

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

**Information Brochure for Admission to Ph.D. Programmes for
Even Semester of the Academic Year 2025-26**

Programme Highlights

- Availability of prestigious fellowships offered by major oil PSUs
- State of the Art research laboratories of international standards
- Opportunity to work under the co-supervision of 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 centers, 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 Chemical & Biochemical Engineering, Department of Computer Science & Engineering, Department of Electrical and Electronics Engineering, Department of Management Studies, Department of Mathematical Sciences, Department of Petroleum Engineering & Geoengineering, Department of Mechanical Engineering, Department of Energy and Human Sciences, which offers PG programmes (**Annexure I**). RGIPT Bengaluru Campus offers M. Tech. and Ph.D. programmes in various engineering disciplines (**Annexure I**). PhD students are assigned to the RGIPT Sivasagar Campus to pursue research activities in various sciences and engineering disciplines. The students will be registered at RGIPT for their PhD programmes.

Duly filled-in on-line applications on the prescribed form are invited for admission to Ph.D. programmes for the **Even Semester of Academic Session 2025-2026** in various departments/disciplines as given in **Annexure-I**. Candidates whose qualifying examination results

are not declared at the time of the written test/interview may also be considered. In case such candidates are selected, their admission will be provisional subject to the condition that they produce proof of completing all the examinations including the project/thesis examination and the viva voce before the date of registration. Such candidates are required to produce evidence that they have passed the qualifying degree examination with the minimum marks/grades required for eligibility by the last date for document submission as mentioned in the academic calendar (within 08 weeks from the date of registration), failing which their admission shall be cancelled.

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 (see also **Table-1A, Annexure-I**). A list of research areas of various departments/disciplines currently available for Ph.D. programmes are given in **Table 1B, 1C** and **1D**, respectively of **Annexure – I**. The number of seats with Institute Assistantship available for Ph.D. programmes in different departments/centers 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 satisfy the following criteria:*
 - (i) *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 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 is available to the students admitted to Ph.D. programmes under Full Time Regular Registration Category. **Such students must have qualified GATE Examination. For B. Tech students of RGIPT/IITs, 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/-*
- *Senior Research Fellow (SRF): Rs. 42000/-*

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 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.

For the Even Semester of Academic Session 2025-26, 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.

Institute encourages students registered under full time Regular category to complete their PhD well in 4-year duration.

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 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. 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 (see 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 at 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 (**see 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 a full salary to the candidate and relieve him/her from the duty to enable the candidate to stay on the campus and to complete the course work requirements. This is not a requirement for candidates who are working in organizations located within a distance of 50 km from the Institute.

The candidate should submit a certificate (See **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 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 (**see 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 (See **Form II** of the Application Form). Such candidates have to 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

The Institute offers Part-Time Ph.D. programmes for permanent staff and faculty members of the Institute as well as Research Assistants/JRFs/SRFs working in an externally funded research project running in the Institute, provided they satisfy the eligibility criteria laid down for the programme concerned (see **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 (See **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.

The candidates working in externally funded projects need to have at least two years of remaining valid project period for consideration in this category. The PhD enrolled candidate after working in an external project for at least two years will be considered for Institute Fellowship.

The Institute offers Part Time Ph.D. Programme also to a professionally employed person, who pursues the programme while continuing the duties of his/her service provided the sponsoring institution/organization is located within a distance of 50 KM from the Institute and engaged in broad areas of Ph.D. Programme applied. He/she must be a regular employee of the sponsoring organization/institution for at least two year. No Objection Certificate (NOC) from the Head of the Institution/Organization must be enclosed with the application (See **Form V** of the Application Form). The candidate must satisfy the eligibility criteria laid down for the programme concerned (see **Sec. 1.A.1**).

[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 shall continue to submit Form 16 for the subsequent years till he/she completes the programme]

NOTE: The number of available Institute Assistantship should not be considered as available 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 even if there is no Institute Assistantship available.

2. SELECTION CRITERIA

Admission to Ph.D. Programme

1. Admission will be based on written test and interview of 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) The number of seats in this type will be 20% of the “announced number of seats” and shall be considered as “Supernumerary Seats”. Any fractional number arrived at would be rounded to higher integer;
 - (iv) Interview should be conducted for this type of candidates PRIOR to the conduct of written test for remaining candidates;
 - (v) 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 on Ph.D. programme is available on the official website www.rgipt.ac.in.

Application Fee for Ph.D.

The application fee is non-refundable

- Rs 600/- + Rs. 108 (Taxes) for SC/ST/PwD and Female Candidates
- Rs 1200/- + Rs. 216 (Taxes) for General, OBC and EWS Candidates

4. Fee Structure for Ph.D. Programme

A. ONE TIME PAYMENT AT THE TIME OF ADMISSION (NON-REFUNDABLE)						
S. N.	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	-
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	-
	Total	9,000.00	9,000.00	9,000.00	9,000.00	-
C. SEMESTER FEE PAYABLE FOR EACH SEMESTER (NON-REFUNDABLE)						
1	Tuition Fee	10,000.00	45,000.00	45,000.00	10,000.00	10,000.00
2	Examination	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	Amenities	2,000.00	2,000.00	2,000.00	2,000.00	-
5	Hostel Establishment	8,000.00	8,000.00	-	8,000.00	-
6	Hostel Seat Rent	10,000.00	10,000.00	-	10,000.00	-
7	Medical Fee	500.00	500.00	-	500.00	-
8	Academic Activities Fee	15,000.00	15,000.00	15,000.00	15,000.00	15,000.00
	Total	48,500.00	83,500.00	65,000.00	48,500.00	28,000.00
AMOUNT PAYABLE AS INSTITUTE'S DUES AT THE TIME OF ADMISSION (FIRST SEMESTER)						
1	TOTAL OF 'A', 'B' & 'C'	64,500.00	99,500.00	81,000.00	64,500.00	32,000.00
AMOUNT PAYABLE AS INSTITUTE'S DUES FOR OTHER SEMESTER						
1	TOTAL OF 'C'	48,500.00	83,500.00	65,000.00	48,500.00	28,000.00

FEES FOR FOREIGN STUDENTS			
S.N.	Particulars	For SAARC Countries	For other Countries
1	At the time of Admission	US \$ 3000.00 + ₹ 64,500.00	US \$ 5000.00 + ₹ 64,500.00
2	Other Semester Fee	US \$ 3000.00 + ₹ 48,500.00	US \$ 5000.00 + ₹ 48,500.00

➔ In addition, all students will pay mess advance of **Rs. 25,000: Jais Campus, Rs. 16,000: Sivasagar Campus, Rs. 25,000: Bengaluru Campus** per semester at the beginning of each semester, which will be adjusted towards actual bills at the end of each academic year.

➔ Any such stay for less than a semester would be charged @100/- for each day of stay at the Institute's Hostel.

4.A. Refund Policy for Ph.D. students

Withdrawal of admission after deposition of full semester fees one day before the date of Physical Registration	(Total deposited fees - Rs. 1500/-) will be refunded
Withdrawal of admission on OR after the date of Physical Registration	Caution Money of 9000/- refunded Settlement of Mess Advance on actual consumption basis
Withdrawal of admission in the mid of any semester	Caution Money of 9000/- refunded Settlement of Mess Advance on actual consumption basis

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.
Computer Science & 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.

Departments offering the Programme	Qualifying Degree (B. Tech./M. Tech./M.Sc.)
Electrical & 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, or equivalent. Or Master's Degree in Science in the following Disciplines: • Applied Physics • Engineering Physics • Materials Science, or equivalent.
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.
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 • Mathematics & Computing • Computer Science & Engineering, or equivalent.
Petroleum Engineering & 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.)
Energy and Human Science	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 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.

A candidate possessing degree(s) that do not exactly conform to the degree(s) listed above is also eligible to apply. Such application on recommendation from DPGC and approval from the Chairman Senate will be considered further for the shortlisting process.

Table 1B: Department-wise Research Areas for Ph.D. Programmes

The discipline-wise Research Areas in the Ph.D. programmes offered at **RGIPT Jais** for the Session 2025-26 are listed below.

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, CO₂ 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.
Computer Science & 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 & 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. 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. 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.
Management Studies	Energy: Energy Transition, Clean Energy Adoption, Hydrogen Adoption, Sustainability, Energy Policy, Environmental, Social and Governance (ESG), Sustainable Energy Finance, Energy Economics. 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. 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. Marketing: Product and Brand Management, Consumer Behaviour, Neuromarketing, Digital and Social Media Marketing, Green Marketing, Services Marketing, B2B Marketing, Retailing, Sales and Distribution Management. 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. Economics: Financial Economics, Energy Economics, Corporate Governance in Banks, Commercial Banking, Efficiency and Productivity Analysis, Technology Adoption in Banks.
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.
Petroleum Engineering & Geoengineering	Enhanced oil recovery, Drilling fluids, Gas hydrates, Source rock evaluation, Reservoir simulation, Flow assurance, Petroleum geomechanics, Unconventional hydrocarbon resources, Production operations, CO₂ 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.
Energy and Human Sciences	Chemistry: Materials Development (Organic Synthesis/Polymer synthesis/Photo catalysis/ Electro catalysis/Nano Catalysis/H ₂ production/CO ₂ 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: Discipline-wise Research Areas for Ph.D. Programmes

The discipline-wise Research Areas in the Ph.D. programmes offered at **RGIPT, Bengaluru** for the Session 2025-26 are listed below.

Disciplines	Research Areas
Electrical and Electronics Engineering	Design and Development of Microwave Filter and Antenna using Microstrip and SIW Technology, Integrated Design of Microwave Filter and Antenna (Filtering Antenna), Dielectric Resonator Antenna, and Metamaterial, Design and Development of Microwave and Millimeter-wave Components. 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.
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.
Mechanical Engineering	Thermal Management, Energy Storage, Solar Energy, Energy and Buildings, Phase change materials, Fluid-Thermal Engineering, Computational Fluid Dynamics, Power Plant Engineering

Computer Science and Engineering	Machine Learning, Artificial Intelligence, IoT, Computer Vision, Pattern Recognition and Natural Language Processing
Mathematics and Computing	Reliability and Survival Analysis, Statistical Decision Theory, Statistical Inference, Probability and Statistics, Statistical Machine Learning
Social Sciences	Sociology (Sociology of Development, Migration and Diaspora Studies, Sociology of Education)

Table 1D: Discipline-wise Research Areas for Ph.D. Programmes

The discipline-wise Research Areas in the Ph.D. programmes offered at **RGIPT, Sivasagar** for the Session 2025-26 are listed below.

Disciplines	Research Areas
Chemical Engineering	Experimental and Computational Fluid Dynamics, Microfluidics, Complex Fluids, Pyrolysis of biomass and waste plastics, Microbial Fuel cell, Wastewater Treatment, Nanostructured material, Environmental remediation, Electrochemical sensors, Emerging Pollutants
Petroleum Engineering	Nanomaterials based drilling fluids and fracturing fluids; Enhanced Oil Recovery, CO ₂ Geo-sequestration, Rheology of complex fluids, Applied Microfluidics in porous domain, Computational Fluid Dynamics (CFD) coupled Machine Learning (ML) and Artificial Intelligence (AI) techniques to characterize multiphase flow, Carbon capture, utilization, and storage (CCUS)
Electronics & Instrumentation Engineering	Semiconductor Devices, Sensors, MEMS, NEMS, Controller Design, Controller Optimization and Renewable Energy, Power Electronics, Renewable Energy Systems and Process Control, Micro grid and smart grid technology
Fire and Safety Engineering	Modelling and simulation in Pool and Jet fires; Combustion and Explosion analysis in storage vessels/pipelines; Industrial Fires; Industrial Safety and Hazards Management; Modelling of Process Safety; Modelling in Enclosure fire
Chemistry	Nanoscience, Quantum dot, White Light emitting devices, Molecular Sensing, Energy storage, Functional coatings and thin films, Separation and purification technology
Mathematics	Mathematical Ecology, Mathematical Modelling, Nonlinear Dynamics, Fuzzy Set Theory, Uncertainty Modelling, Hesitant Fuzzy Set Theory, Decision Making
Physics	Theoretical Condensed Matter Physics: Magnetism, Superconductivity, Twisted Bilayer Graphene, Computational Soft Matter Physics, Liquid crystals, 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), Thermo-fluid, Powder and granules rheology, Polymer composites; 3D printing; Material Characterizations; Flame retardant polymer materials, Nonequilibrium Thermodynamics, Thermodynamics of Irreversible Processes, Biofuels, Exergy Analysis, Hydrogen Application, Renewable Energy, Thermal Management, Statistical Analysis, Artificial Neural Network
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Table 1E: Department-wise number of Institute Assistantship available in Even Semester 2025-26 along with specific research area

Department	Specific research area	Available Institute Assistantship in PhD
RGIPT Jais		
Chemical & Biochemical Engineering	• Industrial Hybrid Separation Process Development for Petrochemicals • CO₂ Capture Process Modelling and Simulation or in the field of Biodiesel Production • Functionalized Biochar for Energy and Environmental Applications, Membrane Separation Process	03
Energy & Human Sciences	• Energy Nanomaterials, Spectro-microscopy and Biomass Valorization	01
Petroleum Engineering and Geoengineering	• Flow Assurance and Transport of Problematic Crude Oils; CO₂ Utilization in EOR and Sequestration in Reservoirs; Drilling and Production Optimization; Novel EOR Techniques	01
Mathematical Sciences	• Numerical Analysis and Scientific Computing • Integral Equations • Statistical theory of Reliability and life testing	03
Computer Science & Engineering	• IoT, Network and Cyber Security, Algorithms • Cloud Computing, Fog Computing, Service Computing, Security, Privacy & Trust in IoT, Distributed Data Analytics, Soft Computing and Virtualization • Computer Vision, Image Processing, Deep Learning, Machine Learning, Artificial Intelligence • Traffic Prediction, Rumor Verification/Fake News Detection, Crisis Informatics and Explainable AI • Spatial Analytics, LiDAR and UAV Analytics, GIS, Satellite Image Processing, AR/VR based Digital Twin Solution with Deep Learning, Quantum Computing Solutions. • Computer Vision, Biometrics and Deep Learning	06

Electrical and Electronics Engineering	• Modeling and Simulation of Dynamic Systems, Machine Learning Applications in Petroleum Engineering, ML, Control & Advanced Signal Processing Applications in Power Engineering, Power Quality, Power Electronics and Drives, Smart Grid, Renewable Energy and Distributed Generation • Artificial Intelligence (AI) and Deep Learning (DL) for 5G/6G, Hybrid RG/VLC, Massive MIMO and Cognitive Radios Communications; AI-IoT- driven Communication Security Enhancement; Security in Cognitive Radios • Energy Storage System Modelling and Control Design for Electric Vehicle Applications, Prescribed Performance Based Concurrent Identification and Control Design for Multiport Power Converters for Renewable Energy Applications, Subspace Analysis for Stochastic Modelling of Time Delay Dynamical Systems in Oil and Gas Industry • Application of Machine Learning in Energy, Health Sector and Flexible Electronics	04
Mechanical Engineering	• Experimental and Simulation Studies on weight balance of locomotive wheels	01
Management Studies	--	XX
RGIPT Bengaluru Campus		
Sustainability Management	• Integrating ESG Factors in Investment Decisions: Evidence from Emerging Markets • The Role of Green Bonds in Financing Sustainable Energy Projects in India • Corporate Sustainability Disclosure and Firm Performance: A Sectoral Analysis of Indian Energy Firms • Sustainable Portfolio Optimization: A Hybrid Machine Learning and Behavioral Finance Approach • Investor Behavior Toward Socially Responsible Investment (SRI) Funds in India • AI-Driven Sustainable Operations and Low-Carbon Supply Chain Management • AI-Enabled Integrated Operations-Finance Optimization for Sustainable and Resilient Supply Chains	02
Robotics and Automation	• Solar Photovoltaic Thermal, Hydrogen Generation using Renewable Energy and Electric Vehicle Powertrain and Charges	01
Electrical and Electronics Engineering	• Electric and Hybrid Vehicles and Solar Photovoltaics	03

	• Instrumentation and Control Wearable Devices • Safety and Occupational Hazards Management • Smart Sensor Applications in Energy Sector • Automotive Safety • RF and Microwave Engineering	
Materials Science & Engineering	• Electrochemical Devices for Green Hydrogen Generation/Energy Storage	01
Computer Science and Engineering	• Artificial Intelligence and Deep Learning	01
Mathematics and Computing	• Statistical Machine Learning	01
Mechanical Engineering	--	XX
RGIPT Sivasagar Campus		
Chemical Engineering	• Energy Technology, Nanostructured Carbon Material & Environmental Remediation • Bioenergy, Pyrolysis of Biomass and Waste • Rheology of Complex Fluids, Optical Flow Visualization and Measurement Techniques (PIV & PTV), Renewable Energy	03
Electronics and Instrumentation Engg.	• Power Electronics, Renewable Energy Integration and Electric Vehicles • Semiconductor Devices, MEMS, Biosensors	02
Petroleum Engineering	• IC Engines, Biofuels, Hydrogen Application, Drilling & Cementing Complications • Carbon Capture Utilization and Storage, Geo-sequestration, Computational Fluid Dynamics, Reservoir Engineering, EOR, Modelling and Simulation, Microfluidics • Nanotechnology in Oil and Gas Industry, Drilling Fluids, Fracturing Fluids, EOR, Rheology of Complex Fluids, Microfluidics and CFD	03
Physics	• Computational Soft Matter Physics, Classical Density Functional Theory, Complex Systems, Phase Transitions, Liquid Crystals, Ionic Liquids, Supercritical Fluids	01
Mechanical Engineering	• IC Engines, Biofuels, Hydrogen Application, Thermal Management, Photovoltaic Thermal Systems, ANN • Non-Conventional Energy, IC Engine • Polymers and Polymer Composites, Additive Manufacturing or 3D Printing, Flammability, Bio-composites, Material Circular Economy	03

Fire and Safety Engineering	• Fire Dynamics, Modeling and Simulation of Fire, Combustion and Explosion Analysis in Storage Vessels and Pipelines, Process Safety and Risk Assessment, Industrial Fire Safety and Hazard Mitigation, Industrial Safety and Hazards Management	01
Chemistry	--	XX
Mathematics	--	XX

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/center even if there are no Institute Assistantship available.**
- **The PhD students registered at EIB and AEI centres will be awarded PhD degree by RGIPT. If required, they may complete their course work there or may complete course work at RGIPT, Jais.**
- *The requirement of earning the credit through Course Work may be waived off by the Dean (Academic Affairs) on the recommendation of DPGC is as follows:*
 - The PhD candidate under External/Part Time Category provided he/she has M. Tech. as qualifying degree from a CFI/CFTI.*
 - The PhD candidates in Part Time Category with M. Tech. degree and CPI of ≥ 7.0 in the qualifying examination and minimum 5 years of professional experience in relevant Industries.*
 - The PhD candidates in Part Time Category with B. Tech. degree and CPI of ≥ 7.5 in the qualifying examination and minimum 10 years of professional experience in relevant Industries.*
 - The PhD candidates under external registration category having master's degree as the qualifying degree from a Govt. Institute/University of repute along with relevant industry/academic experience of 05 years or more.*

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