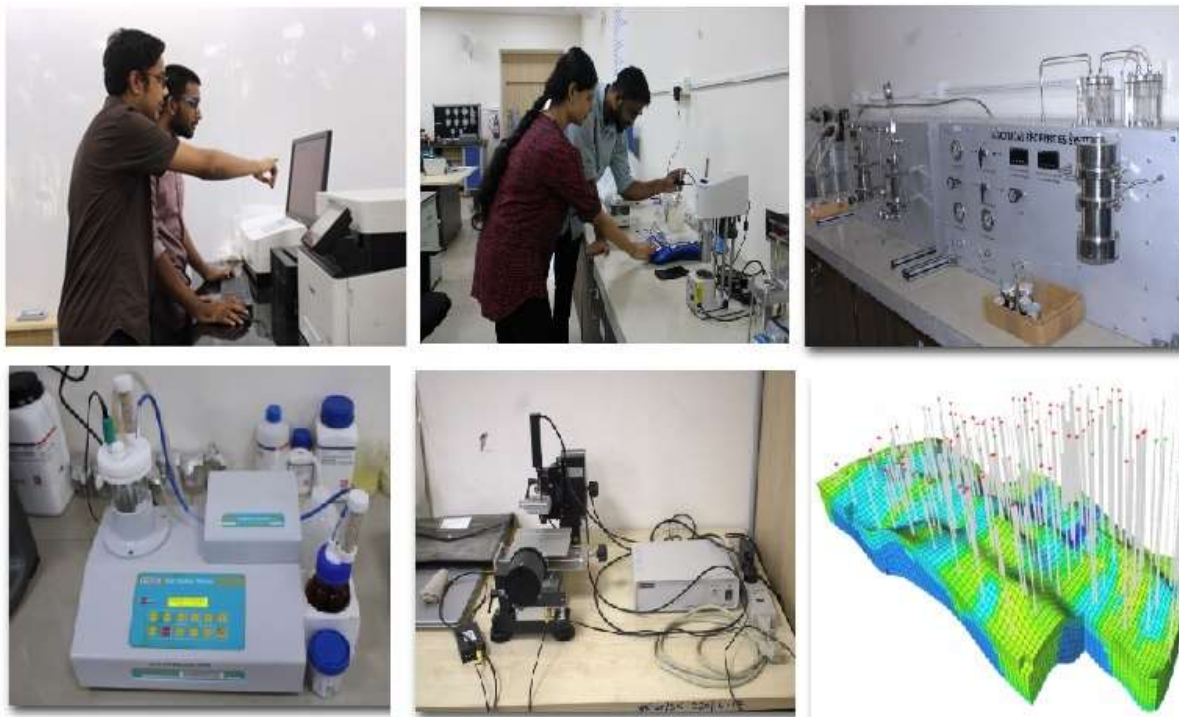
### I.4 COMPUTING FACILITIES

- Information Technology (IT) unit of IIPE has hybrid CPU/GPU platform for high performance computing.
- High-end computational servers with high availability, web servers and 10GBPS network services are provided for various academic and research activities of the Institute.
- Licensed software and email services are also managed by the IT unit.
- All the equipment has uninterrupted Power Supply and are provided with proper air-conditioning.
- The institute currently holds licenses for simulation software like ANSYS, COMSOL, MATLAB, ASPEN and few other softwares as listed below.

## Software resources available at IPE

SI No.	Name of the Software
1	ANSYS
2	AspenONE
3	Compute Modeling Group Ltd (CMG)
4	COMSOL Multiphysics
5	MATLAB
6	PETEX
7	Surfer
8	Voxler
9	Solidworks
10	Origin Lab
11	Gaussian
12	Flownex
13	MS Office Standard Academic Version
14	MS Office Pro PLUS
15	CorelDraw Education Edition
16	Adobe Creative Cloud
17	WebEx
18	Plagiarism tool (Turnitin)
19	Grammarly Edu Premium Suite
20	Quick Heal Seqrite End Point Security
21	LSEase(LIBSYS)

## I.5 LABORATORIES FACILITIES



**Heat Transfer & Particle Technology Lab:** The Heat Transfer lab of the department provides practical training to the students on various heating and cooling systems of different configuration e.g. Cross flow, Parallel flow, counter flow heat exchangers and evaporative systems along with the basic understanding of the study of heat transfer phenomena in boiling, condensation and convection systems etc. Heat Transfer experiments: Thermal conductivity of metal rod, overall heat transfer co-efficient in a vertical condenser, natural convection, critical heat flux, overall heat transfer co-efficient in horizontal condenser, heat transfer co-efficient in double pipe heat exchanger, composite wall. Particle technology lab of the department provides practical understanding to the student on determination of mean particle size, Size distribution equations. Particle size distribution including normal/Gaussian, Particle size reduction and enlargement. Inter-particle forces.

**Fluid Flow lab:** Fluid Mechanics Laboratory covers practical aspects, fundamental flow phenomena of fluids and its applications. It features the following equipment: Bernoulli's experiment; Flow through square and circular pipes; horizontal nozzles; pipe fittings; V-notch, packed bed; Venturi meter, orifice meter; rotameter; pitot tube; Pipe flow Viscometer; Characteristics of centrifugal pump. Design studies on valves, pipe fittings and piping network, Mechanical design of pressure vessel, flange, reinforcement for opening, support.

**Mass Transfer Lab:** The Mass Transfer Lab of the department provides practical training to the UG students on various mass transfer equipment covering all the basic aspects of mass transfer phenomena. The Lab is equipped with the experimental setups for doing experiments on solid-liquid, liquid-liquid extraction, drying and distillation operations etc. Determination of Diffusion Coefficient of Air-Acetone By Stefans method, T-X-Y equilibrium diagram for binary mixture, Batch Distillation, Sieve Plate Distillation, Packed Bed

Distillation Column, Flooding and Loading in Packed Tower, Water Cooling Tower, Liquid-Liquid Extraction, Rotating Disk Contactor, Liquid-Liquid Extraction in Sieve Plate Column, Drying Characteristics of Wet Solids in Flowing Air, Rotary Drier (Hold-Up), Rotary Drier (Drying Characteristics of Wet Solids), Gas-Solid Adsorption. Process control and instrumentation lab: Process Control and Instrumentation Laboratory provides the basic knowledge of instruments such as Level measuring, Temperature measuring, Flow measuring, Pressure measuring instruments etc. In this lab, the students also become familiar with the controller such as PID controller, Temperature Control System and Multi Process Control System which is widely used in the Chemical Industries.

**Reaction Engineering Lab:** The Departmental reaction engineering lab provides practical training to the UG students on several basic reaction engineering equipment covering elementary aspects of reaction engineering. These include RTD studies in a single CSTR/series of CSTRs / tubular reactor, kinetic studies for fluid solid reaction, kinetic studies for liquid phase reaction in a plug flow reactor/ batch reactor. Beside the above mentioned experiments, some are developed in house such as RTD studies in different packed beds and kinetic studies in a CSTR.

**Drilling Fluid Lab:** The lab has instruments to determine rheological and filtration properties of the drilling fluids as per API recommended procedures. Sand content, marsh funnel viscosity, mud density, cement slurry thickening time etc. can be evaluated in the lab.

**Fracturing Lab:** The purpose of the fracturing lab is to provide capabilities to estimate rock properties and to measure fracture growth under various geological conditions in order to understand effectiveness of the stimulation techniques and the production potential of conventional & unconventional reservoirs. Various equipment installed in lab enable the user to estimate the point load strength index, unconfined compressive strength and indirect tensile strength of rock specimens; to measure P- and S-waves velocity, assessment of localized fracture growth and determination of dynamic elastic properties; to examine rocks, minerals, fracture surfaces and porosity characteristics in thin sections.

**Production Engineering Lab:** Production engineering lab is developed to carryout experiments related to petroleum production operations. Various standard instruments installed in lab can evaluate water content in crude oil, dew point, calorific value, pH/Conductivity/ion concentrations, BS&W etc.

**Reservoir Engineering Lab:** Reservoir engineering lab is equipped with facilities to study different rock & fluid properties such as porosity, permeability, contact angle, surface tension, IFT etc. Lab is also equipped with the advanced instruments to estimate porosity of porous sample with inert gas, and to conduct core flow studies.

**Reservoir Simulation Lab:** Currently, Reservoir Simulation lab has CMG software for reservoir modeling and simulation.

**Well logging lab:** The aim of this lab is to enable student's access to modern way to model the subsurface by using the relevant geophysical information as well as to strengthen the basic about the subsurface which can also be a reservoir. This will also help the students to gain the knowledge on how to interpret core geophysical data from well logs and how to correlate the trends in geophysical data. Software assists to study the petro physics, facies analysis and statistical mineralogy for collaborative multi-well log analysis for better drilling decisions. They can also help to visualize and analyze the data.

Several research laboratory facilities are also available at IPE Visakhapatnam. The faculty from various departments conducting research in experimental and theoretical, modelling and simulation studies. Information is available in the following link

[https://ipe.ac.in/research\\_areas\\_faculties](https://ipe.ac.in/research_areas_faculties)



## I.6 RESEARCH WORK AT IIFE



### Biology

Bioinformatics and Molecular Modelling based approaches for Protein Engineering.

### Chemical Engineering

- Process Systems Engineering: Process design and control, Synthesis and optimization of process systems, fault detection and isolation, cyber physical systems.
- Photocatalysis by mixed matrix membrane, Simulation of coupled transport in porous medium, Composite membrane for ion transport.
- Latent heat based thermal storage systems, Thermodynamic performance analysis of solar stills, Turbine blade cooling: Modelling and simulation.
- Renewable Energy Harvesting Systems: Modelling and Simulation;
- Data science and AI for catalyst and drug design.
- Surface Engineering: Surface functionalization of polymers, Surface modification of polymeric materials by plasma treatment, Plasma sterilization
- Two-phase flow: Hydrodynamic investigations on gas-liquid, liquid-liquid flow through millimeter channels.
- Carbon capture and utilization, hydrogen generation and storage and multiscale modelling of gas adsorption and separation

### Chemistry

- Exploitation of smart Nanomaterials in Bio-application
- Fluorescent Molecular Materials: Fabrication, Properties and Applications
- Materials Chemistry
- Organization of materials using block copolymer templates

- e) Sustainable nanomaterials for energy storage and harvesting
- f) Photocatalytic hydrogen generation
- g) Advanced materials for waste water treatment; Environmental monitoring

**Computer Science:** Distributed Systems and Data Sciences

**Earth Sciences:**

- a) Computational Geomechanics, Hydraulic fracture propagation modelling, Mesh free methods.
- b) Engineering Properties of rocks and soil; Rock mass characterization; Rock Failure Mechanism.
- c) Geothermal Energy and Well Logging

**Electrical Engineering:** Power Quality Aspects in Distribution Power System and interactive Micro grid.

**Mathematics**

- a) Numerical Analysis and Scientific Computing, Partial Differential equations, Hyperbolic conservation laws.
- b) Linear Algebra Applications in Machine Learning/Deep Learning.

**Mechanical Engineering**

- a) Heat transfer and fluid flow analysis in mechanical systems
- b) Aerodynamic analysis of turbomachinery flows
- c) Gas turbine heat transfer and cooling technology
- d) Computational fluid dynamics
- e) Thermal energy storage
- f) Renewable energy
- g) Waste to energy

**Petroleum Engineering**

- a) Drilling fluid design and analysis; Enhanced Oil Recovery, Well stimulation techniques
- b) Gas hydrate, Enhance Oil Recovery and Hydraulic Fracturing Fluid Design.
- c) Flow assurance problems; Heavy crude oil-in-water emulsion; Enhanced oil recovery; Drilling fluid design and analysis, Petroleum production problems.
- d) Enhanced Oil Recovery; Reservoir Modelling and Simulation; Multiphase Flow and Transport Processes in Porous Media; machine learning and data analytics in EOR.
- e) Reservoir Simulation

## **2 M. Tech ADMISSIONS IN ENERGY SCIENCE & ENGINEERING**

### **2.1 ABOUT M. Tech PROGRAMME IN ENERGY SCIENCE & ENGINEERING**

The four-semester M. Tech Programme is an interdisciplinary program based on the credit system and provides students with a wide choice of courses. Each batch contains regular M.Tech students, Industry sponsored and Part time candidates. The first two semesters comprise several core and elective courses, followed by project work in the third and fourth semesters. The first semester is common to all the M.Tech students, while in the second semester, they can choose either a vertical on Hydrogen energy or Solar energy. Depending on the vertical, the student will be offered M.Tech in Energy Science and Engineering with Specialization in Hydrogen Energy/Solar Energy. The Industry Sponsored students are expected to conduct their project work in the respective Industry in consultation with the Faculty Member of IIPE. Regular Students can do their project work in industries and other approved organizations. Students are also encouraged to participate in the research and development projects undertaken by the faculty through Industrial Consultancy and Sponsored Research. Sponsored candidates stay on campus for the first year during coursework and conduct the project work in their industry in the second year.

### **2.2 COURSE STRUCTURE**

A candidate must enrol on the M.Tech program to carry out course work in the first year and project work in the second year. IIPE offers a wide range of electives related to sustainable renewable energies such as hydrogen, solar, energy storage, and Geo energy. Students can choose the elective stream/vertical based on their interests. The corresponding dissertation work will be done in their respective stream and industry.

### **2.3 WHO CAN APPLY?**

IIPE offers admission to M. Tech in the following modes:

**Regular:** GATE qualified candidates

**Sponsored/Part time:** Candidates working in Public Sector Undertakings / Government Organizations / Research & Development Organizations / Private Industries / Academic Institutions (approved by AICTE/UGC) with one year of professional experience by 30.04.2023. The candidates are exempted from having a valid GATE Score. There is no residency requirement for Part-Time Students. The candidates recommended by the Organization should get an NOC as per attached template (Annexure I for Sponsored Candidates) / (Annexure II for Part-Time Candidates).

## 2.4 ELIGIBILITY CRITERIA

The candidate should have a **first class** with a minimum of **60% aggregate Marks or CGPA:  $\geq 6.00/10.00$  (55% or CGPA:  $\geq 5.50/10.00$  in case of SC/ST/PwD)** in the B. Tech. / B.E. in Chemical Engineering, Biotechnology, Civil Engineering, Electrical Engineering, Electrical and Electronics Engineering, Electronics Engineering, Electronics and (Communication or Telecommunications or Instrumentation), Energy Engineering, Mechanical Engineering, Engineering Physics, Petroleum Engineering or M.Sc. in Physics/Applied Physics/ Electronics/Chemistry. The minimum mark is without round-off.

## 2.5 NUMBER OF SEATS

Regular Candidates: 15

Sponsored/Part-Time: 15. The seats for Sponsored / Part-Time Candidates is supernumerary.

## 2.6 RESERVATION OF SEATS

Seats are reserved for Indian Nationals under the categories SC/ ST/ OBC (Non-creamy layer)/ EWS and PwD (Persons with Disability) according to the Government of India rules.

## 2.7 SELECTION CRITERIA

**Regular Candidates:** Shortlisting will be based on the basis of GATE score. The shortlisted candidates need to appear for written test/interview.

**Sponsored/Part-Time:** Selection will be on the basis of written test/interview.

## 2.8 FINANCIAL ASSISTANCE

Financial assistance in the form of a Half-Time Teaching Assistantship (HTTA) at the rate of ₹12,400/- p.m. (tenable for a maximum period of 24 months) will be awarded only to the Regular Students, subject to Institute rules. HTTA students are required to assist the department with 8 hours of work per week related to academic activities of the department, such as laboratory demonstration, tutorials, evaluation of assignments, test papers, seminars, research projects, etc.

## 2.9 FEE STRUCTURE

Sl. No.	Particulars	Regular		Sponsored/Part-Time
		Gen/OBC/EWS	SC/ST/PD	
<b>A.</b>	<b>One Time payment at the time of Admission (Non-Refundable) (₹)</b>			
1.	Admission Fee	500	500	1000
2.	Identity Card	100	100	100
3.	Placement Fee	1,500	1,500	0
4.	Convocation Fee	2000	2000	2000
5.	Alumni Subscription	1,000	1,000	1,000
6.	Migration fee	500	500	500
	<b>Total</b>	<b>5,600</b>	<b>5,600</b>	<b>4,600</b>
<b>B.</b>	<b>Caution Deposits Payable at the time of Admission# (₹)</b>			
	Institute caution money	5,000	5,000	5,000
<b>C.</b>	<b>Semester Fee (Each Semester) Non-Refundable (₹)</b>			
1.	Examination	500	500	500
2.	Registration/Enrolment	200	200	200
3.	Gymkhana Fee	1,000	1,000	1,000
4.	Campus Services and Utility	500	500	500
5.	Library Fee	200	200	200
	<b>Total</b>	<b>2,400</b>	<b>2,400</b>	<b>2,400</b>
<b>D.</b>	<b>Annual Fees</b>			
1.	Medical Insurance fee	2,000	2,000	2,000
2.	Student Brotherhood Fund	500	500	500
3.	Benevolent Fund	1,000	1,000	1,000
4.	Modernization Fee	700	700	700
	<b>Total</b>	<b>4,200</b>	<b>4,200</b>	<b>4,200</b>
<b>E.</b>	<b>Tuition Fees (Each Semester)</b>			
	<b>Type of Admission</b>	<b>Regular</b>	<b>Sponsored</b>	
		Gen./OBC/EWS	SC/ST/PwD	
1.	Tuition fees	10000	Nil	25000
<b>F.</b>	<b>Amount Payable at the time of admission (Total of A, B, C, D, and E)</b>			
	<b>Total</b>	<b>27,200</b>	<b>17,200</b>	<b>41,200</b>

Note:

# Students have an option to donate the caution deposit to the Institute

1. Student residing in Hostel need to pay ₹ 30,000/- per semester and caution deposit of ₹ 4,000 /- during the admission.
2. Student need to pay additional amount of ₹ 5,500.00 (approx.) per month to the mess vendor. This is an indicative amount and will be charge as per actual.
3. Fee structure and fee amounts are subject to change from time to time.

### 3. ADMISSION PROCEDURE

#### STEP-I: Fill in the ONLINE application form

Register with Your Email Id and Login. FILL in the appropriate data. Please note that you have to upload your testimonials wherever it is required to validate your information along with your digital photograph and signature.

Application link: [https://erp.iipe.ac.in/IIPEApp/index?admiss\\_ch=04](https://erp.iipe.ac.in/IIPEApp/index?admiss_ch=04)

#### STEP-II: Make PAYMENT and SUBMIT Application

Payment of application fee has to be made through online payment gateway only.

#### STEP-III: Take PRINT

After final submission of your online application, you will be able to generate your online application print with your specific details/data. This application print may be retained with you for future requirement.

Please note that you NEED NOT SEND the application by post. Your application will be considered on the basis of your final submission through online. You can check submission, shortlisting, selection and other application related status from Application Status menu. You should remember your login id and password for the same.

#### 3.1 APPLICATION FEE

Gen/EWS/OBC Candidates	Rs.500/-
SC/ST/PwD/Female Candidates	Rs.250/-

#### 3.2 IMPORTANT DATES

Commencement of application form submission	24 <sup>th</sup> April 2023
Last Date of the application submission	11 <sup>th</sup> June 2023
Date of Written Test/Interviews (for short-listed candidates)	28 <sup>th</sup> June 2023
Declaration of 1 <sup>st</sup> Admission List	3 <sup>rd</sup> July 2023
Last Date for Online Payment of required Fees for 1 <sup>st</sup> Admission List	6 <sup>th</sup> July 2023
Last date for withdrawal from 1 <sup>st</sup> admission list	9 <sup>th</sup> July 2023
Declaration of 2 <sup>nd</sup> Admission List	10 <sup>th</sup> July 2023
Last Date for Online Payment of required Fees for 2 <sup>nd</sup> Admission List	13 <sup>th</sup> July 2023
Last date for withdrawal from 2 <sup>nd</sup> admission list	15 <sup>th</sup> July 2023
Declaration of 3 <sup>rd</sup> Admission List	16 <sup>th</sup> July 2023
Last Date for Online Payment of required Fees for 3 <sup>rd</sup> Admission List (no option for withdrawal for candidates admitted in the third admission list hence no refund will be made)	20 <sup>th</sup> July 2023
Physical Registration (for admitted Students) at IIPE	21 <sup>st</sup> July 2023
Commencement of the 1 <sup>st</sup> Semester classes	24 <sup>th</sup> July 2023

Note: The dates are tentative and subject to change. Please visit IPE website for latest updates in the calendar

**Note:**

Candidates are requested to follow the IPE website ([www.iipe.ac.in](http://www.iipe.ac.in)) regularly for results and admission related updates. No personal communication will be entertained for admission. If any person fails to follow details, it is totally at his/her risk and responsibility, and institute does not bear any liability.

### **3.3 REFUND OF ADMISSION FEES**

Admission fee of the candidates not selected in the final list will be totally refunded. In the event of a registered student withdrawing before the Last date for Withdrawal, the admission fee will be refunded after deduction of the processing fee of ₹ 2,500/. However, if any candidate withdraws his/her admission after the Registration, no refund will be entertained.

### **3.4 LEGAL JURISDICTION**

Visakhapatnam is the only Legal Jurisdiction for any dispute arising on the eve of admissions into IPE. In case, if it is the High Court, Andhra Pradesh Hon'ble High Court at Amaravati is the legal jurisdiction.

## 4. STUDENT LIFE AT IIFE



### 4.1 IIFE student councils

A student body is proposed to be elected from among the students of IIFE which forms the Students Council. This body would help in managing the events and functions that take place in the college. There are various positions in the body such as President, Vice President, Secretary and Executives that the students would thrive to achieve.

This council is a body for periodic discussions with Director of IIFE/Deans and faculty to get their valuable guidance in the following fields:

- Academic discipline
- Extra-curricular activities
- Co-curricular activities
- To organize students activities
- Promoting active participation among members

### Student Activities

#### American Association of Petroleum Geologists (AAPG) student chapter:

American Association of Petroleum Geologists (AAPG) is a global organization that comprises a group of professionals and students. The Student Chapters Program of AAPG plays a critical role by providing an avenue where undergraduate and graduate students can engage in meaningful networking opportunities, and connect with professionals, both inside and outside of academia. IIFE AAPG Student Chapter commenced during 2019-2020 academic session with chapter ID 10198223. The AAPG Student Chapter, IIFE has organized various field trips, Abstract Writing Competition and various other events. IIFE AAPG student chapter is the grant recipient of the American Association of Petroleum Geologists Foundation L. Austin Weeks Undergraduate Grant Program for the year 2021 and 2022.



### **Society of Petroleum Engineers (SPE) Student chapter:**

Student chapters are located around the world and provide an operating framework for society activities at a university level. IPE SPE Student Chapter with the vision of providing continuous personal and professional growth will bring the opportunity for students to organize and participate in technical and non-technical events, engage in technical discussions, network with industry professionals, and learn more about the oil & gas industry. Established on October 2020, it has organized various events including a virtual panel discussion, quiz competition "Quizophile", career talk, etc.

### **The IChE Student Chapter:**

The Indian Institute of Chemical Engineers, IChE student chapter is a conglomerate of professionals from academia, research institutes, and industries across the country it was established on September 2019. It has always been instrumental in the provision of a forum for joint endeavors and a stage for industry-academia interaction. The organization has therefore always proved to be beneficial for the applications of chemical engineering and allied sciences. The IChE Student Chapter, IPE, since its inception has conducted events like logo-making competition, quiz competition, essay writing competition, and "Article Quest2020".

### **Fine Arts Club**

Students of IPE are known for their creativity and artistic skills. Students organize art competitions and display galleries to exhibit their talent, thereby appreciating each other's work along with skill exchange conversations.

### **Photography Club**

The commence of the photography club is one of the initiatives taken by the students to treasure their memories at the institute, showcase their photography skills, and assist budding student photographers in the institute.

### **Social Welfare Activities**

The students of IPE have started the culture of organizing blood donation camps every year as a part of their contribution towards social responsibilities. Apart from this, students also take an active part in beach cleaning activities with the motto of spreading awareness regarding a clean and green environment.

### **Sports and Cultural activities**

A four days sports fest is held annually to encourage talents in various sports. Different games like cricket, volleyball, throw ball, etc. are conducted and competitions are held. Competitions for indoor games like badminton, carrom, chess, etc. are also held prior to the fest. IPE Students conduct Annual Cultural Fest of the college in the month of March every year. It was kick started as Astralis in 2017 which was then successfully organized by the first two batches and the legacy continues thereon.

#### **4.2 IIPE STUDENT ACHIEVEMENTS:**

- IIPE Students have secured GATE Ranks 22, 35, 98 in Petroleum Engineering for the year 2023.
- IIPE Student have secured GATE Rank of 65 in Chemical Engineering for the year 2023.
- IIPE Student has secured CAT 99.85 percentile in (Petroleum Engineering) for the year 2023.
- 14 students were placed with various PSU's (ONGC, HPCL, IOCL, GAIL) through campus recruitment for the year 2023.
- 3 Students of 2022 passed out (Petroleum Engineering) were been recruited by ONGC through GATE 2023 ranks.
- 2 Students of 2020 passed out (Petroleum Engineering) were been recruited by ONGC through GATE 2023 ranks.
- 3 Students of 2022 (Petroleum Engineering) were been recruited by ONGC through GATE 2022 ranks.
- IIPE student wrote a research paper on Diffusion and surface reaction in porous cubical catalyst: A mathematical approach, Recent Innovations in Chemical Engineering 2022.
- IIPE Students have secured GATE Ranks 16, 74 in Petroleum Engineering for the year 2022.
- IIPE Students have secured 93 GATE Rank in Chemical Engineering for the year 2022.
- IIPE student secured rank 7 in category c (undergraduates) of limit 2021 competition, an International online mathematics competition, organized by the students and scholars of Indian Statistical Institute (ISI) Bangalore.
- 19 students were placed with various PSU's (ONGC, HPCL, IOCL) through campus recruitment for the year 2022.
- An IIPE student is a grant recipient for the 2021 AAPG foundation L. Austin weeks under graduate grant program in the AAPG foundations. Austin weeks undergraduate grant program annually awards deserving undergraduate level geoscience students and student-led geoscience associations with \$500 grants.
- 12 students were placed with various PSU's (HPCL, IOCL, GAIL, Oil India Ltd.) through campus recruitment for the year 2021.
- IIPE student secured 2<sup>nd</sup> place in an online team event at Chem Fluence organized by association of chemical engineers, Anna university on 16th march 2021.
- IIPEians got outstanding success in the Petro-vision poster presentation in Petrogon 2.0 by SEG, SPG, EAGE, PDEU student chapters.
- Technical papers were authored by IIPE students, selected to be presented at SPE Russian Petroleum technology conference 2021, and later to be published on one Petro.
- IIPEians won case study competition conducted by SPE RGIPT student chapter in march, 2021.
- IIPEians participated in the semi-final round of the international competition "Venezuela – energy solutions for the future".
- IIPE student secured first place in Petr-o-probe international level quiz competition of petrovision'21 conducted by ac tech, Anna university SPE student chapter from 26th to 28th march, 2021.
- 8 students were placed with various PSU's (HPCL, IOCL) through campus recruitment for the year 2020.

- IPEians work got selected to be presented in the 3<sup>rd</sup> international oil & gas chemistry, chemicals and additives conference (IOGCA 2020) held virtually from 24<sup>th</sup> to 26<sup>th</sup> september 2020.
- IPEians got their paper selected to be presented in the 3<sup>rd</sup> international biennial oil, gas and petrochemical conference OGPC BUSHE HR IRAN 28-29 Dec.2020
- IPEians secured air 15 & 19 in gate, petroleum branch 2020.
- IPEians secured 1<sup>st</sup> & 3<sup>rd</sup> positions in Bhagavad Gita inter-college quiz competition.
- IPEians won a gold medal in the all India inter-college chess boxing championship.
- IPEians won a gold medal in the kondaveedu festival boxing tournament.
- IPE team won the best design reaction in Alche's chem-e-car 2.0, innovision'19, nit rourkela, 2019.
- IPE team secured 1<sup>st</sup> position in hackathon, Visakhapatnam, 2019.
- IPE team secured 1<sup>st</sup> position in appathon, Visakhapatnam, 2019.
- IPE team secured 1<sup>st</sup> position in Petrotech youth forum-2019 quiz competition, 2019.
- IPE team secured 1<sup>st</sup> position in mud-o-gee, PDP, 2019.

### **4.3 STUDENT WELLNESS - YOUR DOST**

YOUR DOST is an online Counselling Platform for students of IPE Visakhapatnam. Emotional wellness and counselling are of absolute need in India especially among the young mind who are buffeted by enormous social-cultural-economic pressures. Your DOST is an online emotional platform that leverages technology to provide convenient, anonymous and confidential support to those in need which is in operation at IPE Visakhapatnam from 1<sup>st</sup> August 2022.

### **4.4 HOSTEL**

The hostel is under round the clock surveillance for the safety of students. The hostels are managed by the Wardens. Talent hunt, literary and sociocultural events add to the vibrancy of the hostel environment. The participation of students in hostel affairs is an essential component of the general administration and decision making. The hostels provided by IPE are provided on subsidized rates where 40 to 50% of Hostel fee is borne by IPE.

The major facilities available in the hostel are:

- Hostel rooms with adequate moving space and proper ventilation
- Mess facility managed by the students
- Furnished rooms with bed, study table, chair, partitioned almirah, fan, and fluorescent tubes
- RO water purifier and geyser facilities.
- Round the clock power back up facility.
- Round the clock Wi-Fi internet connectivity.
- Gym facilities
- Indoor games like caroms, table tennis, etc.

#### **4.5 MESS:**

The mess serves sumptuous veg and non-veg food to the students. It is supervised by a team of students and caretakers headed by a faculty member. The mess menu is a combination of tasty and nutritious food and is changed every month so as to bring in variety.

#### **4.6 MEDICAL FACILITY**

IPE is presently providing the following medical facilities to students:

- Personal Accidental Insurance Policy for Rs. 1,00,000/- for each student;
- Medical Insurance up to Rs. 1,00,000/- for each student.

Both schemes are on an annual renewal basis. IPE have also empanelled reputed hospitals for the OPD facility at CGHS rates.

#### **4.7 ALUMNI ASSOCIATION**

Indian Institute of Petroleum & Energy Alumni Association (IPEAA) was established at IPE Visakhapatnam to provide a platform to the alumni and students for better interaction and networking. The various stakeholders of IPE will be able to discuss & exchange ideas related to academics, research, innovation, society requirements and employment among themselves. In addition, membership of the association will provide several benefits to the alumni of the institute. With the support of the alumni, association aims to implement multiple initiatives towards the development of the institute, students and betterment of the society.

### **5. CONTACT DETAIL**

Indian Institute of Petroleum and Energy,  
Visakhapatnam-530003.

Email: [doaa@iipe.ac.in](mailto:doaa@iipe.ac.in)

**Sponsorship Certificate from Employing Organization on Letterhead  
(for Sponsored M.Tech. Programme)**

The applicant Mr./Ms. .... is now working as  
.....(Designation)..... in the scale of pay of Rs.....  
Since ..... in our organization.

(date)

She/He joined the organization on ..... and has a **total regular service** of .....years.

She/He has been recommended and sponsored by us for admission to 4 Semester M.Tech. Programme (2 semester course work and 2 semester project work) at IPE, Visakhapatnam. and

- for the period of her/his studies in the programme, the candidate would be treated as on duty with usual salary and allowances, and
- that she/he will be fully relieved and granted study leave for a minimum period of 2 years. It is understood that the applicant, if admitted, may be allowed to do her/his project work in our organization, if facilities for such project work are available as certified by the Department of IPE, Visakhapatnam.

No part of the work carried out in fulfilment of the programme will be utilised commercially/submission of manuscript/applying for a patent without the approval of IPE, Visakhapatnam and on terms mutually agreed by IPE, Visakhapatnam and this organisation.

We have also noted that the following conditions are to be satisfied for sponsoring of candidates for M.Tech. programme :

- The candidate should have a **first class** with a minimum of **60% aggregate Marks or CGPA:  $\geq 6.00/10.00$**  (55% or CGPA:  $\geq 5.50/10.00$  in case of SC/ST/PwD) in the B. Tech. / B.E. in Chemical Engineering, Biotechnology, Civil Engineering, Electrical Engineering, Electrical and Electronics Engineering, Electronics Engineering, Electronics and (Communication or Telecommunications or Instrumentation), Energy Engineering, Mechanical Engineering, Engineering Physics, Petroleum Engineering or M.Sc. in Physics / Applied Physics / Electronics/Chemistry. The minimum mark is without round-off.
- The candidate has a minimum professional experience of one year as on 30.04.2023.

**Seal and address of Officer/Principal  
the organization with Office Seal**

**Signature (Name and Designation of  
signed on behalf of the organization  
with Office)**

Date: .....

Place: .....

**Sponsorship Certificate from Employing Organization on Letterhead  
(for Part-Time M.Tech. Programme)**

The applicant Mr./Ms. .... is now working as ..... in the scale of pay of Rs.....(Designation)..... since ..... (date) in our organization.

She/He joined the organization on ..... and has a **total regular service** of ..... years.

She/He has been recommended on a Part-Time Basis for admission to 4 Semester M.Tech. Programme (2 semester course work and 2 semester project work) at IIPE, Visakhapatnam. and

- that her/his official duties permit her/him to devote sufficient time for studies,
- that she/he will not be transferred to any other place during the period of study.

It is understood that the applicant, if admitted, may be allowed to do her/his project work in our organization if facilities for such project work are available as certified by the Department of IIPE, Visakhapatnam.

No part of the work carried out in fulfillment of the programme will be utilized commercially/submission of manuscript/applying for a patent without the approval of IIPE, Visakhapatnam and on terms mutually agreed by IIPE, Visakhapatnam and this organization.

We have also noted that the following conditions are to be satisfied for sponsoring of candidates for M.Tech. programme:

- The candidate should have a **first class** with a minimum of **60% aggregate Marks or CGPA:  $\geq 6.00/10.00$  (55% or CGPA:  $\geq 5.50/10.00$  in case of SC/ST/PwD)** in the B. Tech. / B.E. in Chemical Engineering, Petroleum Engineering, Biotechnology, Civil Engineering, Electrical Engineering, Electrical and Electronics Engineering, Electronics Engineering, Electronics and (Communication or Telecommunications or Instrumentation), Energy Engineering, Mechanical Engineering, Engineering Physics, Petroleum Engineering or M.Sc. in Physics / Applied Physics / Electronics/Chemistry. The minimum mark is without round-off.
- The candidate has a minimum professional experience of one year as on 30.04.2023.

**Seal and address of Officer/Principal  
the organization with Office Seal**

**Signature (Name and Designation of  
signed on behalf of the organization  
with Office)**

Date: .....

Place: .....