# **Pandit Deendayal Petroleum University**

# Ph.D. Admission January 2016 session: Policy & Procedure

# 1. Eligibility

A student seeking an admission to Ph.D. Programme of the University is required to have minimum educational qualification as mentioned hereunder. Each of the Master Degrees referred therein is to be on the basis of two year full time programme.

### For research in an area of Engg./Technology

M.Tech./M.E. or its equivalent as recognized by AIU in appropriate area.

# For research in an interdisciplinary areas like Petroleum Engg., Solar Engg., Nuclear Engg.and Environmental study

M.Tech./M.E./M.Sc./M.Sc.(Tech.) or its equivalent as recognized by AIU in appropriate area.

#### For research in an area of Sciences

M.Sc. degree or its equivalent as recognized by AIU in appropriate area.

#### For research in an area of Management

M.B.A./M.Tech./M.E./A.C.A./A.I.C.W.A./A.C.S. level or its equivalent as recognized by AIU in appropriate area.

#### For research in an area related to Liberal Studies

M. A. degree or its equivalent as recognized by AIU in appropriate area.

#### 2. Research Areas

#### **School of Technology**:

**Solar Energy**: Compound semiconductor thin films materials and silicon for high-efficiency homo and heterojunction Photovoltaic Solar Cell. High Energy density Li ion battery and Super capacitors, DSSC, Solid state DSSC based on perovskite, Organic Solar Cells, Fuel Cell and efficient water splitting for hydrogen generation using solar radiation. Computational material science for solar cell including optimization of optical and electrical properties, Industrial waste water purification using a novel organic molecule under concentrated sunlight, PV plant performance, Energy policy and regulation and Data validation of megawatt scale Solar PV power plant.

#### **Mechanical Engineering**

#### Thermal Engineering

Renewable Energy: Biodiesel, Wind energy, Solar hybrid technology, Solar thermal applications.

#### Thermal and Fluid Engineering:

Water desalinization, refrigeration system, waste heat recovery, Thermal comfort, sustainable manufacturing, Advance refrigeration system, tri-generation. Thermal system design-optimization.

#### **Design Engineering**

Finite Element Analysis, Additive Manufacturing/Rapid Prototyping, Bio printing, Drug manufacturing using Rapid Prototyping, Innovative and creative materials for rapid prototyping processes, Composite materials.

#### Manufacturing and Industrial Engineering

Advanced welding processes and welding metallurgy; surfacing and electrochemical machining; Surface Metrology & Digital Image Processing.

Project management: Theory & Practice; Modelling & Analysis of Industrial Engg. systems

**Elect. Engg.**: Power System Protection; Power electronics, Electrical machines, Electrical Power Systems, High Voltage Engineering, Power Quality.

**Civil Engg.**: Geotechnical Engg, Earthquake Engineering, Soil-Structure interaction, Reinforced Earth, Environmental Geotechnics, Cost Effective Green Technology in construction, Project Management, Advanced Construction Technology, Hydraulics and Environmental Engineering and Waste treatment and utilization for construction, Computational Solid Mechanics, Project Risk Management.

**Chemical Engineering**: Biofuels, Clean Energy and Environment: Carbon Capture and Sequestration; Regenerative chemical absorption; Solar conversion of CO<sub>2</sub>, Catalytic/Electro catalytic conversion of CO<sub>2</sub> to liquid fuels. Solar adsorption cooling, Advanced waste water treatment, Membrane reactors, Ionic liquids, Modelling & simulation.

**Sciences:** Solid State Physics, Material Science, Chemistry, Solid state DSSC based on perovskite, Global warming and Climate change, Cloud physics and rain formation processes, Computational Condensed matter and material science, Geochemistry.

#### **Interdisciplinary Areas:** Such as Environmental Science & Engg.

(The selected candidates who wish to pursue interdisciplinary research will be registered in a department of School of Technology relevant to the area of their qualifying PG degree.)

**Mathematics**: Stochastic Optimization, Solid Mechanics and FGM, Performance measure of distribution warehouses & Software Reliability, Magnetohydrodynamics Computational Biology, Data assimilation in numerical models of ocean, Numerical Reservoir Simulation, Applied Geophysics & Geostatistics.

#### **School of Petroleum Technology:**

Petroleum Engg., Petroleum Refining, Enhanced Oil recovery, Earth Science, Geo Physics, Paleontology, Exploration Geology, Petro Physics, Geothermal Energy, Shale gas, Petro Geo Sciences, Reservoir Engg., Hydrocarbon research & Exploration.

#### **School of Petroleum Management:**

Marketing, Operations Management, HRM and Organizational Behavior, Information Systems Management, Strategic Management, Financial Management.

<u>School of Liberal Studies</u>: English Language & Literature, Public Policy & Public Administration, Psychology, Political Science and International Relations, Mass Communication/Media Studies & Commerce.

#### 3. Selection Procedure

There will be a Research Aptitude Test (RAT) common for all the eligible candidates, followed by a Discipline wise proficiency-evaluation which may be in the form of oral &/or written test/s as to be determined by the concerned School for the research area in its purview.

While appearing at the selection procedure, the candidate is required to produce a set of all the relevant original testimonials in support of the application. The candidate shall have to ensure all fulfillments to the eligibility requirements while applying for admission.

Fees for a single Application: Rs. 2000/- (Non Refundable)

# <u>Last Date for application in the prescribed form available on the website:</u> 30<sup>th</sup>November 2015

## 4. Semester Fees for the programme

#### Non Refundable Fees:

For Part Time students: Rs.50,000/- per semester (except Hostel, Mess, Transportation and alike).

For Full Time students: Rs. 25,000/- per semester as Tuition fees(except Hostel, Mess, Transportation and alike).

Other incidental fees shall be chargeable from time to time.

No request for the fee refund shall be entertained.

#### **Refundable Fees:**

Library Deposit Rs.5,000/-Caution Money Deposit Rs.10,000/-

The second semester fees shall be collected in installment of Rs.10,000/- per month during the first semester from the fellowship given to the full time students if any by the University; and so forth for the fees of third semester onwards. The remaining sum collected from the fellowships will be refunded to the student after successful completion of the Ph.D. programme as defined in the academic rules.

# 5. Research fellowships for the Full Time candidates

Research fellowships will be made available to the few deserving students on merit basis.

Up to first two years: Rs.25,000/- per month as research fellowship In the third year: Rs.30,000/- per month as research fellowship

After third year, the Research fellowship may continue subject to the scrutiny by the Doctoral Committee, but not beyond the fourth year.

It shall be mandatory to perform the duties as Teaching Assistant for all the full time candidates availing the fellowship.

The candidates admitted to pursue Ph. D. on full time basis in the research areas of Sciences and areas under School of Liberal Studies may be granted the fellowships as mentioned above on merit basis provided they have a valid UGC NET/CSIR-UGC NET/SLET score at the time of the admission tests.

M.E. / M.Tech. qualified candidates admitted to pursue Ph. D. on full time basis in the research areas of Engg. & Technology may be granted the fellowships as mentioned above on merit basis.

M. Sc. (Tech.) in GeoScience (3 year full time programme) qualified candidates admitted to pursue Ph. D. on full time basis in the research areas of Engg. & Technology may be granted the fellowships as mentioned on merit basis.

The candidates admitted to pursue Ph. D. on full time basis in the research areas of Management may be granted the fellowships as mentioned above on merit basis provided they have valid CAT score with a minimum of 60 percentile at the time of the admission tests.

No other Financial Assistance/Aid will be given to the students.

The continuance of the Research fellowship shall be subjected to the academic review, discipline and punctuality of the candidate.

The above policy-procedure is subject to modification whenever found necessary by the University.

If a dispute arises regarding any of the above provision, the decision of the Director General of the University shall be final and binding to all.

**Jurisdiction**: The above referred Admission Procedure is subject to the jurisdiction of Hon'ble Court of Gujarat at Ahmedabad.

### 6. CATEGORIES OF Ph.D. STUDENTS

The University admits students for Ph. D. programme under the following categories:

**REGULAR** (**FULL-TIME**): This category refers to the candidates who work full time for their Ph.D. and may receive fellowship/assistantship from the University as per its policy or fellowship from CSIR/UGC or any other recognized funding agency or may be self financed.

**SPONSORED STUDENTS (FULL-TIME):** A candidate in the category is sponsored by a recognized R&D organization, national institute, academic institution, govt. organization or industry for doing research in PDPU on a full time basis. He is required to have at least two years of working experience in the respective field. He will not receive any financial support from the University. Sponsorship letter (Form-I) should be attached with the application.

**PROJECT STAFF (PART-TIME):** This category refers to the candidates who are working on sponsored projects in any School of the University and admitted to the Ph.D. programme. The duration of the project at the time of admission should be at least 2 years.

LOCALLY & PROFESSIONALLY EMPLOYED PERSONNEL (PART-TIME): This category refers to the candidates who are locally and professionally employed personnel. These candidates should be able to meet supervisor(s) regularly in the University for the guidance on their research work. The applicant must be a regular employee of a recognized R&D organization, national institute, academic institution, government organization or industry at the time of admission and be engaged in professional work in the discipline in which admission is sought. No financial assistance will be provided by the University to such students. "No Objection" Certificate from the Head of the Institute/Organization in which he is employed (Form-II) must be enclosed at the time of application.

SPONSORED STUDENTS (EXTERNAL REGISTRATION)(PART TIME): This category refers to candidates employed in R&D organizations related to Science, Technology, & Engineering having adequate research facilities. The research work leading to the Ph.D. degree may be carried out largely in the parent organization of the candidate under a Local Supervisor from the organization but with the overall guidance and advice provided by a faculty member of the University (School Supervisor) under whom he is registered. The appointment of the Local Supervisor is to be reported to the Director General of the University through the Director of the concerned School of the University for final approval. Sponsorship certificate from the Head of the organization where the candidate is employed. (Form III) is required to be enclosed at the time of application. No financial assistance from the University will be provided to such students.

**UNIVERSITY EMPLOYEES (PART-TIME):** Full time employees (Regular/Contractual) of the University may be sponsored as part-time students by the Director General, on recommendation of the School-Director & the Dean of the concerned Faculty, considering also the terms & conditions of appointment.

# 7. Important Dates

Last date for receipt of the application form, at PDPU	30 November 2015
Announcement of the candidates eligible for the selection procedure	8 December 2015
on the website	
Selection Procedure	18 December 2015
RAT in, Block-C(SPT-1 building) from 10.00 a.m. to 12.00 p.m.	
Discipline wise proficiency-evaluation at 1.30 p.m. onward.	
Announcement of the list of candidates offered the admission	24 December 2015
Last Date for paying fees	5 January 2016
Induction programme for admitted candidates	18 January 2016
Commencement of the term	18 January 2016

#### **Contact Details:**

#### Dr. Roshni Solanki

Assistant Registrar (Academics)

Ph.: +91-079-23275012 Email: phd@pdpu.ac.in

## FormI- Full Time SPONSORSHIPLETTER

(This is required tobe on the letterheadof thesponsoring organization)

Reference	No:
Date:	
To TheDirector General PanditDeendayalPetroleumUniversity Raisan, Gandhinagar- 382007.	
Sub: <u>Sponsoringan Employee forPh.D.Programme</u>	
DearSir,	
We hereby sponsor the candidate	
Mr./Ms	
who isan employee in our organization on the position of	,
forjoiningPh.D. Programme in the research area of	
atyourUniversity as a full-timestudent.	
We shallrelieve him/her from his/her duties in the organization d	uring thefirstthreeyearsof the
Ph.D. Programme.	
Signatureand SealoftheSponsoringAuthority	

# $Form\ II-No\ Objection\ Certificate\ for\ Part-Time\ Students$

(This is required to be on the letter head of the organization)

Date:
То
The Director General
PanditDeendayal Petroleum University
Raisan, Gandhinagar-382007
Sub: No Objection Certificate
Dear Sir,
We do not have any objection if Mr./Mrs/Msan
Employee in our organization on the position of, is
admitted to the Ph.D. Programme in the research area of at
your University as a part-time student.
We shall grant him/her leave of absence to attend the programme related activities at the University as and when required.
Signature and Seal of the Employer

## Form III – Sponsorship Certificate of External Registration

(This is to be addressed to the Director General, PanditDeendayal Petroleum University, Raisan, Gandhinagar-382007 on the letter head of the sponsoring organization.)

Reference No.	Date:
1. Name & Address of the sponsoring organization:	
2. Designation of the applicant:	
3. Division/Section of the organization where the research work	x is proposed to carry out:
4. Name of the proposed Local (based at the organization) Supe	ervisor:
(The proposed Local Supervisor needs to be recognized as PhI the University in the prescribed application	
6. Details of the relevant facilities which will be made available	e to the candidate:
7. Statement of Local Supervisor to the University:	
Mr./Mrs/Ms	ty I agree to supervisehis/her
Signature of Local Supervisor	
If Mr. /Mrs./Ms  Ph.D.Programme of your University, we agree to relieve the work related to the programme in every semester at	ve him/her to attend all kind of
He/she will be permitted to carry out the research leading to under the local supervision of Dr	who has beenworking in our
Signature and Seal of the Sponsoring Authority	