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Information Brochure

PhD Admission 2026-27

Even Semester

RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY
(An Institution of National Importance established by the Government of India)

**RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY, JAIS
AND IT'S CAMPUSES, RGIPT BENGALURU & RGIPT SIVASAGAR, ASSAM**

**Information Brochure for Admission to Ph.D. Programmes for
Even Semester of the Academic Year 2026-27**

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**RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY, JAIS
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Programme Highlights

- Prestigious FELLOWSHIPS available from leading Oil PSUs.
- GATE NOT MANDATORY for Ph.D. admission in Engineering disciplines (Refer Section 1.A.2: Financial Assistance).
- STATE-OF-THE-ART RESEARCH LABORATORIES meeting international standards.
- INDUSTRY CO-SUPERVISION opportunities with industry experts.
- RELAXATION IN QUALIFYING MARKS & COURSEWORK WAIVER for experienced applicants.

Rajiv Gandhi Institute of Petroleum Technology (RGIPT), Jais is an autonomous institution established by the Government of India. The Institute has been accorded the status of “An Institution of National Importance” along the lines of the Indian Institutes of Technology (IIT) under an Act of Parliament (“Rajiv Gandhi Institute of Petroleum Technology Act 2007”). The institute also has two fully established campuses, i.e., RGIPT Bengaluru Campus and RGIPT Sivasagar Campus. It is a domain specific Institute, and its prime objective is to provide world-class education, training, and research to roll out efficient human resources to meet the growing requirements of the petroleum & energy sector. The aspiration is to develop India as a global manpower hub for the entire petroleum and energy sector.

The P.G. programmes of the Rajiv Gandhi Institute of Petroleum Technology are aimed at developing manpower with sound theoretical and experimental background in frontier areas of research in engineering, sciences, management and interdisciplinary subjects in the areas of petroleum and energy. The emphasis is on understanding the scientific basis and engineering principles involved in solving problems of practical importance in the relevant field using multidisciplinary approach. An important component of these programmes is to inculcate a habit of independent thinking and initiative by the candidates in planning and execution of the research work. These programmes seek to develop manpower of the highest quality to cater the needs of industry, R & D organizations and educational institutions.

The Institute at Jais has Department of Petroleum Engineering & Geoengineering, Department of Chemical and Biochemical Engineering, Department of Computer Science and Engineering, Department of Electrical and Electronics Engineering, Department of Mechanical Engineering, Department of Mathematical Sciences, Department of Energy and Human Sciences, which offers PG and Ph.D. programmes (**Annexures I & II**). RGIPT Bengaluru Campus offers Ph.D. programmes in various engineering disciplines including Management through the Department of Management Studies (**Annexures I & II**). RGIPT Sivasagar Campus also offers Ph.D.

programmes for the deserving and suitable candidates to pursue research activities in various sciences and engineering disciplines. Overall, the students will be registered at RGIPT all campuses for their PhD programmes.

Duly filled-in online applications in the prescribed format are invited for admission to the **Ph.D. programmes for the Even Semester of the Academic Session 2026-2027** in various departments/disciplines, as specified in **Annexure-I**.

Candidates whose qualifying examination results have not been declared by the time of the written test/interview may also be considered for admission. If selected, their admission shall be **provisional**, subject to their producing documentary evidence of having completed all requirements of the qualifying degree, including the project/thesis examination and viva-voce, before the date of registration.

Such candidates must also provide documentary evidence that they have **successfully completed the qualifying degree examination with the minimum marks/grades prescribed for eligibility** by the last date for document submission, as specified in the academic calendar (i.e., within **08 weeks from the date of registration**). Failure to meet these requirements within the stipulated period shall result in **cancellation of the admission**.

All forms mentioned in this document are available on the admission portal. Please use the links provided in the instructions given therein.

1. Ph.D. Programmes

A candidate may apply for any of the four categories of registration as described below, subject to the fulfillment of requirements of minimum qualification and eligibility criteria.

- **Full Time Regular Registration Category**
- **Full Time External Registration Category**
- **Full Time Sponsored Registration Category**
- **Part Time Registration Category**

1.A. Full Time Regular Registration Category

Applicants must have the requisite qualification with minimum marks/CPI as mentioned below in the department/discipline concerned (Refer **Table-1A, Annexure-I**). A list of research areas of various departments/disciplines currently available for Ph.D. programmes are given in **Table 1B (Jais Campus), 1C (Bengaluru Campus) and 1D (Sivasagar Campus)**, respectively of **Annexure-I**. The number of seats with Institute Assistantship available for Ph.D. programmes in different departments/campuses are given in **Table 1E of Annexure-I**.

1.A.1 Minimum Qualification:

Ph.D. in Engineering

- a) Applicants with Master's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0-point scale) at the Master's degree level.
- b) Applicants with Bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0-point scale) at the Bachelor's degree level.
- c) Applicants with Master's degree in science as an allied discipline/area (where science is an allied discipline/area), must have a minimum of 65% marks or 6.5 CPI (on a 10.0-point scale) at the Master's degree level.

Ph.D. in Sciences

- a) Applicants with Master's degree in science in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0-point scale) at the Master's degree level.
- b) Applicants with four-year Bachelor's degree in Science in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0-point scale) at the Bachelor's degree level.

Ph.D. in Humanities

- a) Applicants with Master's degree in engineering with a minimum CPI of 6.00 on a 10.0-point scale (or 60% marks) in the qualifying degree.
- b) Applicants with Master's degree in humanities/sciences or allied subjects with a minimum CPI of 6.00 on a 10.0-point scale (or 60% marks) in the qualifying degree.
- c) Applicants with Bachelor's degree in engineering or sciences (4-Year program) with a minimum CPI of 7.50 on a 10.0-point scale (or 75% marks) in the Bachelor degree.

Ph.D. in Management Studies

- a) Applicants with Master's degree or equivalent in the management or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0-point scale) at the Master's degree level.
- b) Professional qualification such as CA, ICWA & CS with minimum of 50% marks and a minimum of 60% marks in the bachelor's degree.
- c) Applicants with Bachelor's degree in engineering discipline or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0-point scale) at the Bachelor's degree level.

1.A.1.1 A relaxation of maximum 5% in qualifying marks or 0.5 in CPI (on a 10-point scale) may be considered by the Departmental Postgraduate Committee (DPGC) of the respective departments for professionals with at least 2-years of industry experience.

1.A.2 Financial Assistance

Financial Assistance in the form of Institute Assistantship (IA) is available to the students admitted to Ph.D. programmes under Full Time Regular Registration Category. **For B. Tech students of RGIPT/CFTIs/CFIs/State Funded Technical Institutes/Engineering Institutes with NIRF Rank 1-25, or Master students from Government-recognized Institute, Institute Assistantship will be provided with exemption of the qualifying GATE examination.**

The students will receive the following monthly fellowship:

- *Junior Research Fellow (JRF): Rs. 37000/- per month*
- *Junior Research Fellow (JRF) (RGIPT Sponsored Projects*): Rs. 18500/- per month*

**Additional Rs. 18,500/- per month (subject to selection) (An additional interview/test will be conducted by Central Instrumentation Facilities (CIF) team for availing this facility) [as given in 1.E].*

Upon successful completion of two years in the Ph.D. programme, candidates shall be elevated to the position of Senior Research Fellow (SRF) in accordance with the applicable Institute norms. The **NET-LS qualified students** may be eligible for Institute Assistantship in Department of Energy and Human Science and Department of Management Studies provided they have CPI of

7.0 or 70% marks in the qualifying examination. The assistantship is subject to its availability.

A student shall be assigned duties of up to eight hours per week by the departments to avail the Teaching Assistantship. The renewal of assistantship is contingent on the student's satisfactory performance in the academic programme and in the discharge of assistantship duties on a semester to semester basis. Candidates selected for the CIF TAsip shall not be required to perform departmental TA duties, notwithstanding their enrollment under an RGIPT-sponsored project.

For the Even Semester of Academic Session 2026-27, the Institute Assistantship available in each department are as given in **Table 1E of Annexure-I**.

No student shall be admitted to Full Time Regular Registration Category without Institute Assistantship or National-Level Scholarships/Fellowships. No student can get financial assistance from more than one source at a time.

The **upper age limit** for Full Time Regular Registration category is **28 years** as on admission into fellowship. Age relaxation rule would be applicable as per Govt. of India policy.

Financial assistance in the form of Institute Assistantship to eligible Ph.D. scholars shall be provided for a **maximum period of four years** from the date of registration in the Ph.D. programme, irrespective of whether the scholar has received fellowship support from a project or the Institute.

In cases where a scholar submits the Ph.D. thesis before completion of four years from the date of registration, the Institute Assistantship may continue, based on the recommendation of the DPGC and with the approval of the Dean (Academic Affairs), up to four years or the date of the oral examination, whichever is earlier. Such scholars shall register for zero credits during this period.

Applicants who are either of sponsored registration category or who are already awarded fellowship by external agencies or Part time registration category or external registration category can submit their applications for admission in departments even if there is no Institute Assistantship available.

a) Full Institute Assistantship upon completion of the project (provided the remaining project duration at the time of registration was at least one year) fellowship be given to those students who had qualified for Institute Assistantship or were recipient of JRF/SRF through national level tests conducted by UGC, CSIR, Department of Biotechnology, etc.

b) Other Ph.D. Students working on various projects be given half of the Institute Assistantship upon completion and closure of their Project Fellowship. However, such Ph.D. students may join projects once again by leaving Institute Assistantship, when selected on any new Project with the Supervisor.

(Any other cases will be guided by the Institute Rules)

1.A.3 ICRGI Ph.D. Research Fellowship:

Two students from Full time regular registration category will be selected following an evaluation procedure to pursue their research work under **joint supervision of RGIPT and Indian Oil Corporation Ltd. (IOCL)**. These students will be eligible to receive 25% supplementary stipend in addition to their regular stipend (as per the UGC guideline) under this fellowship scheme. These scholars will be eligible for other monetary benefits such as HRA, contingency, medical facilities during their programme.

1.A.4. HPRGI Ph.D. Research Fellowship:

Two students from Full time regular registration category will be selected following an evaluation procedure to pursue their research work under **joint supervision of RGIPT and Hindustan Petroleum Corporation Ltd. (HPCL)**. These students will be eligible to receive 25% supplementary stipend in addition to their regular stipend (as per the UGC guideline) under this fellowship scheme. These scholars will be eligible for other monetary benefits such as HRA, contingency, medical facilities during their programme.

1.A.5. CPRGI Ph.D. Research Fellowship:

Two students from Full time regular registration category will be selected following an evaluation procedure to pursue their research work under **joint supervision of RGIPT and Chennai Petroleum Corporation Ltd. (CPCL)**. These students will be eligible to receive 25% supplementary stipend in addition to their regular stipend (as per the UGC guideline) under this fellowship scheme. These scholars will be eligible for other monetary benefits such as HRA, contingency, medical facilities during their programme.

1.A.6. BPRGI Ph.D. Research Fellowship:

Three students from Full time regular registration category will be selected following an evaluation procedure to pursue their research work under **joint supervision of RGIPT and Bharat Petroleum Corporation Ltd. (BPCL)**. These students will be eligible to receive 25% supplementary stipend in addition to their regular stipend (as per the UGC guideline) under this fellowship scheme. These scholars will be eligible for other monetary benefits such as HRA, contingency, medical facilities during their programme.

1.A.7 Admission of Candidates having National-Level Scholarships

There is a provision for admission to Ph.D. programmes for candidates who fulfill the eligibility criteria for the respective programmes and also have qualified in any of the National Level JRF/SRF Tests conducted by UGC, CSIR, Department of Biotechnology, Indian Council of Medical Research or DST-INSPIRE fellowship or Dr. K.S. Krishnan Fellowship of DAE, etc.

Applicants must have requisite qualification with minimum marks/CPI (Refer **Sec. 1.A.1**). Such candidates may be offered admission after an interview as and when they apply in Departments where they are eligible. They will be recommended by DPGC to register for the programme for the next available semester. Such candidates who are applying for admission in response to this advertisement for the current session will go through similar process of selection as above.

1.B. Full Time External Registration category

A candidate working in an external R&D organization or in an industry recognized by the Institute, which is equipped with necessary research and library facilities, can also apply for admission to Ph.D. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (Refer **Sec. 1.A.1**). Such a candidate must show satisfactory performance in the interview, must be sponsored by his/her employer and must have been in employment with the sponsoring organization for at least two years at the time of admission.

The employer must undertake to pay the candidate's full salary and relieve him/her from official duties to enable the candidate to reside on campus and complete the coursework requirements. This requirement shall not apply to candidates employed in organizations located within 50 km of the Institute.

The candidate should submit a certificate (Refer **Form I** of the Application Form) obtained from his/her organization that the research facilities of his/her organization would be made available to him/her for carrying out research. He/she should also provide the biodata of the **prospective supervisor** along with his/her consent, who would be supervising the candidate's work at his/her organization.

[N.B. Letter of appointment and Form – 16 for two years of service is required from the employer at the time of interview.]

In case of a candidate, who is in professional service in a reputed organization for **more than 07 years**, the requirement of having an **external supervisor may be relaxed** by the Chairman, Senate on the recommendation of the concerned DPGC.

In addition, an R&D organization/industry or a research area in the specific organization may be recognized by the Institute as per the following procedure. On the recommendation of the DPGC, the Senate Post-Graduate Committee (SPGC) will constitute a committee to assess and approve an R & D organization/ industry for admission of sponsored candidates to carry out Ph.D. research in a specified area. The committee may, upon inspection, also approve all the areas in which R & D activities are going on in that organization. Refer **Annexure-II** for already approved list.

An application for admission from a candidate working in the approved organization will be considered only if he/she wishes to work in the approved area.

1.C. Full Time Sponsored Registration Category

A candidate who is sponsored by a Teaching Institution or by an R&D organization or by an Industry can also apply for admission to Ph.D. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (Refer **Sec. 1.A.1**). He/she must have been in service of the sponsoring institution/organization for at least two years at the time of admission. The sponsoring organization must specifically undertake to provide full salary to the candidate and to relieve him/her to pursue the programme for its full duration (Refer **Form II** of the Application Form). Such candidates must complete the requirements of the programme by staying on-campus for the full duration of the programme.

[N.B. Letter of appointment and Form – 16 issued by the employer for two years of service is required at the time of written test / interview. In addition, the candidate must submit an undertaking that he/she will continue to submit Form – 16 for the subsequent years till he/she completes the programme.]

1.D. Part Time Registration Category

A candidate working in an external R&D organization or in an industry recognized by the Institute, which is equipped with necessary research and library facilities, can also apply for admission to Ph.D. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (Refer **Sec. 1.A.1**). Such a candidate must show satisfactory performance in the interview, must be sponsored by his/her employer and must have been in employment with the sponsoring organization for at least two years at the time of admission.

The candidate should submit a certificate (Refer **Form V** of the Application Form) obtained from his/her organization that the research facilities of his/her organization would be made available to him/her for carrying out research. He/she should also provide the biodata of the **prospective supervisor** along with his/her consent, who would be supervising the candidate's work at his/her organization.

[N.B. Letter of appointment and Form – 16 for two years of service is required from the employer at the time of interview.]

In case of a candidate, who is in professional service in a reputed organization for **more than 07 years**, the requirement of having an **external supervisor may be relaxed** by the Chairman, Senate on the recommendation of the concerned DPGC.

In addition, an R&D organization/industry or a research area in a specific organization may be recognized by the Institute as per the following procedure. On the recommendation of the DPGC, the SPGC will constitute a committee to assess and approve an R & D organization/ industry for admission of sponsored candidates to carry out Ph.D. research in a specified area. The committee may, upon inspection, also approve all the areas in which R & D activities are going on in that organization. Refer **Annexure-II** for already approved list.

An application for admission from a candidate working in the approved organization will be considered only if he/she wishes to work in the approved area.

The permanent staff and faculty members of the Institute/organization as well as Research Assistants/JRFs/SRFs working on an externally funded research project running in the Institute, are also applicable for registration for Part Time Ph.D. category, provided they satisfy the eligibility criteria laid down for the programme concerned (Refer **Sec. 1.A.1**). Such a candidate should submit a No Objection Certificate (NOC) from the Head of the Department/Principal Investigator as the case may be (Refer **Forms III & IV** of the Application Form) as applicable. They will be required to attend to normal duties assigned to them by the Department the Principal Investigator of the research project. Furthermore, Research Assistants, Junior Research Fellows (JRFs), and Senior Research Fellows (SRFs) engaged in externally funded research projects running within the Institute shall be eligible to apply under the Full Time Regular Registration Category, subject to the explicit permission of the concerned Funding Agency. In such cases, all norms governing the Full Time Regular Registration Category shall be applicable to such candidates.

NOTE: The number of available PhD seats given in **Table 1E of Annexure-I** under Institute Assistantship should not be considered as final available PhD seats. Applicants who are either of sponsored registration category or who are already awarded fellowship by external agencies or part time registration category or external registration category can submit their applications for admission in departments/disciplines even if there is no seat available under Institute

1.E. Project-Linked PhD category

Projects will be undertaken in the following thrust areas, including but not limited to:

- Energy
- Clean/green energy and transition
- Additives for Oil and Gas industries
- Carbon neutrality
- Decarbonization
- Circular economy
- Hydrocarbon exploration
- Sustainable development

All other necessary information regarding the projects will be shared no later than one week prior to the Written Test.

Eligibility Criteria

- Bachelor's/ Master's degree holders from Government-recognized Institutions (Refer **Sec. 1.A.1**).
- GATE qualification is not mandatory.
- Strong inclination towards experimental research and system development.

Selection Process

Step 1: Ph.D. Admission

- Candidates must qualify for a written test conducted by RGIPT
- Followed by an interview (as per institute norms)
- Selected candidates will be enrolled in the Project-linked Ph.D. program

Step 2: CIF Teaching Assistantship (TAship)

- After Ph.D. enrollment, candidates may apply for the CIF TAship
- A separate Written Test and Interview will be conducted

TAship Details:

- Engagement: 20 hours per week in CIF
- Nature of work: Operation and maintenance of equipment
- Formal CIF Assistantship agreement including
 - i) Defined duties
 - ii) Work schedule
 - iii) Safety protocols
 - iv) Performance metrics
- No Departmental Teaching Assistantship (TA), as CIF duties constitute equivalent service.

Fellowship & Financial Support

- Ph.D. Fellowship
₹ 18,500/- per month from Institute-sponsored project
- CIF TAship:
Additional ₹ 18,500/- per month (subject to selection) (*An additional interview/test will be conducted by CIF for availing this facility*)

Total potential earning: ₹37,000/- per month

Important Note

- Candidates must first qualify for Ph.D. admission
- CIF TAship is not automatic and requires separate selection
- Preference will be given to candidates with:
 - ✓ Hands-on experimental experience
 - ✓ Interest in sustainability and circular economy

In addition, manpower engaged in externally funded agency-sponsored projects shall also be permitted to register under the Full Time Regular Registration Category. All conditions stipulated by the Funding Agency concerned shall be applicable to such candidates.

2. SELECTION CRITERIA

Admission to Ph.D. Programme

1. Admission will be based on written test and interview with the candidates shortlisted by the department concerned.
2. The following category of applicants shall be **exempted** from appearing in the **written test**:
 - a) External Registration Category
 - b) Sponsored Registration Category
 - c) Part Time Registration Category
 - d) Candidates having National Level Scholarships
 - e) Outstanding candidates from Premier Institution:
 - (i) Applicants who have qualifying degree from CFI/CFTI with CPI of 8.00 or above (on a 10.0-point scale).
 - (ii) There will not be any category-wise or specialization-wise seats for selection under the above type.
 - (iii) Interview should be conducted for this type of candidates PRIOR to the conduct of written test for remaining candidates.
 - (iv) Any candidate who could not qualify in the said Interview, through this channel, is eligible to take regular selection procedure of Written Test and Interview. Since the candidate has been interviewed once, he/she will not appear again in the interview and marks of the first interview will be considered for preparing merit list.
3. Further, if qualifying marks are specified in written test and/or interview a 5% relaxation will be given to SC/ST candidate. If a candidate avails such relaxation, he/she shall not be considered for admission in General Category.
4. Upon approval of Chairman, Senate, the Head of the Department concerned will issue admission letters to the candidates who will be required to accept the offer of admission by depositing the prescribed fee before a specified date.
5. In case a candidate does not accept the offer by paying the prescribed fee by the specified date, the offer of admission will stand withdrawn, and the admission will be offered to the candidates in the waiting list, if any, in order of merit.

2.A. RESERVATIONS TO SC/ST/OBC/EWS CANDIDATES:

In each discipline, 15% seats are reserved for SC, 7.5% seats for ST, 27% seats for OBC (non-creamy layer) and 10% seats for EWS candidates. SC/ST/OBC candidates must also satisfy the eligibility requirements for admission. However, while considering their cases, only suitability for the programme is ensured and the SC/ST/OBC/EWS candidates are not compared with those belonging to other categories.

Further, a relaxation of 5% marks or 0.5 CPI (on a 10-point scale) shall be admissible on the marks obtained in qualifying degree for SC and ST candidates in the admission.

The SC/ST/OBC/EWS certificates must be produced at the time of written test / interview on the prescribed form. In case of OBC (non-creamy layer) the certificate should not be dated prior to six months from date of written test/ interview. The following authorities are empowered to issue the SC/ST/OBC/EWS certificate:

- (a) District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Addl. Deputy Commissioner/Deputy Collector/First Class Stipendiary Magistrate/City Magistrate/Sub-Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner.

- (b) Chief Presidency Magistrate/ Additional Chief Presidency Magistrate/ Presidency Magistrate.
- (c) Revenue Officer not below the rank of Tehsildar.
- (d) Sub-Divisional Officer of the area where the candidate and/or his family normally resides.
- (e) Administrator/ Secretary to the Administrator/ Development Officer (Lakshadweep Islands).

2.B. RESERVATIONS TO PHYSICALLY CHALLENGED (PC) CANDIDATES

In total, 5% reservation (horizontal) shall apply for candidates with physical disability as per Govt. of India norms (minimum 40% disability; attested copy of the certificate from District CMO must be furnished). Such candidates must satisfy the eligibility requirements for admission. However, while considering these applications, only suitability for the programme is ensured and they are not compared with those belonging to other categories. The candidates called for counseling may also be examined by a Medical Board constituted by the RGIPT, Jais.

3. ADMISSION OF FOREIGN NATIONALS & INDIAN NATIONALS RESIDING ABROAD

Admissions to Ph.D. Programmes are available for Indian Nationals Residing Abroad (INRA) and foreign nationals as per details given below.

1. Indian Nationals Residing Abroad (INRA): Candidates must have been residing abroad continuously for at least one year at the time of applying for admission. Their applications may be processed by the departments as and when they are received or according to any schedule convenient to the departments. The applications should be scrutinized to make sure that, in terms of qualifications, they are comparable with the candidates admitted in the general category.
2. The applications of foreign nationals, who are sponsored by the Indian Council of Cultural Relations (ICCR)/Study in India programme, will be scrutinized by the departments concerned to assess their suitability for admission to the programme. The recommendations of the Department will be sent to the Chairman, Senate through the Chairperson, SPGC for approval.
3. Candidates belonging to the above two categories should satisfy the eligibility conditions and should have qualified GRE. The candidates not having a GRE score will have to study and pass a suitably designed English course.

Note: 1. Mere fulfillment of eligibility criteria does not guarantee admission in a programme. The candidates' performance in the written test and interview should be at the levels expected for the respective programmes.

2. Further details of the Ph.D. programme are available on the official website www.rgipt.ac.in.

Application Fee for Ph.D.

The application fee is non-refundable.

- Rs 708/- for SC/ST/PwD and Female Candidates
- Rs 1,416/- for General, OBC and EWS Candidates

4. Fee Structure for Ph.D. Programme

A. ONE TIME PAYMENT AT THE TIME OF ADMISSION (NON-REFUNDABLE)						
Sl. No.	Particulars	Full Time Regular		Part Time Registration		
		Non-Sponsored	Sponsored (all category)/ External/QIP	External*	Project Fellow	Internal Permanent Faculty/ Staff of RGIPT
1	Admission Fee	4,000.00	4,000.00	4,000.00	4,000.00	2,000.00
2	Alumni Membership Fee	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
3	Students' Welfare Fund	1,000.00	1,000.00	1,000.00	1,000.00	0.00
4	Thesis Fee	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	Total	7,000.00	7,000.00	7,000.00	7,000.00	4,000.00
B. PAYABLE AT THE TIME OF ADMISSION (REFUNDABLE)						
1	Caution Money	9,000.00	9,000.00	9,000.00	9,000.00	0.00
	Total	9,000.00	9,000.00	9,000.00	9,000.00	0.00
C. SEMESTER FEE PAYABLE FOR EACH SEMESTER (NON-REFUNDABLE)						
1	Tuition Fee	15,000.00	60,000.00	60,000.00	15,000.00	15,000.00
2	Examination Fee	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
3	Registration/ Enrollment	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
4	Students Amenities Fee	2,000.00	2,000.00	2,000.00	2,000.00	0.00
5	Hostel Establishment Fee	8,000.00	8,000.00	0.00	8,000.00	0.00
6	Hostel Seat Rent	10,000.00	10,000.00	0.00	10,000.00	0.00
7	Medical Fee	1,000.00	1,000.00	0.00	1,000.00	0.00
8	Academic Activities Fee	15,000.00	15,000.00	15,000.00	15,000.00	15,000.00
	Total	54,000.00	99,000.00	80,000.00	54,000.00	33,000.00
AMOUNT PAYABLE AS INSTITUTE'S DUES AT THE TIME OF ADMISSION (FIRST SEMESTER)						
1	TOTAL OF 'A', 'B' & 'C'	70,000.00	1,15,000.00	96,000.00	70,000.00	37,000.00
AMOUNT PAYABLE AS INSTITUTE'S DUES FOR OTHER SEMESTER						
1	TOTAL OF 'C'	54,000.00	99,000.00	80,000.00	54,000.00	33,000.00

* Those candidates, whose tuition fee is not reimbursed by the employing organization, shall pay tuition fee same as that of the Regular Category from second semester onwards.

FEEs FOR FOREIGN STUDENTS			
S.N.	Particulars	For SAARC Countries	For other Countries
1	At the time of Admission	US \$ 3000.00 + ₹ 65,000.00	US \$ 5000.00 + ₹ 65,000.00
2	Other Semester Fee	US \$ 3000.00 + ₹ 49,000.00	US \$ 5000.00 + ₹ 49,000.00

- **In addition**, all the hostel staying students will pay **mess advance of ₹ 25,000.00 per semester (for Jais & Bengaluru Campus), ₹ 16,000.00 per semester (for Sivasagar Campus) at the beginning of each semester**, which will be adjusted towards actual bills at the end of each academic year.

- Any stay by the student at the Institute's hostel beyond the semester study period shall be charged at **₹100 per day**. Mess facilities may be available on a per-day payment basis, subject to availability.

4.A. Refund Policy for PG students

Cases	Refund amount
Withdrawal of admission after deposition of full semester fees one day before the date of physical registration	Total deposited fees – Rs. 1500/-
Withdrawal of admission on OR after the date of physical registration	Caution Money of Rs. 9000/-, settlement of Mess Advance on actual consumption basis.
Withdrawal of admission in the Mid of any Semester	Caution Money of Rs. 9000/-, settlement of Mess Advance on actual consumption basis.

Process for getting refund:

The students shall submit an application to the concerned Head of Department, clearly stating the reason for withdrawal from the programme. The application must be accompanied by the following documents:

- Admission offer letter
- Fee deposit receipt
- One Identity Card (Aadhar/PAN)
- Cancelled Cheque/Photocopy of Passbook

The student will receive a refund of the amount in the bank account provided by them. Normally, the process will be completed within 45 days.

5. Research and Development Facilities (All Campuses)

Research Infrastructure and Laboratory Facilities at RGIPT Jais Campus:

RGIPT has a dedicated Central Instrumentation Facility (CIF) at its Jais Campus, equipped with more than 75 advanced research and analytical facilities. It serves as a cornerstone of the Institute's advanced research ecosystem, providing access to state-of-the-art scientific infrastructure and fostering excellence in research, innovation, and experiential learning. Major instruments include Nuclear Magnetic Resonance (NMR), X-ray Photoelectron Spectroscopy (XPS), X-ray Fluorescence (XRF), Field Emission Scanning Electron Microscopy (FESEM), High-Resolution Transmission Electron Microscopy (HRTEM), X-ray Diffraction (XRD), Small-Angle X-ray Scattering (SAXS), and Atomic Force Microscopy (AFM), enabling cutting-edge investigations across energy, materials science, petroleum engineering, and allied disciplines.

The CIF offers comprehensive testing and characterization capabilities across seven major R&D categories: Analytical Sciences, Chromatography, Corrosion Engineering, Geological and Geophysical Sciences, Spectroscopy, Surface and Imaging Science, and Thermal Sciences.





These capabilities facilitate detailed investigations into structural, chemical, physical, morphological, and thermal properties of diverse materials, including chemical compounds, nanoparticles, polymers, catalysts, and active pharmaceutical ingredients. Beyond providing advanced instrumentation, the CIF represents a strategic institutional asset that strengthens RGIPT's research competitiveness, promotes interdisciplinary collaboration, and bridges the gap between fundamental scientific inquiry and industrial applications. By enabling students and researchers to undertake sophisticated experimental investigations within the Institute, the facility enhances research productivity, develops industry-relevant technical competencies, and supports high-impact scholarly outcomes. Furthermore, its capabilities provide a strong

foundation for collaborative research, industry partnerships, consultancy, and technology-driven innovation, reinforcing RGIPT's position as an emerging centre of excellence in energy and allied sciences.

What sets CIF apart is its accessibility to undergraduate and postgraduate students, who actively use these facilities for projects, including Design and Innovation Center initiatives, gaining valuable hands-on experience with sophisticated equipment. Managed by skilled technical staff, the facility ensures a safe and supportive environment for learning and experimentation. By integrating advanced research tools into undergraduate and postgraduate experience, CIF enables students to develop practical skills, encourage innovation, and engage with real-world scientific challenges from an early stage of their academic journey. It also helps nearby academic and R&D organizations and industries through offering technical and consultancy services. These equipment facilities are managed, maintained, and run by the trained and expert technical staff of the institute under the guidance of a group of specialized faculties

Research Infrastructure and Laboratory Facilities at RGIPT Sivasagar Campus:

A range of experimental facilities are available to support advanced research in chemical engineering, energy conversion, and sustainable fuel technologies. The available infrastructure includes an electrochemical workstation for electrochemical characterization and energy-related studies; a hydrogen dual-fuel test engine for investigating hydrogen-based alternative fuels and combustion performance; a mechanical oil expeller for oil extraction from biomass and oil-bearing feedstocks; a biodiesel production plant for biodiesel synthesis and process optimization; and a diesel/petrol test engine for evaluating engine performance, combustion characteristics, and emissions using conventional and alternative fuels.



Electrochemical workstation



Hydrogen Dual Fuel Test Engine



Mechanical Oil expeller



Biodiesel Production Plant



Diesel/Petrol Test Engine

These facilities provide valuable opportunities for Ph.D. scholars to undertake experimental research in biofuels, biomass and waste-to-energy conversion, sustainable energy systems, and the development of cleaner and more efficient fuel technologies.

Research Infrastructure and Laboratory Facilities at RGIPT Bengaluru Campus:

The Bengaluru Campus of RGIPT provides a research-oriented environment for doctoral scholars to pursue investigations in energy technologies, sustainable engineering and emerging areas of science and technology. With a focus on experimental investigation, system-level analysis and modelling, the campus offers opportunities to address contemporary challenges in Instrumentation and control, Safety and Occupational hazards management, Renewable energy and conversion systems, Digital twin, Multi-physics simulation, Metal Recovery, Energy Storage, Thermal Energy Management, Artificial Intelligence, computer vision, generative models, and AI-assisted experimental analysis.

The campus is equipped with specialized laboratory facilities supporting fundamental research and applied engineering investigations across multiple domains. These facilities include Spin coater, Potentiostat, syringe pump, Gas Chromatograph, Magnetic Stirrer, Solar VI analyser, Solar Thermal Collectors, Solar PV systems, Micro-grid, EV power train, Fuel cell system and Hardware in loop etc. The available software and simulation facilities include MATLAB, LabVIEW and Typhoon HIL. The Institute also offers **high-performance GPU-enabled** computing facilities (Specifications are provided in the table below).

Component	Specification
GPU	2 × NVIDIA RTX PRO 6000 Blackwell Server Edition (96 GB, PCIe Gen5)
CPU	Dual × Intel® 24-Core, 3.25 GHz Processor (Intel® Xeon Silver 4516Y+)
System RAM	512 GB (16 × 32 GB) 6400 MHz RDIMM Memory
Boot Storage	2 × 1 TB NVMe SSD (OS and software stack)
Dataset/Model Storage	8 TB NVMe SSD



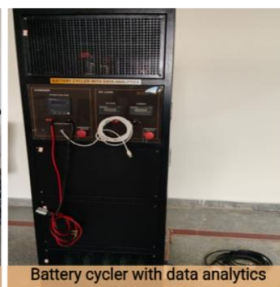
Parabolic trough solar concentrator



Solar thermal energy storage



Powertrain and controller



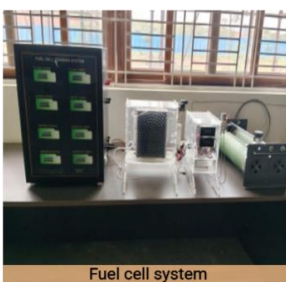
Battery cycler with data analytics



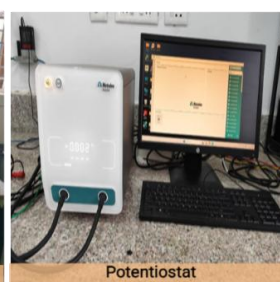
DC fast charger



Hardware-in-the-loop testing



Fuel cell system



Potentiostat

NOTE:

Additional research and development facilities, specialized laboratories, and departmental research activities can be explored through the respective department websites on the official RGIPT website.

Table 1A: Departments and Qualifying Degrees for Ph.D. Programmes

Departments offering the Programme	Qualifying Degree (B. Tech./M. Tech./M.Sc.)
Chemical & Biochemical Engineering	Bachelors or Master's Degree in Engineering/Technology in the following Disciplines: • Chemical Engineering • Biochemical Engineering • Materials Science and Engineering • Metallurgical Engineering • Petroleum Engineering • Chemical Technology • Mechanical Engineering • Environmental Engineering • Renewable Energy Engineering • Biotechnology or equivalent. Or Master's Degree in Science in the following Disciplines: • Physics • Chemistry • Mathematics • Materials Science • Nanoscience, or equivalent.
Petroleum Engineering and Geoengineering	Bachelor's or Master's Degree in Engineering/Technology in the following Disciplines: • Petroleum Engineering • Chemical Engineering • Mechanical Engineering • Electrical Engineering • Computer Science & Engineering, or equivalent Or Master's Degree in Science in the following Disciplines: • Geophysics/Geology/Petroleum Geosciences • Chemistry • Physics • Mathematics, or equivalent.

Departments offering the Programme	Qualifying Degree (B. Tech./M. Tech./M.Sc.)
Computer Science and Engineering	Bachelor's or Master's Degree in Engineering/Technology in the following Disciplines: • Computer Science and Engineering • Information Technology • Information and Communication Technology • Mathematics and Computing • Electronics Engineering • Electrical Engineering • Petroleum Engineering • Energy Engineering, or equivalent. Or Master's Degree in Science in the following Disciplines: • Computer Science • Computer Applications • Electronics • Physics • Energy Sciences • Bioinformatics • Geoinformatics • Mathematics, or equivalent.
Electrical and Electronics Engineering	Bachelor's or Master's Degree in Engineering/Technology in the following Disciplines: • Electronics and Communication Engineering • Electronics Engineering • Electronics and Instrumentation Engineering • Electrical Engineering • Computer Science and Engineering • Energy Engineering or equivalent. Or Master's Degree in Science in the following Disciplines: • Applied Physics • Engineering Physics • Materials Science, or equivalent.

Departments offering the Programme	Qualifying Degree (B. Tech./M. Tech./M.Sc.)
Mechanical Engineering	Bachelor's or Master's Degree in Engineering/Technology in the following Disciplines: • Mechanical Engineering • Manufacturing Engineering / Production Engineering / Industrial Engineering • Materials Science and Engineering / Metallurgical Engineering • Aerospace Engineering / Automobile Engineering • Energy Engineering • Chemical Engineering • Petroleum Engineering • Electrical Engineering • Mechatronics Engineering or equivalent. Or Master's Degree in Science in the following Disciplines: • Physics • Applied Physics • Materials Science or equivalent.
Mathematical Sciences	Master's degree (M.SC./M.A./M.S. or equivalent) in Mathematics, Applied Mathematics, Statistics, Mathematics and Statistics, Mathematics and Computing, Industrial Mathematics, Mathematics and Finance. Or Bachelor's or Master's degree in Engineering/Technology in the following Disciplines: • Mathematics • Statistics/ Applied statistics / Biostatistics • Operations Research • Mathematics & Computing • Computer Science & Engineering, or equivalent.
Energy and Human Sciences	Master's Degree in Science/Technology in the following Disciplines: • Chemistry • Materials Science • Nanoscience & Nanotechnology • Polymer Sciences • Biochemistry/ Biotechnology/ Life Sciences • Physics • Applied/Engineering Physics • Electronics, or equivalent Or

Departments offering the Programme	Qualifying Degree (B. Tech./M. Tech./M.Sc.)
	Bachelor's or Master's Degree in Engineering/Technology in the following Disciplines: • Petroleum Engineering • Chemical Engineering • Mechanical Engineering • Materials Science & Engineering • Electrical Engineering • or equivalent Or Master's Degree in Arts in Social Sciences and Humanities.
Management Studies	Master's degree in Management/Engineering/ Technology or equivalent. Or Master's degree in Science/Commerce/Arts or equivalent. Or Bachelor's degree in Engineering/Technology. Or Professional qualification- CA, ICWA & CS in addition to a bachelor's degree.

NOTE:

Candidates holding degree(s) that do not exactly match those listed above may also apply. Such applications, upon recommendation by the DPGC and approval by the Chairman, Senate, shall be considered for further shortlisting.

Table 1B:**Department/Discipline-wise Research Areas for Ph.D. Programmes at RGIPT, Jais Campus**

Department	Research Areas
Chemical & Biochemical Engineering	Biofuels, Pyrolysis & Gasification of Biomass, Heterogeneous catalysis, Catalytic isomerization, Process modeling, Design, Simulation and control, Design controllability interaction in integrated chemical systems, Corrosion failure, Corrosion inhibition, Phase transformations in polymers and soft matter, Interfacial rheology of oil-water interface, Process intensification, Microfluidics, Multiphase flow, Metal extraction & Recycling, Computational modeling of catalytic processes, CO ₂ capture, utilization & sequestration (CCUS), Adsorption, Electrochemical systems, Flow battery, Water splitting, Polymer-ceramic composites. Polymers, Oxides, Nanoparticles for energy, Photo-Voltaic, Photocatalysis, Modelling & Simulation of material structures and processes, Renewable energy, Crystallization, Petroleum refining, Bioremediation and Biomaterial.
Petroleum Engineering and Geoengineering	Enhanced oil recovery, Drilling fluids, Gas hydrates, Source rock evaluation, Reservoir simulation, Flow assurance, Petroleum geomechanics, Unconventional hydrocarbon resources, Production operations, CO ₂ Sequestration, AI/ML applications, Rock Physics, Petrophysics and Geomechanics, Isotope geochemistry, organic petrography, Hydrology and Watershed processes, Paleo environments and the sedimentary record, Inorganic/ Organic, Coal petrology, Structural geology, Engineering geology, Ground water & hydrology, Exploration seismology, Gravity and Magnetic, Electromagnetics, Seismic data analysis, Rock Physics, Petrophysics, Geomechanics, Unconventional hydrocarbon resources, Source rock characterization, Reservoir Characterization & modeling, Formation Evaluation.
Computer Science and Engineering	Security and Privacy in IoV Networks: Blockchain, Cyber Security, Post Quantum Cryptography. Real-Time Scheduling System: Computational Geometry, Resource Scheduling in Cloud and Fog Computing Systems. Signal and Digital Image Processing: LiDAR: Laser Scanning, Laser Data Processing and Deriving Applications, Digital Image Processing, GIS and Data Science Approaches utilizing AI/ML. Graphics and Visual Computing: Salient Object Detection, Morphological Image Processing, Medical Image Processing. Cloud Computing, Fog Computing, Internet of Things, Message Synchronization, High-Performance Computing, Soft Computing, Virtualization, Edge Computing. Machine Learning and Artificial Intelligence: AI and ML applications, Multi-Sensor Data Analysis, AI for Deepfake Detection, Generative ML, AI in Reservoir Characterization, Computer Vision, Natural Language Processing. Microfluidic Lab on Chip and its algorithmic design, bio-protocol and sample preparation and its scheduling. Developing AR/VR applications for energy sector. Industrial process analysis with AI/ML & sensors. Natural Language Processing: Large Language Models (LLMs), Multimodal NLP, Low-resource and Multilingual NLP, Integrating knowledge and common sense, Contextualized modeling and multi-turn dialogue understanding, Explainable NLP, Ethics, Bias and Fairness, Conversational AI and Dialogue Systems, Few-shot and Zero-shot Learning

Electrical and Electronics Engineering	Microelectronics/VLSI: Nano and Optoelectronics Devices, Solar Cells, Photodetectors, Organic FETs, Flexible Electronics, Wearable Electronics, Green Electronics and Sustainable Energy, Design Thinking, Energy harvesting, Simulation of Optical Devices, Experimental Study for optical Sensors, Metamaterial surfaces, VLSI architectures for signal and image processing, hardware accelerators for edge computing, approximate computing Communication & Signal Processing: Optical Communication, Wireless Communications (RF, 5G, 6G, Cognitive Radios), Signal Processing, Signal Processing for IOT Networks, IoT Systems for Energy & Healthcare, Optical Wireless Communications (VLC, FSO), Quantum Computing, Reconfigurable Intelligent Surfaces. AI-Enabled Wireless Communications for 5G/6G and Beyond: Intelligent resource allocation, channel estimation, signal detection, and optimization using AI/ML/DL. Visible Light Communication (VLC) and Li-Fi: Next-generation optical wireless communication for high-speed, energy-efficient, and secure connectivity. AI-Driven Massive MIMO: Deep learning-based channel estimation, CSI feedback and compression, beamforming, and spectral-efficiency enhancement. VLC for Smart Oil and Gas Infrastructure: Optical wireless communication for reliable connectivity, monitoring, and sensing in oil and gas pipelines and industrial environments. AI-Assisted Navigation for Visually Impaired People: Intelligent mobility guidance integrating VLC-based localization, obstacle detection, and multisensor navigation. Integrated Communication, Localization, and Sensing: Emerging technologies that combine wireless connectivity with positioning, environmental awareness, and intelligent decision-making. VLC-Based Indoor Localization and Positioning: High-accuracy indoor positioning using visible light, signal processing, and AI. Cognitive Radio and Intelligent Spectrum Sharing: AI-driven spectrum sensing, dynamic spectrum access, and secure wireless communication. UAV-Assisted and Intelligent Wireless Networks: AI-enabled communication, resource allocation, and reliable connectivity using unmanned aerial vehicles. Power & Control: Power Electronics & Drives, Electric Vehicle, Machine learning applications to the power system and drives, Distributed generation, Power System, Microgrid and smart grid technologies, Power quality, Electrical Machines & Drives; Control Systems, System Identification, Battery Management Systems, Wide-Bandgap (SiC/GaN) Power Converters: Modelling, Digital Twins, AI-Assisted Design and Grid Impacts, SiC Power Conversion for Green Hydrogen and Electrified Energy Industries, Power Electronics and Converter Control, Design of EV Battery Charger for Electric Vehicles, SiC/GaN-Based Converters and Their Control Design, Renewable Energy and Grid Integration.
Mechanical Engineering	Thermal and fluid sciences: Heat transfer, thermal management, microscale fluid dynamics, microfluidics, multiphase flow and droplet evaporation Energy and sustainability: Clean hydrogen, renewable energy, energy conversion and storage, thermochemical processes and waste valorization Pipeline and process engineering: Pipeline design, multiphase flow, thermo-fluid systems and fluid–particle interactions Advanced manufacturing and materials: Microfabrication, welding and joining, composites and materials characterization Intelligent manufacturing: AI/ML in manufacturing, process monitoring, non-destructive evaluation, and structural health monitoring

	Mechanical design and robotics: Design methodology, product design, wearable robotics, assistive robotics, soft robotics and human–robot interaction Computational modelling: Multiphysics modelling, CFD, numerical simulation, experimental validation and advanced control Microfluidics and biomedical technologies: Electrohydrodynamics, biomedical devices, bio-fluid mechanics and point-of-care diagnostics
Mathematical Sciences	Reliability theory, Statistical Information theory, Stochastic ordering and ageing, Order statistics and Record values. Numerical analysis of partial differential equations, Control theory, Hyperbolic conservation laws, Computational fluid dynamics, Data assimilation techniques, Integral Equations, Time Scale Theory, Dynamical System, Mesh free Methods, Computational Finance, Functional Analysis, Spectral Theory, Algebraic Geometry, Complex Geometry, Number Theory, Elliptic Curves, Approximation Theory, Numerical Analysis of Operator Equations, Partial Integro-Differential Equations, Option Pricing, Calibration and Inverse Problems, Periodicity and Stability of Stochastic Systems, Physics-Informed Neural Networks and Scientific Machine Learning, Data-Driven Modeling.
Energy and Human Sciences	Chemistry: Materials Development (Organic Synthesis/Polymer synthesis/Photo catalysis/ Electro catalysis/Nano Catalysis/H₂ production/CO₂ utilization/ Hydrogel/ MOF/ COF/ Nanocrystal/ Petrochemical), Biotechnology/ Microbiology Physics: Condensed Matter Physics and Materials Science, Magnetic and Multiferroic Materials, Soft Sensors and Actuators, Phase-Change Materials, Energy Storage Materials. Humanities: English (Literature, Cultural studies, Film studies, Professional Communication, Narrative Studies etc.)

Table 1C:

Department/Discipline-wise Research Areas for Ph.D. Programmes at RGIPT, Bengaluru Campus

Disciplines	Research Areas
Electrical and Electronics Engineering	Power electronics, Control system, Electrical machines and drives, Smart grid and micro-grid, Electric/Hybrid/Fuel Cell based Vehicle system, Renewable energy systems and integration, Solar photovoltaics, Building integrated Photovoltaic/Thermal systems, Energy efficiency, Net zero energy Buildings, Solar PV/T and Concentrator based system, Energy, Exergy and economic analysis, Grid modernisation, Power quality, Energy and load forecasting, Life cycle assessment, Energy auditing, Battery Management System/Thermal Management System, Sensors and transducer, Smart energy systems, Instrumentation and process control, Data analytics, IoT, AI and Applications, Optimization, Novel Materials for Sensor Applications, Wearable Devices, Safety and Occupational hazards management, Smart sensor applications in Energy Sector, Automotive Safety, Piezoelectric-based energy harvesting, AI enabled energy management, Digital twin, Green Hydrogen Production and Integrated Energy–Water–Hydrogen Systems, Hardware-in-the-Loop (HIL) Simulation and Intelligent Control of Energy Systems.

Mechanical Engineering	Energy Storage, Energy and Buildings, Phase change materials, Fluid-Thermal Engineering, Computational Fluid Dynamics, Power Plant Engineering, Data Center Thermal Management and Cooling Technologies, Thermal Management of Batteries, Buildings, and Electronic Processors, Solar Thermal Energy Systems and Renewable Energy Technologies, AI/ML-Driven Modelling, Simulation, and Optimization of Energy Systems.
Computer Science and Engineering	Machine Learning, Artificial Intelligence, IoT, Computer Vision, Pattern Recognition Natural Language Processing and Multimodal Deep Learning.
Management Studies	Energy: Energy Transition, Clean Energy Adoption, Hydrogen Adoption, Sustainability, Energy Policy, Environmental, Social and Governance (ESG), Sustainable Energy Finance, Energy Economics, Renewable Energy Adoption, Hydrogen Economy, and Quantitative Research Methods (SEM, ANN and Statistical Modelling). Finance: Corporate Finance and Equity Valuation, Initial Public Offerings, Behavioural Finance, Blockchain in Financial Services or Fintech, Stock Price Volatility, Sustainable Finance and Government Policy, Behavioural Finance, Corporate Finance, Sustainable and Green Finance, ESG Investing, Financial Markets, FinTech, Investor Behaviour, Financial Literacy, AI/ML Applications in Finance, Energy Finance. OB & HR: Human Resource Management, Indigenous Management Systems, Organizational Behaviour, Leadership, Corporate Ethics, Governance and CSR, Negotiations and Conflict Management. Business Analytics & Information Systems: Big Data Analytics, Supply Chain Analytics, Data Mining, Natural Language Processing, Data Science, Artificial Intelligence and Machine Learning, Organisational Information Systems, E-Commerce and M-Commerce, Social Media Analytics, Sales Management, Consumer Behaviour, Business-to-Business Marketing (B2B). Marketing: Product and Brand Management, Consumer Behaviour, Neuromarketing, Digital and Social Media Marketing, Green Marketing, Services Marketing, B2B Marketing, Retailing, Sales and Distribution Management, Digital Transformation in Marketing, Consumer Acceptance of Emerging Technologies, Adoption of Artificial Intelligence in Sales & Marketing. Operations: Operations Management, Supply Chain Management, Production System, Service Process Simulation and Service Level, Revenue Management and Analytics, Contracts Modelling, Capacity Sensitive Product Mix Planning, Supply Chain Analytics, Multi-sourcing, Returns Management, Revenue Management and Analytics, Deep learning in the supply chain, ML in circular economy. Economics: Financial Economics, Corporate Governance in Banks, Commercial Banking, Efficiency and Productivity Analysis, Technology Adoption in Banks. Digitalization, Sustainable Supply Chain Management, Supplier Selection, Service Operations Management, Agri-food Supply Chain, Circular Supply Chain, Manufacturing Supply Chain, Warehouse Management, Logistics Management, Supply Chain Analytics, Energy Economics, Environmental Economics, Financial Economics, Macroeconomics, Econometrics, Machine learning in business, Text analytics (Natural Language Processing) in business, Deep learning in business, Big-data analytics in business, Information Systems and Technology, Human-computer interaction.

Mathematics and Computing	Copulas, Dependence Modelling, Multivariate Statistical Analysis, Statistical Information Theory, Reliability and Survival Analysis, Statistical Decision Theory, Statistical Inference, Probability and Statistics, Statistical Machine Learning
Chemical Engineering	Electrocatalytic CO₂ Reduction (ECR): Designing non-noble, earth-abundant metallic nano electrocatalyst for the selective ECR to high-value products such as CO, HCOOH, and ethanol. Multiphysics Simulation: Coupling experimental electrochemistry with COMSOL Multiphysics to model complex mass transport, fluid dynamics, and reaction kinetics. Metal Recovery: Investigating green methodologies, utilizing Deep Eutectic Solvents (DES), for the selective extraction and electrochemical recovery of critical metals (Li, Co) from spent lithium-ion batteries.
Social Sciences	Sociology (Sociology of Development, Migration and Diaspora Studies, Sociology of Education)

Table 1D:

Department/Discipline-wise Research Areas for Ph.D. Programmes at RGIPT, Sivasagar Campus

Disciplines	Research Areas
Chemical Engineering	Renewable Energy, Experimental and Computational Fluid Dynamics, Microfluidics, Complex Fluids; Thermochemical Characterization and Conversion of Biomass and Waste Plastics; Pyrolysis and Co-Pyrolysis; Kinetic and Thermodynamic Studies; Waste-to-Energy and Resource Recovery; Microbial Fuel Cells; and Sustainable Wastewater Treatment; Nano structured material for Environmental and Energy Applications, Environmental remediation, Electrochemical sensors, Emerging Pollutants
Petroleum Engineering	Surface Production, Offshore Oil & Gas, Oil & gas market, business and development; Microfluidics and Pore-scale Flow, Drilling Fluids and Rheology, Computational Fluid Dynamics (CFD), Geothermal Energy and Geothermal Well Engineering, HPHT Drilling Challenges, Advanced Drilling Fluid Systems for HPHT and Geothermal Applications; Carbon Capture, Utilization and Storage (CCUS), Enhanced Oil Recovery (EOR), Computational Fluid Dynamics (CFD) for Petroleum Engineering, Subsurface CO ₂ and H ₂ Storage, Artificial Intelligence and Machine Learning in Oil & Gas, Quantum Computing and Quantum Algorithms for Engineering Applications, IC Engine, Biodiesel, CCUS policy, Strategic Petroleum Reserves Policy, Oil Well Drilling and Cementing
Electrical & Electronics Engineering	Fractional Order PID Controllers, Smart Grid, Evolutionary Optimization Techniques; RF and Microwave Antennas and Filters, Microwave Devices, Filtering Antennas; Power Electronics, Renewable Energy Systems and Process Control, Micro grid and smart grid technology, Electric Vehicles; Semiconductor Devices, Sensors, MEMS, NEMS, Controller Design, Controller Optimization, Emerging solar cell technology, Electronic materials and its applications in sensing, water splitting and energy storage technologies.

Fire and Safety Engineering	Modelling and simulation in Pool and Jet fires; Combustion and Explosion analysis in storage vessels/pipelines; Industrial Fires; Modelling in Enclosure Fire, Modelling in Process Safety and Risk Assessment, Industrial Fire Safety and Hazard Mitigation (i.e. Chemical and Petroleum Industries), Quantitative Fire Risk Assessment and Management Strategies
Chemistry	Nanoscience, Molecular sensing, Energy Application; Functional coating and thin films for: • Water purification • Gas Separation • Energy storage.
Mathematics	Mathematical Modeling and Applications, Mathematical Ecology, Nonlinear Fuzzy Set Theory and its Extensions, Uncertainty Modelling, Hesitant Fuzzy Sets, Fuzzy Measures, Decision Making (MCDM), Statistical Machine Learning, Statistical Inference under Degradation Data, Reliability and Survival Analysis, Life Testing Analysis under Censored Data
Physics	Theoretical Condensed Matter Physics: Magnetism, Superconductivity, Twisted Bilayer Graphene, Computational Soft Matter Physics, Complex systems like Liquid crystals, ionic liquids, Classical density functional theory, Supercritical fluids
Mechanical Engineering	Thermal and Fluid, IC Engines, Alternative Energy sources, Molecular simulation of phase transition; Theoretical studies on heterogeneous nucleation, Pipeline design for multiphase flow (Experimental & Simulation), Deployable furniture design, Thermo-fluid, Powder and granules rheology, Polymer composites; Additive Manufacturing, Sustainable Materials, Mechanical testing and characterisations, 3D printing; Material Characterizations; Flame retardant polymer materials, Nonequilibrium Thermodynamics, Thermodynamics of Irreversible Processes, Biofuels, Engines and Exergy Analysis, Hydrogen Application, Renewable Energy, Thermal Management, Statistical Analysis, Artificial Neural Network, AI/ML in Manufacturing and Materials Processing, Deformation Behaviour and Formability, Microforming of high performance alloy and composites, Sustainable recycling, Equipment and Tool design, Severe Plastic Deformation, Micromachining, Multi-scale machining process, Finite element modeling (FEM), Machinability and materials characterization, Surface engineering
Materials Science & Engineering	Solar cells, Nanomaterials and applications, Photocatalysts and electrocatalysts, condensed matter physics (experimental), Electronic materials, Fuel cell, Energy storage and conversion devices and computational material science

Table 1E:

Department Wise Number of Institute Assistantship Available in Even Semester 2026-27 Along with Specific Research Area

Department/Discipline	Specific research area	Available PhD seats with Institute Assistantship
RGIPT Jais Campus		
Chemical & Biochemical Engineering	• CO₂ capture and Conversion • Heterogeneous catalysis for hydrogen generation and storage; Bioremediation and Biomaterial • Fabrication of hydrogen production device - performance analysis • Corrosion • Transition metal-based composites for electrochemical applications	05
Petroleum Engineering and Geoengineering	• Enhanced Oil Recovery (EOR); Cementation; CCUS; Gas Hydrates; CO₂ Utilization • Design of high-density brine drilling fluids for HP/HT environments; Formulation of nanoparticle-assisted polymer slugs for Carbon Dioxide utilization and sequestration • Flow Assurance: Flow Improvement of Crude Oils; CCUS: CO₂ Utilisation in EOR and Sequestration in Reservoirs; Drilling and Production Process Optimization; Novel EOR Techniques and Optimization • Enhanced Oil Recovery; Reservoir Modelling and Simulation; AI/ML in Upstream Oil Industry; Carbon Utilization and Sequestration	04
	• Petroleum Geology, Hydrocarbon Source-Rock Evaluation and Basin Analysis; Unconventional Hydrocarbon Resources and Reservoir Characterization, Including Coalbed Methane and Shale Gas; Geological CO₂ Sequestration and Enhanced Coalbed Methane Recovery; Rare Earth Elements and Critical Mineral Recovery from Coal-Associated Resources; Coal Petrology, Coal Chemistry, Organic Geochemistry and Sustainable Resource Utilization; Sedimentary Basin Analysis, Basin Evolution and Paleoenvironmental Reconstruction • Exploration Geophysics; Near Surface Geophysics	02

Computer Science & Engineering	Cyber Security and malware analysis using AI-driven techniques, Large Language Models (LLMs), Multimodal NLP, Low-resource and Multilingual NLP, Intelligent transportation systems, Deep learning techniques for spatiotemporal data modeling for domains like traffic, climate, agriculture, pandemics, etc.	03
Electrical and Electronics Engineering	• Wide-Bandgap (SiC/GaN) Power Converters: Modelling, Digital Twins, AI-Assisted Design and Grid Impacts, SiC Power Conversion for Green Hydrogen and Electrified Energy Industries • Areas of wireless communication and AI-enabled wireless communication, intelligent wireless technologies for 5G/6G and beyond, AI-Enabled Wireless Communications for 5G/6G and Beyond, Visible Light Communication (VLC) and Li-Fi, AI-Driven Massive MIMO, VLC for Smart Oil and Gas Infrastructure, AI-Assisted Navigation for Visually Impaired People. • Power Electronics and Converter Control, Design of EV Battery Charger for Electric Vehicles, SiC/GaN-Based Converters and Their Control Design, Renewable Energy and Grid Integration. • VLSI architecture for signal and image processing, hardware accelerators for edge computing, approximate computing	04
Mechanical Engineering	• Mechanical design and tribological analysis • Thermal energy storage and Carbon Capture, Utilization, and Storage (CCUS) • Friction stir-based additive manufacturing for composite structures and thermomechanical analysis • Microfluidics, Electrohydrodynamic jetting and its application in flexible electronics, sensor fabrication. • Sustainable Bioenergy and Waste-to-Energy Technologies: Biogas, Biohydrogen, and Resource Recovery • Design and Analysis of Thermochemical Reactor for Sustainable Aviation Fuel Synthesis, Development of Hydrogen Compressor and Purification Pilot Plant • Design, Ergonomic Optimization, and Human-Factors Evaluation of an Industrial Neck-Assist Wearable Robot for Overhead Tasks	07
Mathematical Sciences	• Computational Finance, Numerical Analysis and Differential Equations, Numerical Methods for PDEs and Partial Integro-Differential Equations, Physics-Informed Neural Networks and Scientific	05

	Machine Learning, Option Pricing, Calibration and Inverse Problems, Data-Driven Modeling • Approximation Theory, Numerical Analysis of Operator Equations • Elliptic Curves, Number Theory, Algebraic and Complex Geometry • Time-Scale Dynamic Equations, Periodicity and Stability of Stochastic Systems, Physics-Informed Scientific Machine Learning for Mathematical Modeling • Reliability Theory, Statistical Information Theory	
Energy & Human Sciences	• Porous Materials, Heterogeneous Catalysis, Electrocatalysis, Solar Thermal Energy Storage • Systems, Multiferroic and Magnetoelectric Materials for data storage device, Solar Energy Materials and Devices, Soft Sensors and Actuators, Flexible Optoelectronic Devices, biomass conversion, Plastic recycling	05
RGIPT Bengaluru Campus		
Robotics and Automation	Solar Photovoltaic and Photovoltaic/Thermal (PV/T) Systems; Building-Integrated Photovoltaics (BIPV/BIPVT); Smart Grids and Hybrid Renewable Energy Microgrids; AI-Enabled Energy Management and Digital Twin Technologies; Green Hydrogen Production and Integrated Energy–Water–Hydrogen Systems; Electric Vehicles, Battery Energy Storage and Thermal Management; Hardware-in-the-Loop (HIL) Simulation and Intelligent Control of Energy Systems	01
Electrical and Electronics Engineering	Instrumentation and control, Gas Sensors, Novel Materials for Sensor Applications, Wearable Devices, Safety and Occupational hazards management, Smart sensor applications in Energy Sector, Automotive Safety, Piezoelectric-based energy harvesting, Solar PV reliability modelling, Electric Vehicle Energy Management, Control, Energy Efficiency and Optimisation, Smart Grid Analytics and Technologies, Micro-Grid, AI applications in Energy systems	02
Computer Science and Engineering	Artificial Intelligence, Multimodal Deep Learning and Computer Vision	01
Mathematics and Computing	Probability and Statistics, Copulas, Dependence Modelling, Multivariate Statistical Analysis, Statistical Information Theory, Reliability and Survival Analysis, Statistical Decision Theory, Statistical Inference, Statistical Machine Learning	02
Chemical Engineering	Electrocatalytic CO ₂ Reduction (ECR): Designing non-noble, earth-abundant metallic nano electrocatalyst for the selective ECR to high-value	01

	products such as CO, HCOOH, and ethanol. Multiphysics Simulation: Coupling experimental electrochemistry with COMSOL Multiphysics to model complex mass transport, fluid dynamics, and reaction kinetics. Metal Recovery: Investigating green methodologies, utilizing Deep Eutectic Solvents (DES), for the selective extraction and electrochemical recovery of critical metals (Li, Co) from spent lithium-ion batteries	
Management Studies	Energy, Marketing, Retailing, Consumer Behavior, Green Marketing, Services Marketing, Neuromarketing, Retail Management, Sales Management, Consumer Behaviour, Business-to-Business Marketing (B2B), Digital Transformation in Marketing, Consumer Acceptance of Emerging Technologies, Adoption of Artificial Intelligence in Sales & Marketing, Supply Chain Analytics, Multi-sourcing, Returns Management, Revenue Management and Analytics, Deep learning in the supply chain, ML in circular economy, Machine learning in business, Text analytics (Natural Language Processing) in business, Deep learning in business, Big-data analytics in business, Information Systems and Technology, Human-computer interaction, Digitalization, Sustainable Supply Chain Management, Supplier Selection, Service Operations Management, Agri-food Supply Chain, Circular Supply Chain, Manufacturing Supply Chain, Warehouse Management, Logistics Management, Supply Chain Analytics, Energy Economics, Environmental Economics, Financial Economics, Macroeconomics, Econometrics	07

RGIPT Sivasagar Campus		
Chemical Engineering	• Renewable energy • Experimental Fluid Dynamics • Microfluidics • Biofuels • Pyrolysis and Co-Pyrolysis • Waste-to-Energy • Microbial Fuel Cells • Sustainable Wastewater Treatment • Nano structured material for Environmental and Energy Applications • Electrochemical sensors • Emerging Pollutants • Fire Dynamics • Combustion • Computational Fluid Dynamics in Fire Dynamics • Explosion and Industrial Fire Safety	04

	• Industrial Safety and Risk Assessment • Modelling in Enclosure Fire • Industrial Safety and Hazard Management - Occupational Health and Environment Structure - Modelling in Fire	
Electrical & Electronics Engineering	• Fractional Order PID Controllers, • Smart Grid, Evolutionary Optimization Techniques • RF and Microwave Antennas and Filters • Microwave Devices • Filtering Antennas • Power Electronics, • Renewable Energy Systems and Process Control • Micro grid and smart grid technology • Electric Vehicles • Semiconductor Devices • Sensors • MEMS • NEMS • Controller Design and Optimization	04
Petroleum Engineering	• Carbon Capture, Utilization and Storage (CCUS) • Enhanced Oil Recovery (EOR) • Computational Fluid Dynamics (CFD) for Petroleum Engineering • Subsurface CO₂ and H₂ Storage • Artificial Intelligence and Machine Learning in Oil & Gas • Quantum Computing and Quantum Algorithms for Engineering Applications • Microfluidics and Pore-scale Flow • Drilling Fluids and Rheology • Geothermal Energy and Geothermal Well Engineering • HPHT Drilling Challenges • Advanced Drilling Fluid Systems for HPHT and Geothermal Applications • Surface Production • Offshore Oil & Gas • Oil & gas market, business and development • Internal Combustion Engine • Biofuels • Oil Well Drilling and Cementing • Carbon Capture Utilization and Storage Policy • Strategic Petroleum Reserves Policy	04

Mechanical Engineering	• IC Engines • Heat Transfer • Biofuels • Hydrogen applications • Fluid flow analysis • Composite materials • Biocomposites • Additive Manufacturing • Equipment and Tool Design • Severe plastic deformation • Micromachining • FEM • Machinability • Multi-scale machining process • Advanced manufacturing techniques • Finite element modeling • Sustainable recycling • Equipment and Tool Design	04
Engineering Sciences	• Computational Soft Matter Physics, Complex systems like Liquid crystals, ionic liquids, Classical density functional theory, Supercritical fluids • Theoretical Condensed Matter Physics: Magnetism, Superconductivity, Twisted Bilayer Graphene • Nanoscience, Molecular sensing, Energy Application • Functional coating and thin films for Water purification, Gas Separation, Energy storage • Mathematical Modeling and Applications, Mathematical Ecology, Nonlinear Fuzzy Set Theory and its Extensions • Uncertainty Modelling, Hesitant Fuzzy Sets, Fuzzy Measures, Decision Making (MCDM) • Statistical Machine Learning, Statistical Inference under Degradation Data, Reliability and Survival Analysis, Life Testing Analysis under Censored Data	07
Project-linked PhD category (Jais Campus Only)		
Petroleum Engineering and Geoengineering	Development of high return biogas slurry processing system for CO ₂ absorption, energy and fertilizer	01
Mechanical Engineering	Sustainable plastic waste recycling technologies for high value product manufacturing	01
Energy and Human Sciences	Production, Upgradation and Sustainability assessment of Bio crude production from Hydrothermal Liquefaction of Lignocellulosic Biomass	01

NOTE:

- Reservation rules as per the Government of India policy will apply.
- **The number of available Institute Assistantship should not be considered as available seats. Applicants who are either of sponsored/external/part time category or who are already awarded fellowship by external agencies can submit their applications for admission in department/campuses even if there are no Institute Assistantship available.**
- **Ph.D. students registered at the Bengaluru and Sivasagar campuses shall be awarded their Ph.D. degrees by RGIPT. They may complete their prescribed coursework at their respective campuses or at the RGIPT Jais campus, as applicable and subject to the Institute's academic regulations.**
- *The Dean (Academic Affairs) may waive the coursework credit requirements for Ph.D. candidates, upon the recommendation of the DPGC, subject to the following eligibility criteria:*
 - i) **External/Part Time Category:** *Candidates holding an M.Tech. degree from a Centrally Funded Institution (CFI/CFTI) as the qualifying degree.*
 - ii) **Part Time Category:** *Candidates holding an M.Tech. degree with a CPI of 7.0 or above in the qualifying degree and having at least **five years of relevant professional experience in industry.***
 - iii) **Part Time Category:** *Candidates holding a B.Tech. degree with a CPI of 7.5 or above in the qualifying degree and having at least **ten years of relevant professional experience in industry.***
 - iv) **External Registration Category:** *Candidates holding a master's degree from a reputed Government institute/university as the qualifying degree and having at least **five years of relevant experience in industry and/or academia.***

LIST OF R & D ORGANIZATIONS RECOGNIZED BY THE INSTITUTE FOR EXTERNAL REGISTRATION

- All Oil PSU's (ONGC, IOCL, OIL, GAIL, BPCL, HPCL) and their R&D centers.
- All R & D Laboratories/Institutions of CSIR, DAE, DOS, DRDO, DST and Ministry of Telecommunication & Information Technology.
- Bharat Heavy Electricals Limited (BHEL), Research and Development Laboratories.
- Central Mine Planning and Design Institute Limited, Ranchi.
- Central Power Research Institute, Bangalore.
- Central Pulp and Paper Research Institute, Saharanpur.
- Hindustan Aeronautics Limited, Lucknow & Korwa.
- Hindustan Machine Tools (R & D Division), Bangalore.
- Indian Bureau of Mines, Nagpur.
- Kirloskar Electric Limited, Bangalore.
- Mechanical Engineering Research and Development Organization, Pune.
- National Institute of Rock Mechanics, Kolar.
- National Council for Cement and Building Materials (NCCBM), New Delhi.
- Raman Research Institute, Bangalore.
- Tata Steel, Jamshedpur.
- National Metallurgical Laboratory Extension Centre, Chennai.
- Northern Coalfields Limited, Singrauli
- Coal India Limited
- Geological Survey of India.
- Jubilant Ingrevia, Uttar Pradesh

**Important Dates for Ph.D. Admission
(Even Sem 2026-27)**

Activities	Current Approved Dates
Opening of Admission Portal for Online Submission of Application Form	October 16, 2026 (Friday)
Closing Date of Admission Portal	November 26, 2026 (Thursday)
Notification to Shortlisted Candidate (Written Test/Interview)	November 30, 2026 (Monday)
Date of Written Test and/or Interview	December 11-12, 2026 (Friday-Saturday)
Announcement of List of Candidates Offering Admission including Wait Listed Candidates on Institute Website	December 15, 2026 (Tuesday)
Last Date for Submission of Registration Fee (1 st Round)	December 22, 2026 (Tuesday)
Admission Offers to Wait-Listed Candidates (Subject to Seat Availability)	December 23, 2026 (Wednesday)
Last Date for Submission of Registration Fee (2 nd Round)	December 26, 2026 (Saturday)
Date of Physical Registration in the Department Concerned	December 28, 2026 (Monday)
Commencement of Classes	December 29, 2026 (Tuesday)

Application Fee (Non-Refundable)

Non- refundable application fee should be submitted before filing of application form

- ₹ 708/- for SC/ST/PwD/Female Candidates
- ₹ 1,416/- for General, OBC/EWS Candidates



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Important Links

- ▶ [About RGIPT \[Link\]](#)
- ▶ [About Director \[Link\]](#)
- ▶ [About Academics \[Link\]](#)
- ▶ [About Research Activities \[Link\]](#)
- ▶ [About Faculty Members \[Link\]](#)

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